2020

Hollister Urban Area Urban Water Management Plan

July 2021

TODD GROUNDWATER

Todd Groundwater

FINAL 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**

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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.

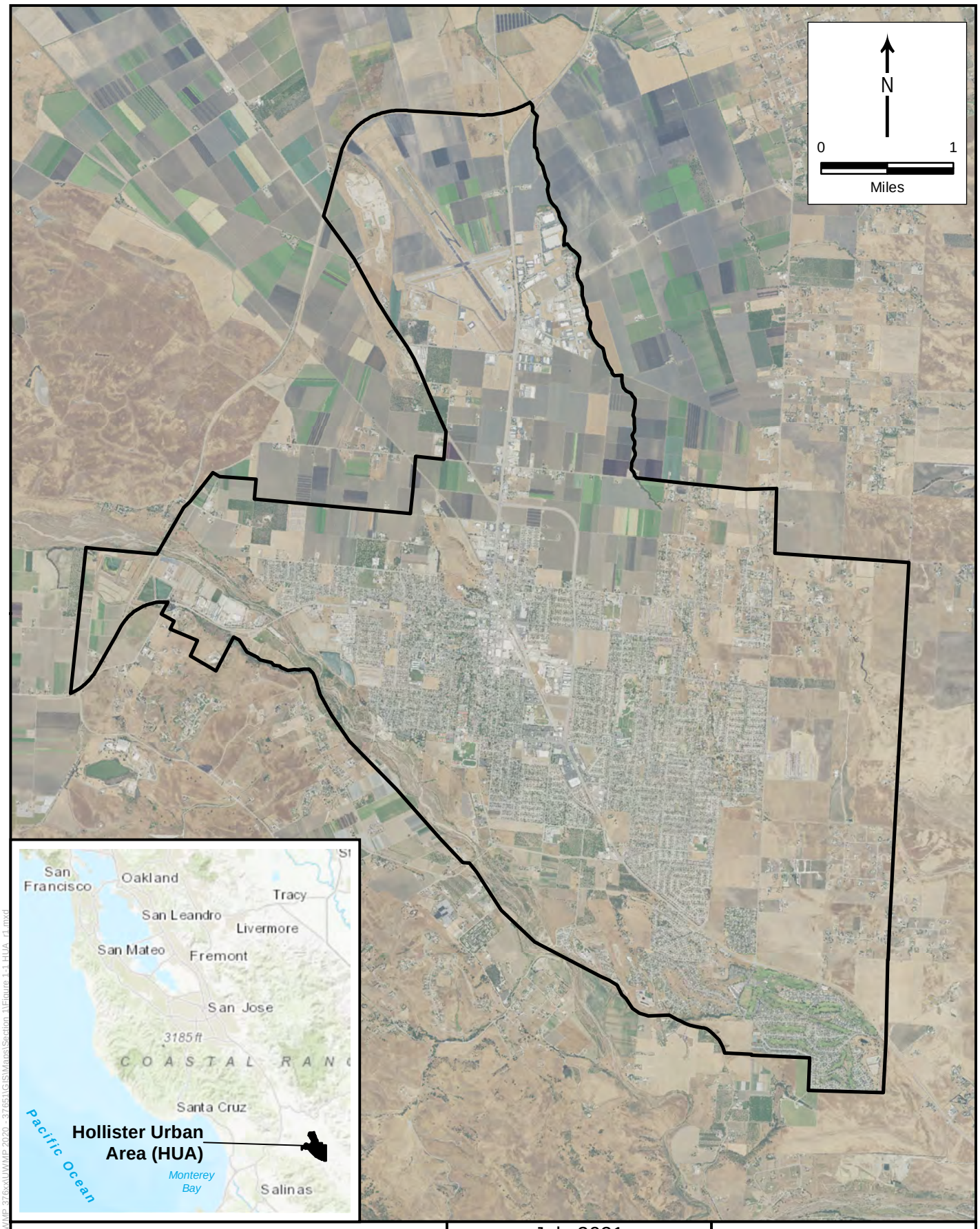
Water Conservation

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

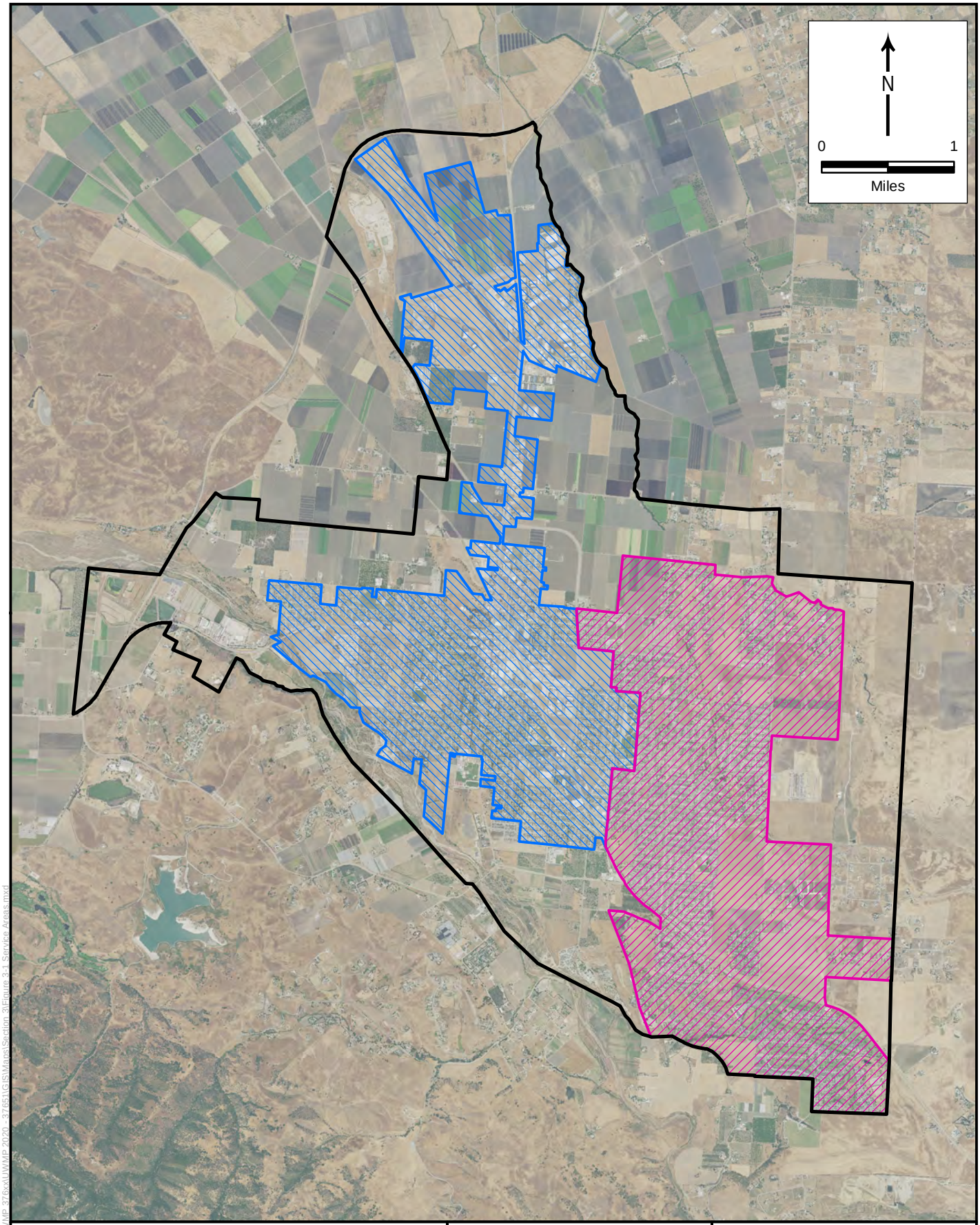
Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	25,963	31,286	37,365	43,489	49,978	
NOTES: Hollister. 2020 population based on DWR tool using 2019 connections, as 2020 connection information is not available. Future population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

TODD GROUNDWATER

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

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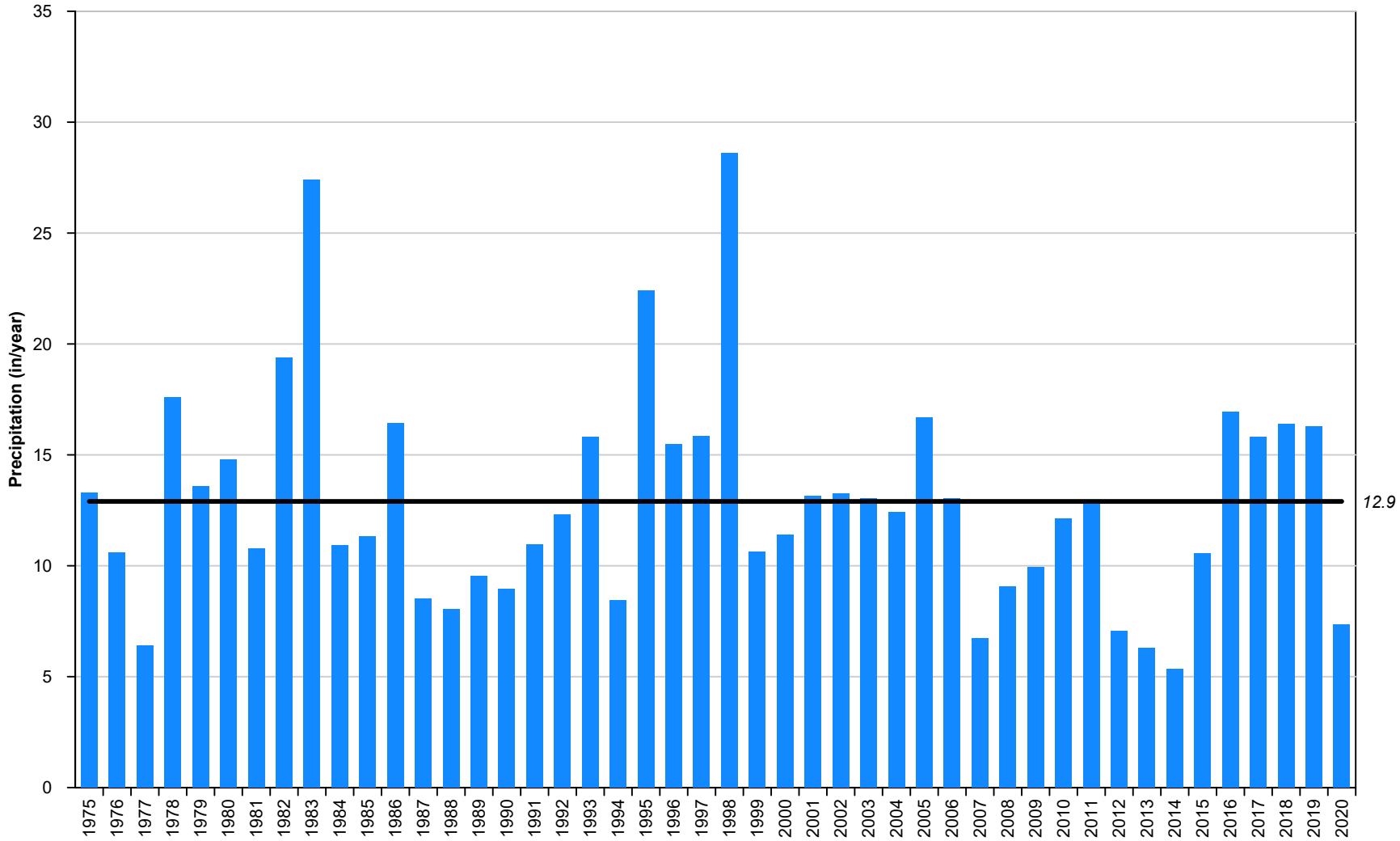


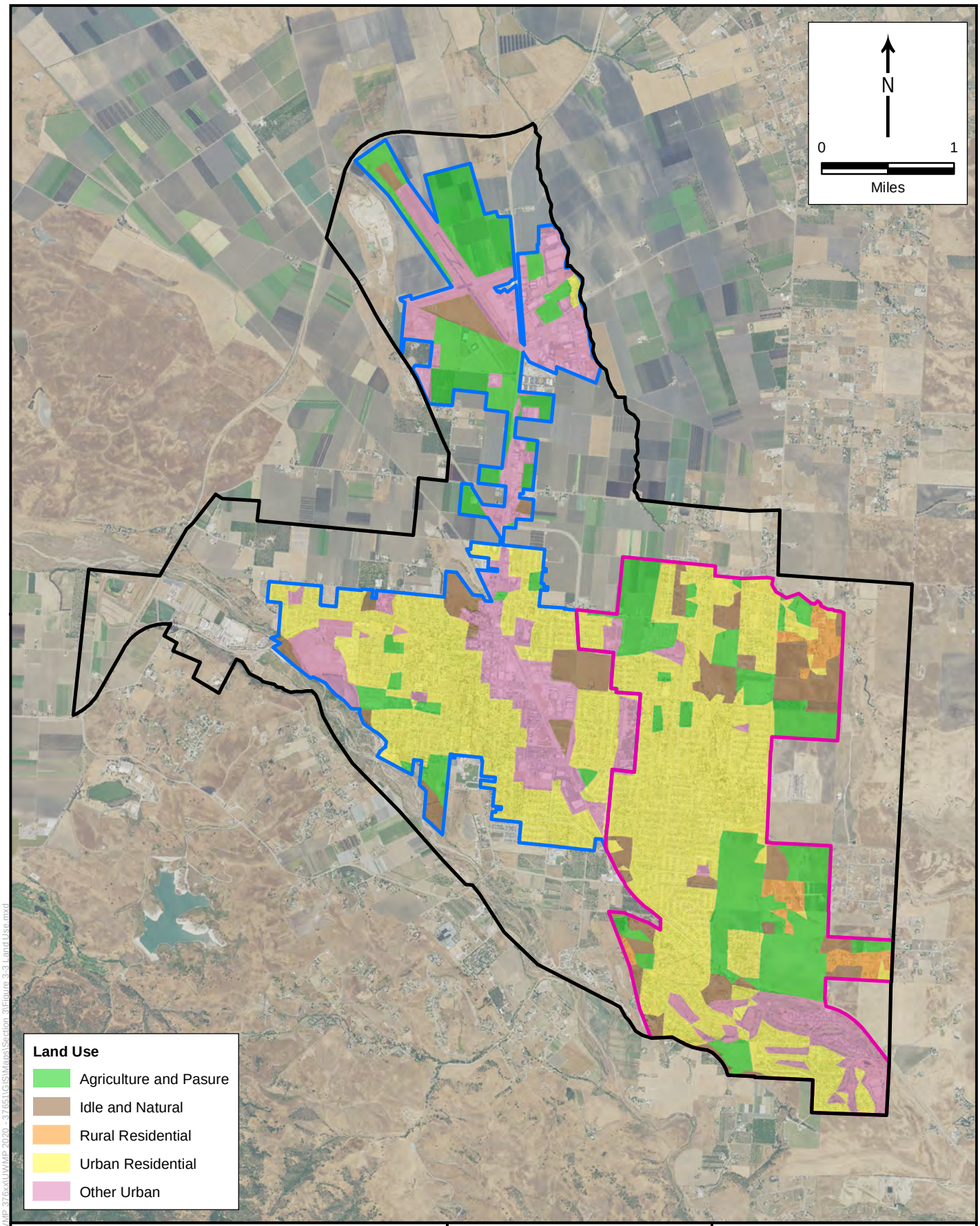
Precipitation (in/year)

Average (1875 - 2020)

July 2021

TODD GROUNDWATER

Figure 3-2
Annual Precipitation
Hollister Urban Area



July 2021

TODD GROUNDWATER

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

DRAFT 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*				
Drop down list *May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool*		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		29	30	30	31	
Other Non-Potable						
Other						
TOTAL		3,687	4,125	4,864	5,529	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

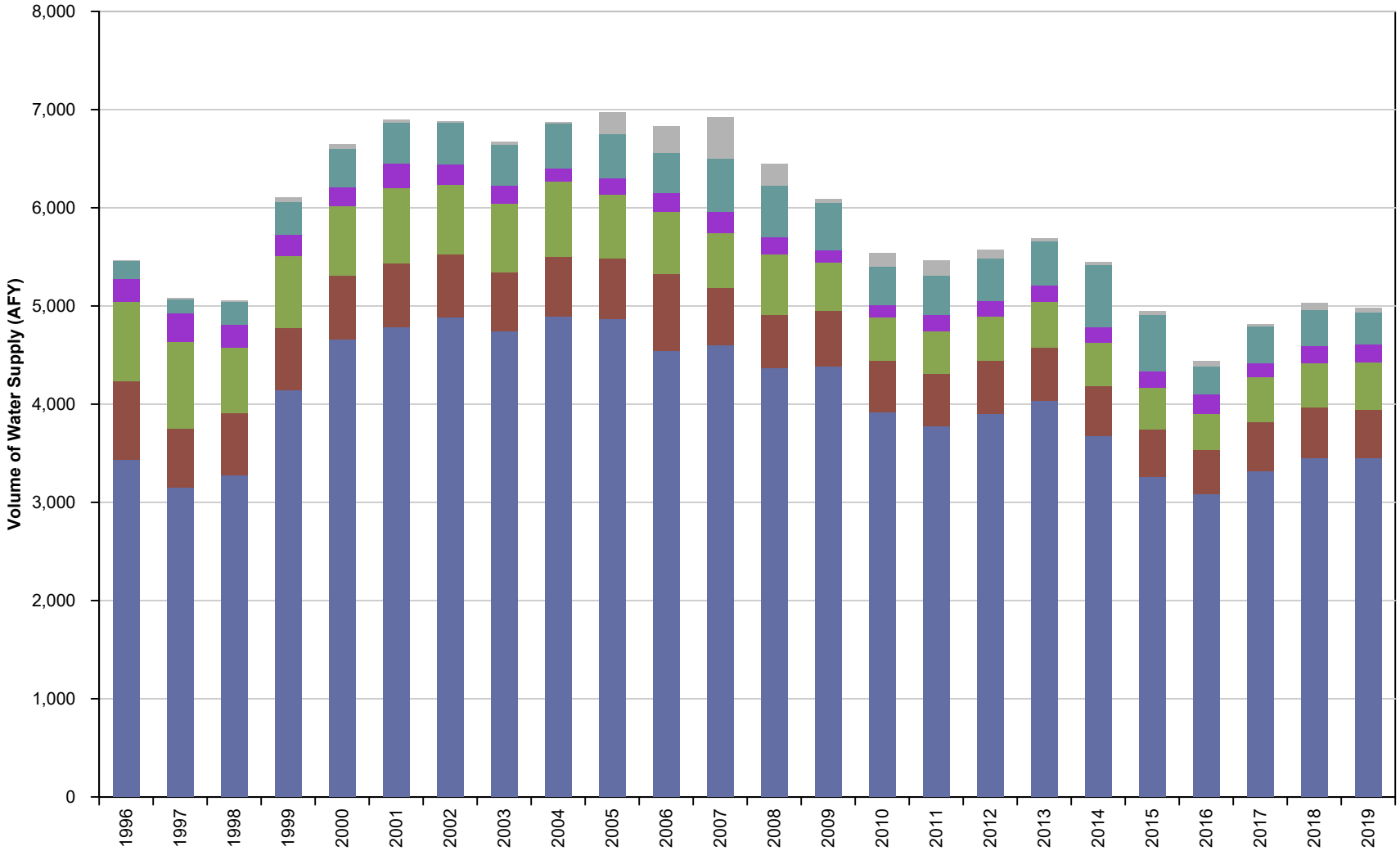
Submittal Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
07/2019	84.4
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

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:	



A. Single Family Residential
B. Multi-family Residential
C. Commercial/Institutional
D. Industrial
E. Landscape
F. Other

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

DRAFT Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		**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		488		1,232		1,828		2,537			
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).											

Urban Water Supplier: *Hollister Urban Area*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

dropdown menu

Table 6-10. Energy Intensity

Table O-1A: Recommended Energy Intensity - Water Supply Process Approach								
Enter Start Date for Reporting Period 1/1/2020 End Date 12/30/2020	**Urban Water Supplier Operational Control**							
	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*

Quantity of Self-Generated Renewable Energy

kWh

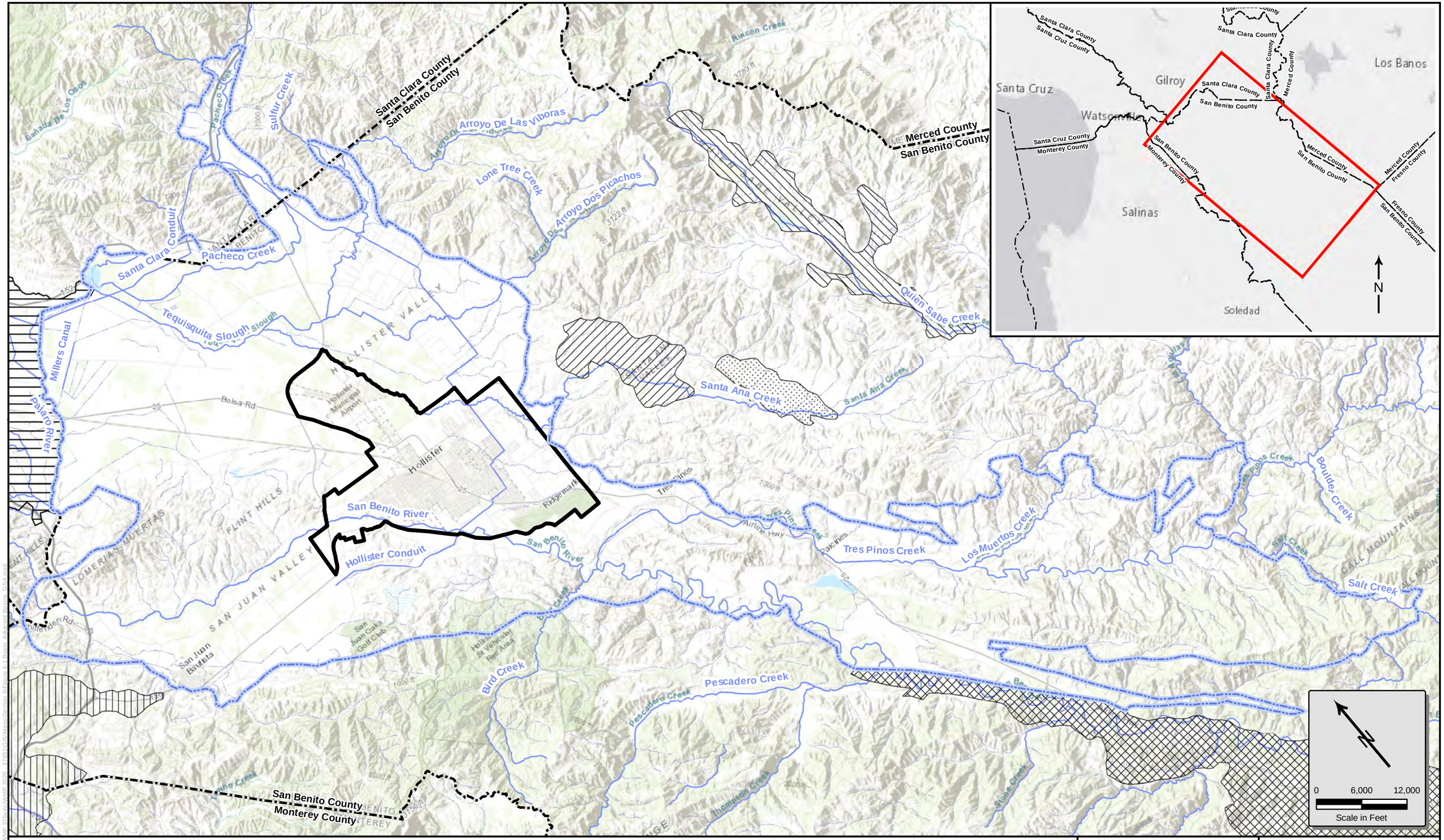
Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

dropdown menu

Data Quality Narrative:

Narrative:

Extract and Divert includes all groundwater energy uses,. Storage, Conveyance, Treatment, and Distribution includes all CVP water in SBCWD including agriculture supplies not included in the volume of water totals.

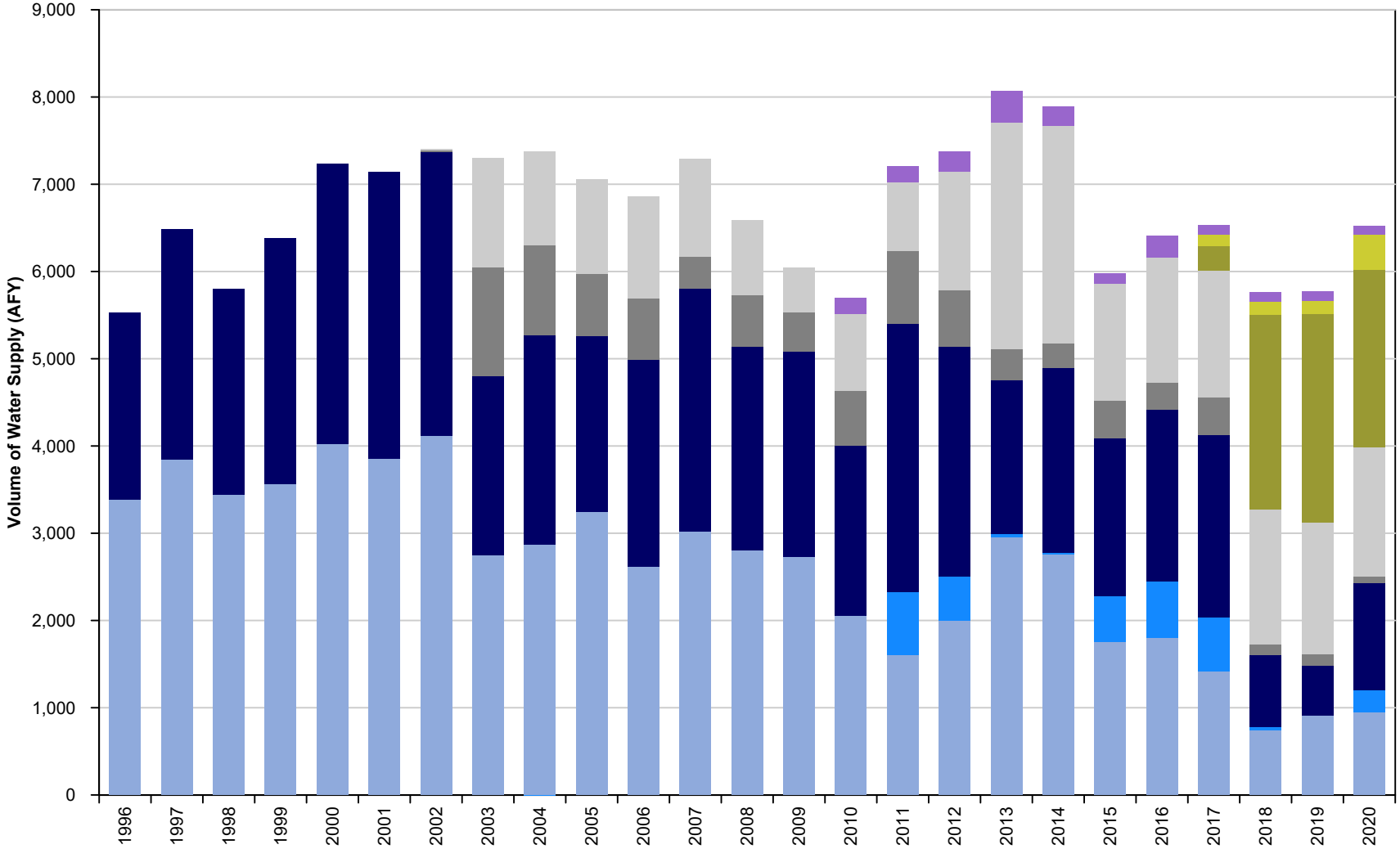


North San Benito Basin
Hollister Urban Area
Llagas Area Subbasin of the Gilroy-Hollister Basin
Pajaro Valley Subbasin of the Corralitos Basin
Quien Sabe Valley Basin
Santa Ana Valley Basin
Upper Santa Ana Valley Basin
San Benito River Valley Basin

July 2021

TODD GROUNDWATER

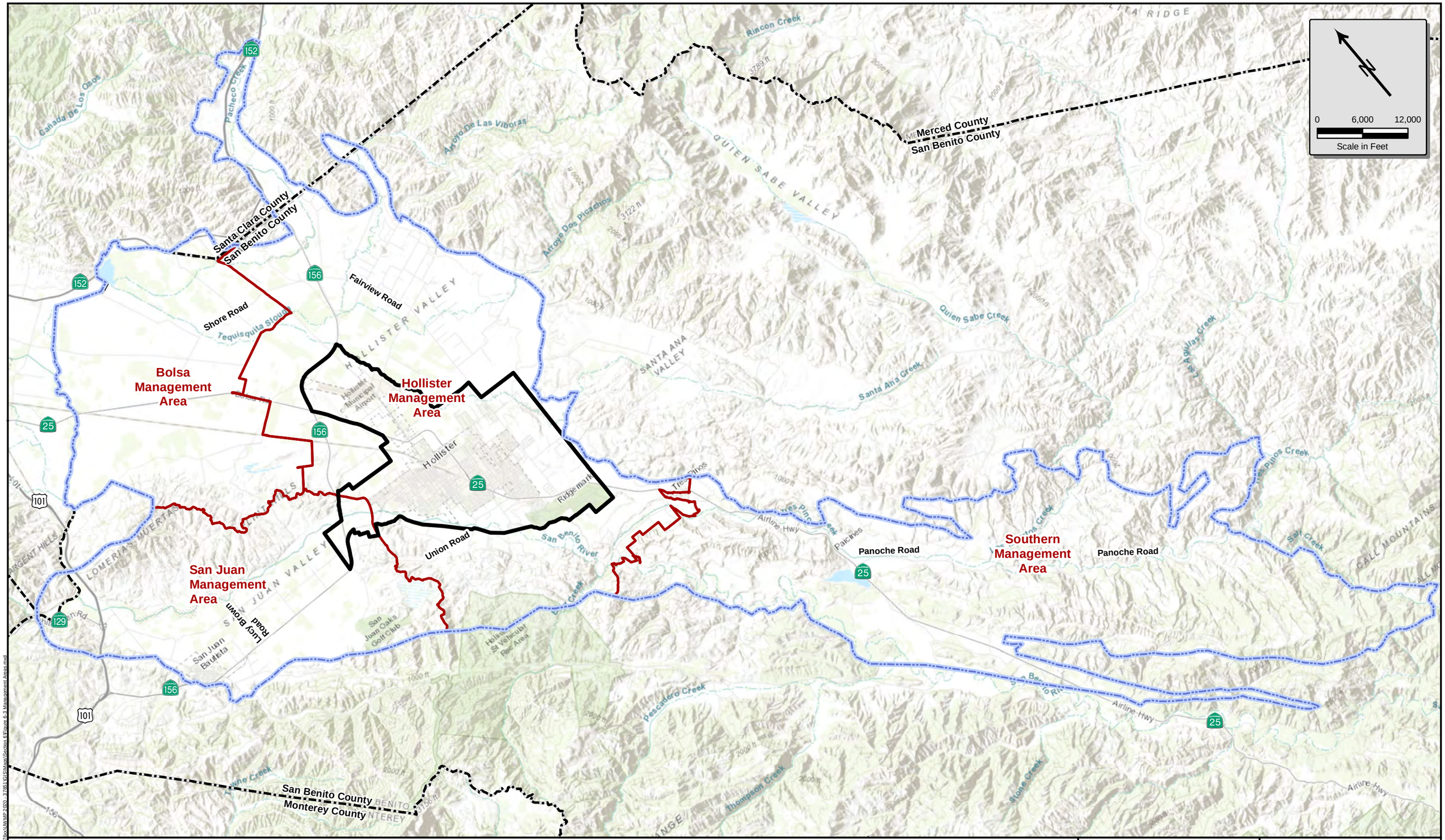
Figure 6-1
North San Benito Groundwater Basin

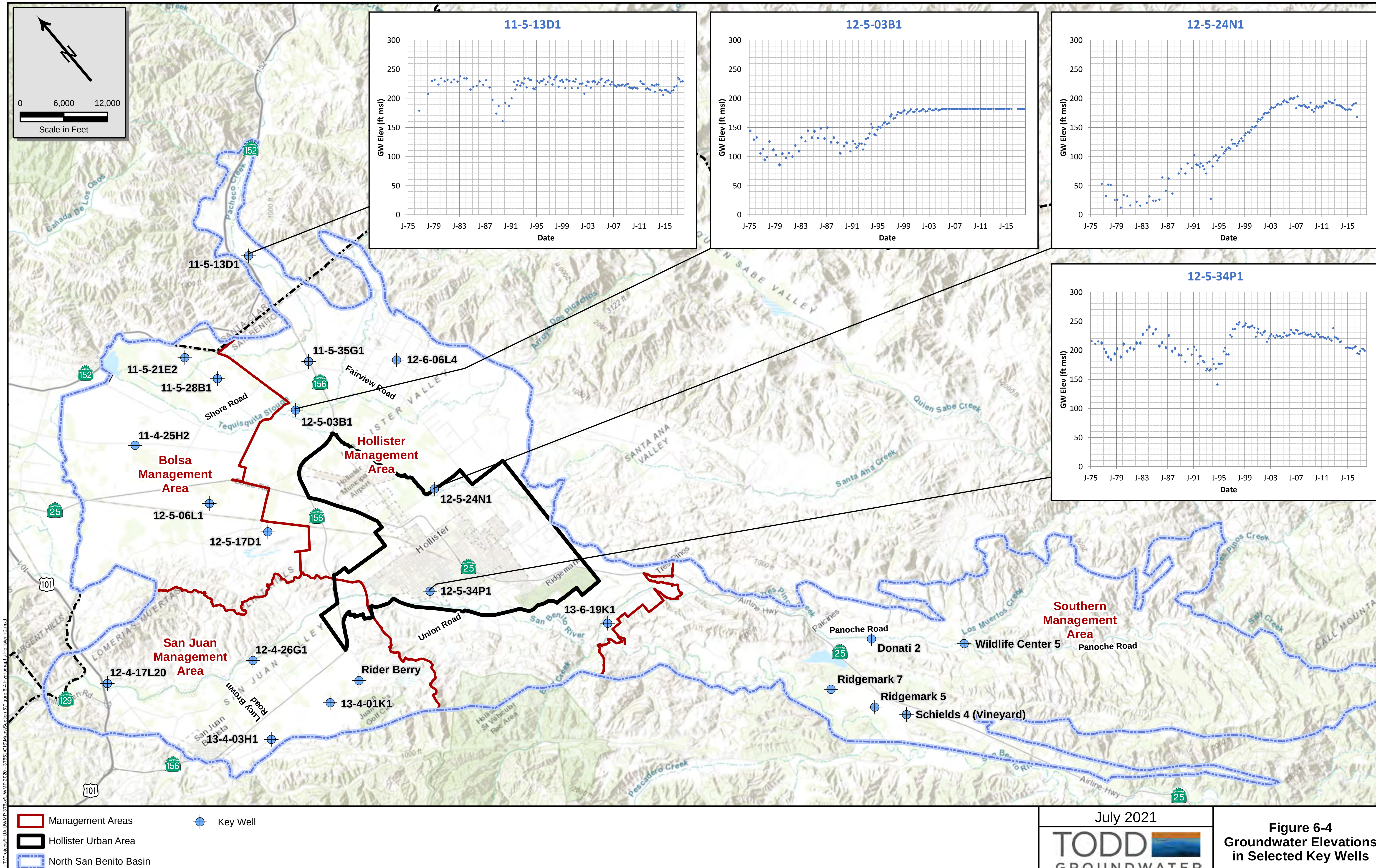


July 2021

TODD GROUNDWATER

Figure 6-2
Historical and Current Supply by Source


Merced County
San Benito County
Santa Clara County
San Benito County
Fairview Road
Shore Road
Union Road
Lucy Brown Road
Panoche Road
Panoche Road
Bolsa Management Area
Hollister Management Area
San Juan Management Area
Southern Management Area
HOLLISTER VALLEY
SAN JUAN VALLEY
QUIEN SABE VALLEY
SANTA ANA VALLEY
LOMERIAS MUERTAS HILLS
GABILAN RANGE
CALL MOUNTAINS
Rincon Creek
Arroyo De Las Viboras
Arroyo Dos Picachos
Quien Sabe Creek
Santa Ana Creek
Tres Pinos Creek
Pacheco Creek
Tequisquita Slough
San Benito River
Pescadero Creek
Thompson Creek
Stone Creek
Airline Hwy
Hollister
Ridgemark
Hollister Municipal Airport
San Juan Bautista
San Juan Oaks Golf Club
Hollister St Vehicular Rec Area
0
6,000
12,000
Scale in Feet
Management Areas
Hollister Urban Area
North San Benito Basin
July 2021
TODD GROUNDWATER
Figure 6-3
Management Areas

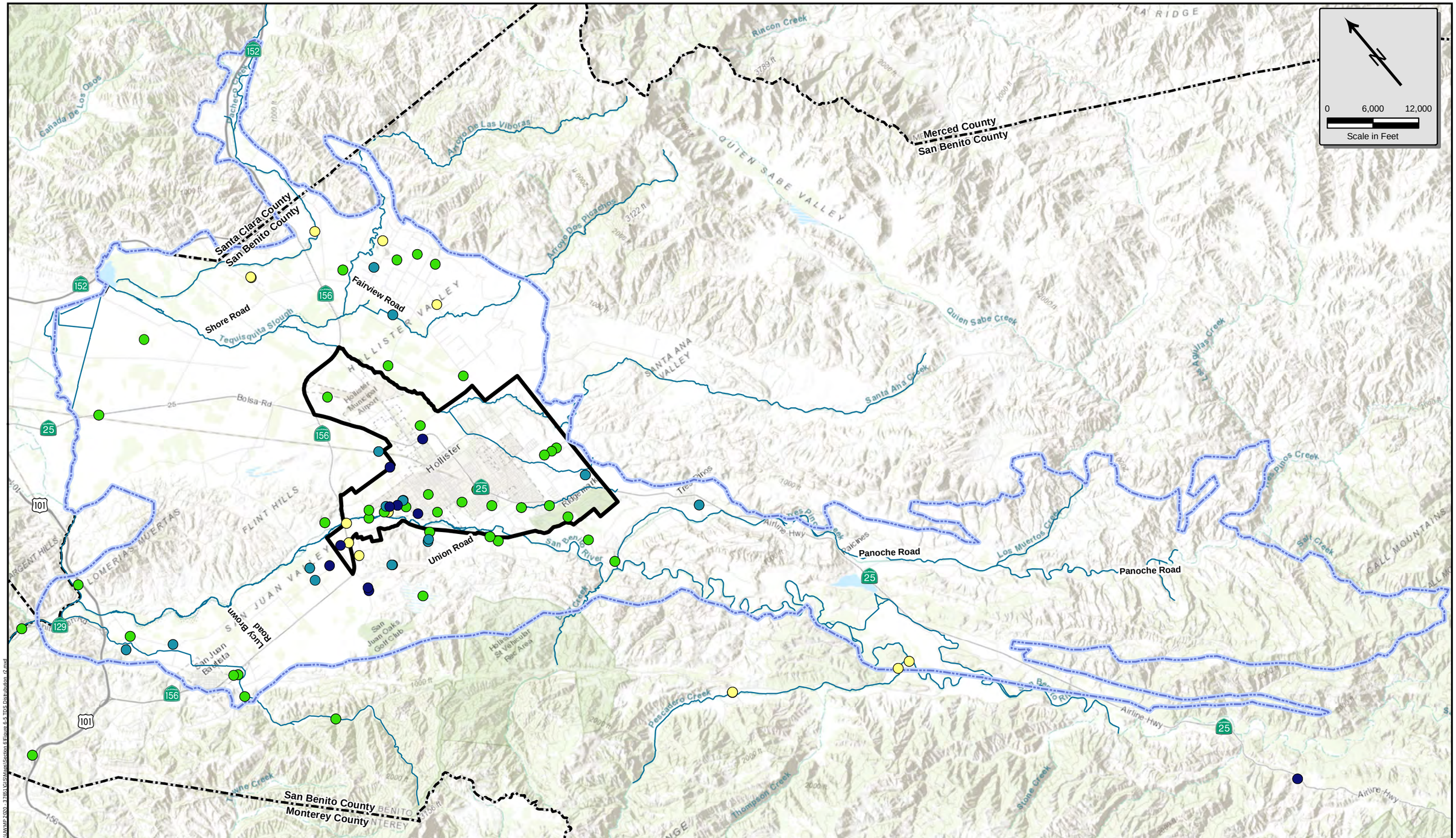


July 2021

TODD GROUNDWATER

Figure 6-4
Groundwater Elevations in Selected Key Wells

Path: T:\Projects\HUA UWMP 376xx\UWMP 2020 - 37651\GIS\Maps\Section 6\Figure 6-4 Hydrographs Hollister_r2.mxd



Hollister Urban Area

North San Benito Basin

Average TDS Concentration

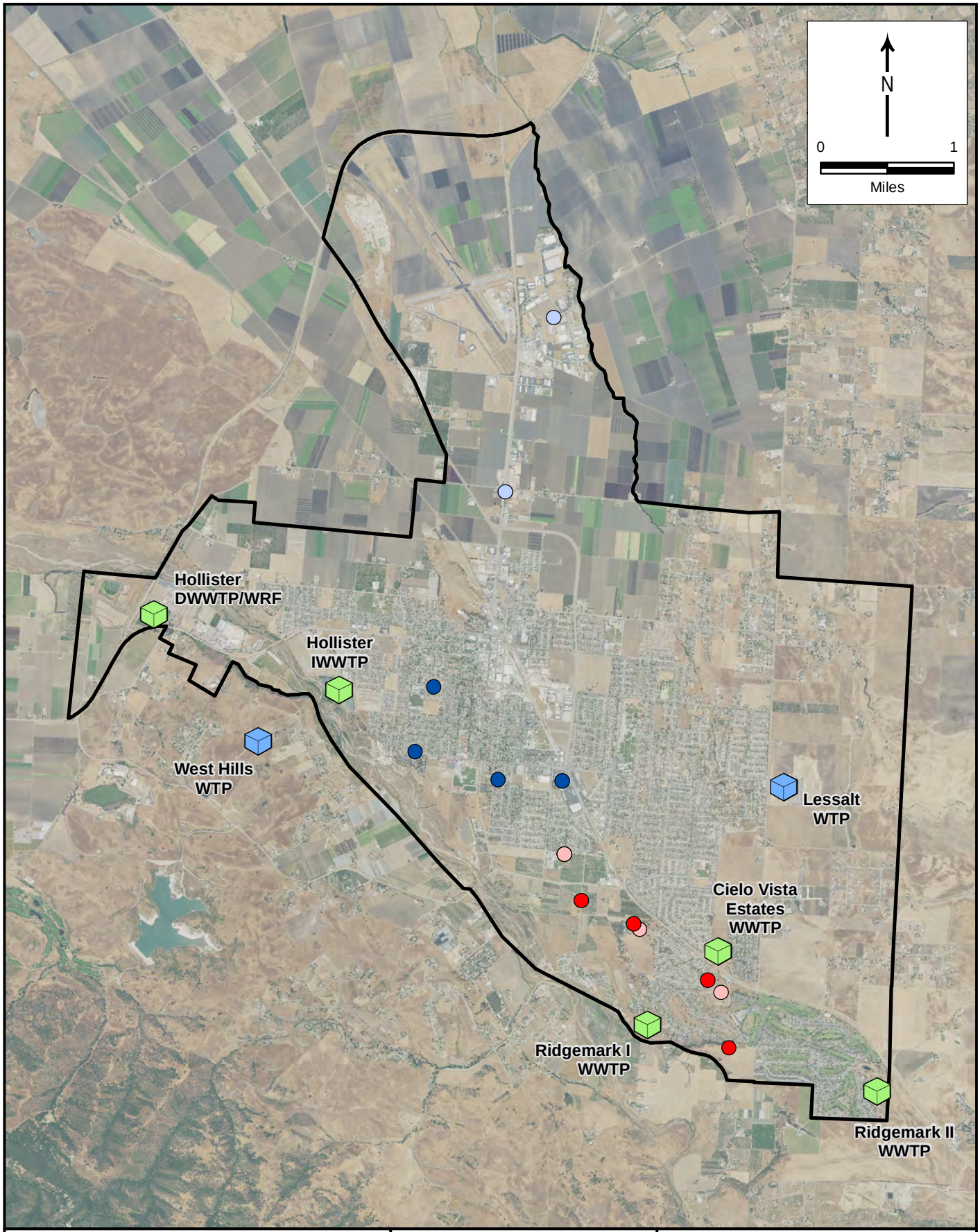
- Less than 500 mg/L
- 500 to 1,000 mg/L
- 1,000 to 1,500 mg/L
- Greater than 1,500 mg/L

July 2021

TODD GROUNDWATER

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

Path: K:\Projects\HUA UWMP 3760\UWMP 2020 - 3760\GIS\MapSection\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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2020

Hollister Urban Area
Urban Water Management Plan

July 2021

APPENDICES

TODD GROUNDWATER

Appendix A
Notice to Adopt

NOTICE
2020 Hollister Urban Area
Urban Water Management Plan Update

Date: March 25, 2021

To: City of Hollister, City Clerk
County of San Benito, Clerk of the Board

From: Shawn Novack, Water Conservation Program Manager
San Benito County Water District

Re: 2020 Urban Water Management Plan Update

The Urban Water Management Planning Act requires every urban water supplier to prepare and adopt an Urban Water Management Plan (UWMP) and to update the plan at least once every five years. The Hollister Urban Area UWMP, a collaborative endeavor of the City of Hollister, Sunnyslope County Water District, and San Benito County Water District, is now being reviewed and changes are being considered.

In accordance with Water Code Section 10621, this notice is provided to the City and County at least 60 days prior to the public hearings on the plan, which are being scheduled for late May and mid-June. Consistent with the Water Code, the plan will be adopted by the Hollister Urban Area agencies by July 1, 2021.

If you have any questions or comments regarding the UWMP update, please contact:

Shawn Novack
Water Conservation Program Manager
San Benito County Water District
snovack@sbcwd.com
(831) 637.4378 Direct

NOTICE OF PUBLIC HEARING 2020 URBAN WATER MANAGEMENT PLAN UPDATE SAN BENITO COUNTY WATER DISTRICT

NOTICE IS HEREBY GIVEN that the Board of Directors of the San Benito County Water District, the Board of Directors of the Sunnyslope County Water District and the City Council of the City of Hollister have received the 2020 Urban Water Management Plan Update.

NOTICE IS FURTHER GIVEN that the Board of Directors of the San Benito County Water District, the Board of Directors of the Sunnyslope County Water District and the City Council of the City of Hollister will hold Public Hearings on the dates and times listed below, for the purpose of receiving comment on said report. Upon close of the public hearing, each agency will consider approval of a resolution to adopt the 2020 Urban Water Management Plan Update.

San Benito County Water District, Board Room, 30 Mansfield Road, Hollister, CA Wednesday, May 26, 2021 at 5:00 p.m.
Zoom Meeting
Meeting ID: 968 3893 2000
Passcode: 682542
Dial in only:
+1 669 900 9128 US (San Jose)

City of Hollister, City Council Chambers, City Hall, 375 Fifth Street, Hollister, CA Monday, June 7, 2021 at 6:30 p.m.
Zoom Meeting
Link will be available on agenda when posted on the website.

Sunnyslope County Water District, Board Room, 3570 Airline Highway, Hollister, CA Tuesday, June 15, 2021 at 5:15 p.m.
Zoom Meeting
Meeting ID: 943 5144 3777
Dial in only:
+1 669 900 9128 US (San Jose)

Said report is available for examination at: San Benito County Water District on their website at **https://www.sbcwd.com/planning-documents/**; Sunnyslope County Water District on their website at www.sunnyslopewater.org; at City Hall, 375 Fifth Street, Hollister, when agenda is posted at www.hollister.ca.gov; at the San Benito County Public Library, 470 Fifth Street, Hollister; and the City of Hollister, Engineering Department, 420 Hill Street, Building C, Hollister.

BOARD OF DIRECTORS
SAN BENITO COUNTY WATER DISTRICT

BOARD OF DIRECTORS
SUNNYSLOPE COUNTY WATER DISTRICT

CITY COUNCIL
CITY OF HOLLISTER

Run: April 30th, May 7th.
(Pub HF 4/30, 5/7)

RESOLUTION 2021-11

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BENITO COUNTY WATER DISTRICT APPROVING, WITH QUALIFICATIONS, THE HOLLISTER AREA URBAN WATER MANAGEMENT PLAN 2020

WHEREAS, the San Benito County Water District (District) has joined in a cooperative effort with the Sunnyslope County Water District and the City of Hollister in the preparation of an Urban Water Management Plan ("the Plan") pursuant to Water Code Section 10620 et. seq., known as the Urban Water Management Planning Act; and,

WHEREAS, the study area for the Plan is the "Hollister Urban Area" comprised of the service areas for the City of Hollister and Sunnyslope County Water District as well as the immediate surrounding areas. This area overlies the North San Benito Groundwater Basin; and,

WHEREAS, one of the purposes of the Plan is to identify and quantify existing and planned sources of available water and the reliability of the water supplies without creating any rights or entitlement to water service or a specific level of water service; and,

WHEREAS, neither the Plan nor the statute mandating the adoption of the Plan encourages exclusive use of the Plan by land use entitlement agencies in making water-related land use decisions; and,

WHEREAS, because water is a changing resource, the Plan must be viewed as a snapshot of water availability and reliability based upon facts available at the time of creating the Plan; that water dynamics change because of forces of nature or human conduct and that, for the above reasons, the exclusive use of the Plan as a resource tool for making land use decisions is discouraged; that land use entitlement requests must be reviewed on a project by project basis for the purpose of analyzing the availability and reliability of water resources for the project; and,

WHEREAS, the District acknowledges its responsibility to take all necessary steps to address water supply emergency issues; and,

WHEREAS, the District is committed to water conservation and obligated to specific water conservation measures by virtue of the District water supply contract with United States Department of the Interior, Bureau of Reclamation.

NOW, THEREFORE, the Board of Directors of the San Benito County Water District hereby resolves as follows:

1. The Hollister Area Urban Water Management Plan 2020 ("the Plan") dated July 2021, is hereby adopted by the Board of Directors of the San Benito County Water District (District) and incorporated into this resolution by reference. A copy of the Plan is available for public review during normal business hours at the District Office located at 30 Mansfield Road, Hollister, California;

2. No later than sixty (60) days from May 26, 2021, the District shall deliver the Plan together with this resolution to the City of Hollister, San Juan Bautista, and the County of San Benito;

3. The District Manager is directed to file the Plan with the California Department of Water Resources by July 1, 2021;

4. The Plan, as adopted by the District, is not intended as a tool to be used exclusively by land use planning agencies as a substitute for a comprehensive study and investigation of water availability, reliability, and quality for development projects and land use changes proposed in San Benito County or the City of Hollister and San Juan Bautista, for the reasons stated in the recitals to this resolution;

5. The District Manager is hereby directed to implement the Water Conservation programs as funded through the District's Annual Budgets including water shortage contingency analysis and recommendations to the District Board regarding procedures to carry out effective water conservation and recycling programs in order to meet statutory and contractual obligations.

THE FOREGOING RESOLUTION was adopted at a regular meeting of the Board of Directors of the San Benito County Water District held on May 26, 2021, by the following vote:

AYES:	Williams, Flores, Shelton & Tobias
NOES:	None
ABSTAIN:	None
ABSENT:	Tonascia

Doug Williams
President

ATTEST:

Sara C. Singleton
Assistant Manager

RESOLUTION NO. 2021-100

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HOLLISTER APPROVING THE 2020 HOLLISTER URBAN AREA URBAN WATER MANAGEMENT PLAN UPDATE

WHEREAS, the City of Hollister (City) has joined in a cooperative effort with the Sunnyslope County Water District and the San Benito County Water District in the preparation of an Urban Water Management Plan ("the Plan") pursuant to Water Code Section 10620 et. seq., known as the Urban Water Management Planning Act; and

WHEREAS, the study area for the Plan is the "Hollister Urban Area" comprised of the service areas for the City of Hollister and Sunnyslope County Water District as well as the immediate surrounding areas. This area overlies the North San Benito Groundwater Basin; and

WHEREAS, one of the purposes of the Plan is to identify and quantify existing and planned sources of available water and the reliability of the water supplies without creating any rights or entitlement to water service or a specific level of water service; and

WHEREAS, neither the Plan nor the statute mandating the adoption of the Plan encourages exclusive use of the Plan by land use entitlement agencies in making water-related land use decisions; and

WHEREAS, because water is a changing resource, the Plan must be viewed as a snapshot of water availability and reliability based upon facts available at the time of creating the Plan; that water dynamics change because of forces of nature or human conduct and that, for the above reasons, the exclusive use of the Plan as a resourcetool for making land use decisions is discouraged; that land use entitlement requests must be reviewed on a project by project basis for the purpose of analyzing the availability and reliability of water resources for the project; and

WHEREAS, the City acknowledges its responsibility to take all necessary steps to address water supply emergency issues; and,

WHEREAS, the City is committed to water conservation and obligated to specific water conservation measures by virtue of the City water supply contract with United States Department of the Interior, Bureau of Reclamation.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Hollister hereby resolves as follows:

1. The Hollister Area Urban Water Management Plan 2020 ("the Plan") dated July 2021, is hereby adopted by the City Council of the City of Hollister (City) and incorporated into this resolution by reference. A copy of the Plan is available for public review during normal business hours at City Hall located at 375 Fifth Street, Hollister, California;

2. The City Manager is directed to file the Plan with the California Department of Water Resources by July 1, 2021;

3. The Plan, as adopted by the City, is not intended as a tool to be used exclusively by land use planning agencies as a substitute for a comprehensive study and investigation of water availability, reliability, and quality for development projects and land use changes proposed in San Benito County or the City of Hollister and San Juan Bautista, for the reasons stated in the recitals to this resolution;

4. The City Manager is hereby directed to implement the Water Conservation programs as funded through the City's Annual Budget, including water shortage contingency analysis and recommendations to the City Council regarding procedures to carry out effective water conservation and recycling programs in order to meet statutory and contractual obligations.

PASSED AND ADOPTED, by the City Council of the City of Hollister at a regular meeting held this 7th day of June, 2021, by the following vote:

AYES: Council Members Perez, Resendiz, Burns, and Mayor Velazquez.
NOES: None.
ABSTAINED: None.
ABSENT: None.

Ignacio Velazquez, Mayor

ATTEST:

Christine Black, MMC, City Clerk

APPROVED AS TO FORM:

Epperson Law Group PC

Jason S. Epperson, City Attorney

I, CHRISTINE BLACK, MMC, City Clerk of the City of Hollister, do hereby certify that the attached Resolution No. 2021-100 is an original Resolution, or true and correct copy of a City Resolution, duly adopted by the Council of the City of Hollister at a regular meeting of said Council held on the 7th day of June, 2021, at which meeting a quorum was present.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Official Seal of the City of Hollister this 7th day of June, 2021.

Christine Black, MMC
City Clerk of the City of Hollister

(Seal)

RESOLUTION 556

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SUNNYSLOPE COUNTY WATER DISTRICT APPROVING THE HOLLISTER AREA URBAN WATER MANAGEMENT PLAN 2020

WHEREAS, the Sunnyslope County Water District (District) has joined in a cooperative effort with the San Benito County Water District, and the City of Hollister in the preparation of an Urban Water Management Plan ("the Plan") pursuant to Water Code Section 10620 et. Seg., known as the Urban Water Management Planning Act; and,

WHEREAS, the study area for the Plan is the "Hollister Urban Area" comprised of the service areas for the City of Hollister and Sunnyslope County Water District as well as the immediate surrounding areas. This area overlies the North San Benito Groundwater Basin; and,

WHEREAS, one of the purposes of the Plan is to identify and quantify existing and planned sources of available water and the reliability of the water supplies without creating any rights or entitlement to water service or a specific level of water service; and,

WHEREAS, neither the Plan nor the statute mandating the adoption of the Plan encourages exclusive use of the Plan by land use entitlement agencies in making water-related land use decisions; and,

WHEREAS, because water is a changing resource, the Plan must be viewed as a snapshot of water availability and reliability based upon facts available at the time of creating the Plan; that water dynamics change because of forces of nature or human conduct and that, for the above reasons, the exclusive use of the Plan as a resource tool for making land use decisions is discouraged; that land use entitlement requests must be reviewed on a project by project basis for the purpose of analyzing and availability and reliability of water resources for the project; and,

WHEREAS, the District acknowledges its responsibility to take all necessary steps to address water supply emergency issues; and,

WHEREAS, the District is committed to water conservation and obligated to specific water conservation measures by virtue of the District water supply contract with the United States Department of the Interior, Bureau of Reclamation.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Sunnyslope County Water District hereby resolves as follows:

1. The Hollister Area Urban Water Management Plan 2020 ("the Plan") dated July 2021, is hereby adopted by the Board of Directors of the Sunnyslope County Water District (District) and incorporated into this resolution by reference. A copy of the Plan is available

for public Review during normal Business Hours at 3570 Airline Highway, Hollister, California;

2. The General Manager is directed to file the Plan with the California Department of Water Resources by July 1, 2021;

3. The Plan, as adopted by the District, is not intended as a tool to be used exclusively by land use planning agencies as a substitute for comprehensive study and investigation of water availability, reliability, and quality for development projects and land use changes proposed in San Benito County or the City of Hollister and San Juan Bautista, for the reasons stated in the recitals to this revolution;

4. The General Manager is hereby directed to implement the Water Conservation programs as funded through the District's Annual Budget, including water shortage contingency analysis and recommendations to the Board of Directors regarding procedures to carry out effective water conservation and recycling programs in order to meet statutory and contractual obligations.

PASSED AND ADOPTED, by the Board of Directors of the Sunnyslope County Water District at a Regular Meeting held this 15th day of June 2021, by the following vote:

AYES: Directors: *Alcorn, Buzzetta, Johnson, Parker*

NOES:

ABSENT:

Jerry Buzzetta, President

(Seal)

ATTEST:

By _____

Drew A. Lander, Secretary of Board of Directors

Appendix B
DWR Population Tool

Hollister - Population Using Persons-per-Connection								
	Year	# SF Connections	# MF/GQ Connections	Persons Per SF Connection	Persons Per MF/GQ Connection	SF Population	MF/GQ Population	Total Population
10 to 15 Year Baseline Population Calculations								
Year 1	1996	4,267	153	3.74	21.02	15,966	3,216	19,182
Year 2	1997	4,469	174	3.72	20.91	16,640	3,638	20,277
Year 3	1998	4,630	186	3.7	20.8	17,154	3,868	21,022
Year 4	1999	4,905	210	3.69	20.69	18,082	4,344	22,427
Year 5	2000	5,014	215	3.67	20.58	18,392	4,424	22,816
Year 6	2001	5,199	218	3.65	20.47	18,982	4,462	23,444
Year 7	2002	5,289	219	3.63	20.36	19,210	4,459	23,668
Year 8	2003	5,227	223	3.61	20.25	18,885	4,516	23,401
Year 9	2004	5,204	222	3.59	20.14	18,703	4,471	23,174
Year 10	2005	5,190	221	3.58	20.03	18,554	4,427	22,981
5 Year Baseline Population Calculations								
Year 1	2003	5,227	223	3.61	20.25	18,885	4,516	23,401
Year 2	2004	5,204	222	3.59	20.14	18,703	4,471	23,174
Year 3	2005	5,190	221	3.58	20.03	18,554	4,427	22,981
Year 4	2006	5,158	238	3.56	19.92	18,342	4,741	23,083
Year 5	2007	5,175	229	3.54	19.81	18,304	4,536	22,840
2015 Compliance Year Population Calculations								
	2015	5410	260	3.39	18.93	18,340	4,922	23,262

Sunnyslope - Population Using Persons-per-Connection								
	Year	# SF Connections	# MF/GQ Connections	Persons Per SF Connection	Persons Per MF/GQ Connection	SF Population	MF/GQ Population	Total Population
10 to 15 Year Baseline Population Calculations								
Year 1	1996	3,332	352	2.79	11.66	9,312	4,103	13,415
Year 2	1997	4,418	205	2.82	11.59	12,468	2,375	14,843
Year 3	1998	4,418	205	2.85	11.52	12,588	2,362	14,950
Year 4	1999	4,695	198	2.88	11.45	13,506	2,267	15,773
Year 5	2000	4,843	198	2.9	11.38	14,064	2,254	16,318
Year 6	2001	4,938	200	2.93	11.31	14,458	2,262	16,721
Year 7	2002	4,986	200	2.96	11.24	14,739	2,249	16,987
Year 8	2003	4,977	200	2.98	11.18	14,851	2,235	17,087
Year 9	2004	4,985	199	3.01	11.11	15,015	2,210	17,225
Year 10	2005	4,985	200	3.04	11.04	15,154	2,208	17,362
5 Year Baseline Population Calculations								
Year 1	2003	4,977	200	2.98	11.18	14,851	2,235	17,087
Year 2	2004	4,985	199	3.01	11.11	15,015	2,210	17,225
Year 3	2005	4,985	200	3.04	11.04	15,154	2,208	17,362
Year 4	2006	4,985	198	3.07	10.97	15,294	2,172	17,466
Year 5	2007	4,937	198	3.1	10.9	15,285	2,159	17,444
2015 Compliance Year Population Calculations								
	2015	5181	213	3.31	10.37	17,171	2,209	19,380

HUA - Population Using Persons-per-Connection								
	Year	# SF Connections	# MF/GQ Connections	Persons Per SF Connection	Persons Per MF/GQ Connection	SF Population	MF/GQ Population	Total Population
10 to 15 Year Baseline Population Calculations								
Year 1	1996	7,599	505	3.265	16.34	25,278	7,319	32,597
Year 2	1997	8,887	379	3.27	16.25	29,108	6,013	35,120
Year 3	1998	9,048	391	3.275	16.16	29,742	6,230	35,972
Year 4	1999	9,600	408	3.285	16.07	31,588	6,611	38,200
Year 5	2000	9,857	413	3.285	15.98	32,456	6,678	39,134
Year 6	2001	10,137	418	3.29	15.89	33,440	6,724	40,165
Year 7	2002	10,275	419	3.295	15.8	33,949	6,708	40,655
Year 8	2003	10,204	423	3.295	15.715	33,736	6,751	40,488
Year 9	2004	10,189	421	3.3	15.625	33,718	6,681	40,399
Year 10	2005	10,175	421	3.31	15.535	33,708	6,635	40,343
5 Year Baseline Population Calculations								
Year 1	2003	10,204	423	3.295	15.715	33,736	6,751	40,488
Year 2	2004	10,189	421	3.3	15.625	33,718	6,681	40,399
Year 3	2005	10,175	421	3.31	15.535	33,708	6,635	40,343
Year 4	2006	10,143	436	3.315	15.445	33,636	6,913	40,549
Year 5	2007	10,112	427	3.32	15.355	33,589	6,695	40,284
2015 Compliance Year Population Calculations								
	2015	10591	473	3.35	14.65	35,511	7,131	42,642

Appendix C
Future Water Demands

Map #	Project Number	Approval Date	Project Name	Applicant	Contact Name	Contact Number	Address	APN	Zone	Housing Type	Number of Units	Status
1	TM 2005-1	3/22/2007	West of Fairview	Award Homes	Jim Sullivan	408-985-6000	Fairview Rd	020-270-041 020-310-006 020-310-007 020-310-008 020-310-013 020-310-014 020-310-015	RWF	SFD	507	Building Permit
1	TM 2005-1	3/22/2007	West of Fairview	Award Homes	Jim Sullivan	408-985-6000	Fairview Rd	020-270-041 020-310-006 020-310-007 020-310-008 020-310-013 020-310-014 020-310-015	RWF	Duet	60	Building Permit
1	TM 2005-1	3/22/2007	West of Fairview	Award Homes	Jim Sullivan	408-985-6000	Fairview Rd	020-270-041 020-310-006 020-310-007 020-310-008 020-310-013 020-310-014 020-310-015	RWF	MF	100	Building Permit
2	TM 2009-2 CUP 2009-1 S&A 2009-6 S&A 2012-7 CUP 2012-2	5/27/2010	Silver Oaks/ Twin Oaks	Marilyn Ferreira Real Estate/ Miller Homes	Marty Miller	408-805-1318	Hwy 25 & Valley View Rd	057-150-015 057-150-018 057-150-019 057-150-021 057-150-022 057-150-023 057-150-025 057-150-026 057-150-027 057-150-028 057-150-029	R3-M/PZ	Age Restricted SFD	170	Under Construction
3	S&A 2013-3 TM 2013-1 CUP 2013-2	6/26/2013	Bella Sera/ Ladd Lane Apartments	North Florida Development/Ted Intravia	Ted Intravia	831-638-9403	382 Hillock Dr	057-230-013	NMU	MF	63	Under Construction
4	MS 2014-2 CUP 2014-1 TM 2013-5	3/27/2014	Cerrato	Union Community Partners	Century Communities	408-207-9499	510 Hillcrest Rd	054-250-045	R3-M/PZ	SFD	241	Under Construction
5	TM 2015-5	1/28/2016	El Cerro	DelCurto Brothers Construction	Darin DelCurto	831-801-6543	Hillcrest Rd & El Cerro Dr	020-120-114	R1-L/PZ	SFD	22	Under Construction
6	TM 2015-9 CUP 2016-3	1/28/2016	Farmstead	Alex Sywak	Alex Sywak	408-309-9253	South St & Westside Blvd	058-060-010	R1-L/PZ	SFD	13	Building Permit
7	TM 2016-2	5/26/2016	Cerro Verde	Robert Kutz	Bob Kutz	831-636-0108	Hillcrest Rd & El Cerro Dr	020-120-143 020-120-141	R1-L/PZ	N/A	N/A	Building Permit
8	TM 2016-3	6/22/2016 6/27/2019 (1-year Extension)	James Matthews	James Matthews/Tony Faria	Tony Faria	831-902-5150	1650 Cienega Rd	020-170-035	R1-L/PZ	SFD	8	Final Map
9	MS 2016-2	8/25/2016	Sandra Cross	Sandra Cross	Sandy Cross	408-832-2808	1640 Cienega Rd	020-170-034	R1-L/PZ	SFD	3	Engineering Review
10	TM 2016-4 CUP 2018-6	1/26/2017	Hillcrest Meadows	Hugh Bikle/Hillcrest Meadows LLC	Hugh Walker	831-443-0417	Trinity Dr & Sawtooth Dr	020-120-144 020-120-145	R1-L/PZ	SFD	49	Under Construction
11	MS 2017-1 CUP 2017-1	2/23/2017	Falconi Way	McDonald investments, Inc.	McDonald Investments, Inc	831-636-9906	491 Santa Ana Rd	054-500-019	R1	SFD	3	Under Construction
12	TM 2013-2 CUP 2014-7	4/27/2017	Allendale	DeNova Homes, Inc.	Mike Evans	925-852-0551	North St & Buena Vista Rd	053-370-038 053-370-037 019-130-027 019-130-026	R3-M/PZ	SFD	279	Under Construction
12	TM 2013-2 CUP 2014-7	4/27/2017	Allendale	DeNova Homes, Inc.	N/A	N/A	North St & Buena Vista Rd	053-370-038 053-370-037 019-130-027 019-130-026	R3-M/PZ	MF	60	S&A Approval Needed

Map #	Project Number	Approval Date	Project Name	Applicant	Contact Name	Contact Number	Address	APN	Zone	Housing Type	Number of Units	Status
13	TM 2016-5 CUP 2017-3 S&A 2016-13	5/25/2017	Los Pinars	Valles & Associates	Al Valles	831-902-5250	1603 & 1605 Cushman St	057-230-040 057-230-041	NMU	SFD	15	Building Permit
13	TM 2016-5 CUP 2017-3 S&A 2016-13	5/25/2017	Los Pinars	Valles & Associates	Al Valles	831-902-5250	1603 & 1605 Cushman St	057-230-040 057-230-041	NMU	MF	44	Building Permit
13	TM 2016-5 CUP 2017-3 S&A 2016-13	5/25/2017	Los Pinars	Valles & Associates	Al Valles	831-902-5250	1603 & 1605 Cushman St	057-230-040 057-230-041	NMU	Attached SFD	26	Building Permit
14	PZ 2015-5 CUP 2017-6 TM 2016-1 S&A 2017-6	2/20/2018	Roberts Ranch	Hollister Enterprise, LLC	Richard Scagliotti	925-979-1734	Fairview Rd & Mimosa Rd	057-049-010 057-049-002 020-310-009	R1-L/PZ	SFD	192	Building Permit
14	PZ 2015-5 CUP 2017-6 TM 2016-1 S&A 2017-6 S&A 2018-22 CUP 2019-3	6/27/2019	Roberts Ranch	Hollister Enterprise, LLC	Richard Scagliotti	925-979-1734	Fairview Rd & Mimosa Rd	057-049-010 057-049-002 020-310-009	R1-L/PZ	MF	49	Building Permit
15	TM 2017-2 S&A 2017-6 CUP 2017-19	1/25/2018 11/21/2019 (2 year extension)	Lynn Lake	Lynn Lake	Lynn Lake	831-801-1693	220 4th St	054-140-006	DMU	Attached SFD	5	Final Map
16	TM 2017-4 CUP 2017-19 S&A 2016-9	1/25/2018	Solorio Park I	Stewart Fahmy/California Land Development	Meritage Homes/Jon Cakus	925-543-4058	1001 4th St	052-080-001 052-300-001	WG	SFD	36	Under Construction
16	TM 2017-4 CUP 2017-19 S&A 2016-9	1/25/2018	Solorio Park I	Stewart Fahmy/California Land Development	Meritage Homes/Jon Cakus	925-543-4058	1001 4th St	052-080-001 052-300-001	R1-L/PZ	SFD	40	Under Construction
17	TM 2018-1 CUP 2018-1 S&A 2018-5	4/26/2018	Solorio Park II	Stewart Fahmy/California Land Development	Meritage Homes/Jon Cakus	925-543-4058	1040 South St	052-280-001	R1-L/PZ	SFD	25	Under Construction
18	TM 2017-3 CUP 2017-18 S&A 2017-9	4/26/2018	Mirabella II/ Westfield	Doug Ledeboer	Doug Ledeboer	925-683-7052	Buena Vista Rd & Miller Rd	019-120-038	R3-M/PZ	SFD	157	Under Construction
18	TM 2017-3 CUP 2017-18 S&A 2017-9	4/26/2018	Mirabella II/ Westfield	Doug Ledeboer	Doug Ledeboer	925-683-7052	Buena Vista Rd & Miller Rd	019-120-038	R3-M/PZ	MF	26	Under Construction
19	TM 2018-2 CUP 2018-2 S&A 2018-6	5/24/2018	Klauer Subdivision	Kraig Klauer	Kraig Klauer	831-801-5950	811 Santa Ana Rd	054-580-042	R1-L/PZ	SFD	9	Under Construction
19	TM 2018-2 CUP 2018-2 S&A 2018-6	5/24/2018	Klauer Subdivision	Kraig Klauer	Kraig Klauer	831-801-5950	811 Santa Ana Rd	054-580-042	R1-L/PZ	MF	3	Under Construction
20	MS 2018-3 S&A 2018-7	9/27/2018	221 Hawkins St	Alan Brookshire	Alan Brookshire	831-261-4786	221 Hawkins St	056-061-002	DMU	SFD	3	Final Map
21	TM 2018-3 CUP 2018-3	6/28/2018	Maple Park	Hugh Bikle	Hugh Walker	831-443-0417	Chappell Rd	019-340-002	R3-M/PZ	SFD	49	Under Construction
22	S&A 2018-18 S&A 2018-17 MS 2019-1 CUP 2018-14 TM 2019-1	9/27/2018	400 Block	DelCurto Brothers Construction/ Community Foundation for San Benito County	Darin DelCurto Gary Byrne	831-801-6543 831-630-1924	365 4th St, 430, 434, & 438 San Benito St	054-110-036 054-110-016 054-110-030	DMU	Condo	22	Building Permit
23	S&A 2019-5	5/23/2019	638 Line St	Manuel Alvarez	Manuel Alvarez	831-801-5342	638 Line St	052-010-017	R3-M/PZ	MF	2	Under Construction
24	S&A 2019-10 MS 2019-2	6/27/2019	Maggie Lesende	Maggie Lesende	Maggie Lesende	408-459-4660	814 Prospect Ave	056-050-013 056-050-014	NMU	MF	4	Engineering Review
25	MS 2019-3 CUP 2019-5	8/22/2019	Tony Faria	Tony Faria	Tony Faria	831-902-5150	1650 Cienega Rd	020-170-035	R1-L/PZ	SFD	4	Building Permit
26	S&A 2019-16	11/21/2019	Ladd Lane Apartments	David Huboi	Ty Intravia	831-638-9403	392 Hillock Dr	057-230-013	NMU	MF	28	Building Permit
27	S&A 2019-20	6/25/2020	114 4th St	John Giancola	John Giancola	408-857-5984	114 4th St	054-152-005	DMU	MF	2	Engineering Review
28	S&A 2020-4	6/25/2020	930 San Benito St	Paul & Robin Schweiger	Paul & Robin Schweiger	650-291-6739	930 San Benito St	056-080-018	HO	MF	3	Engineering Review

Map #	Project Number	Approval Date	Project Name	Applicant	Contact Name	Contact Number	Address	APN	Zone	Housing Type	Number of Units	Status
29	S&A 2020-7 CUP 2020-1	8/27/2020	390 West St	Navjit & Gurpreet Sangha	Navjit & Gurpreet Sangha	661-330-7779	390 West St	053-190-017	OT(M)	MF	2	Engineering Review
30	TM 2020-1 S&A 2020-9	8/27/2020	2001 Memorial/Tom King	Roger Mcdonald	Roger Mcdonald	831-801-0280	2001 Memorial Dr	057-770-040	R3	MF	16	Final Map
A	PZ 2013-2	N/A	Gonzalez north of Buena Vista (11.48 acres)	Fernando Gonzalez/Doug Ledeboer	Doug Ledeboer	925-683-7052	Buena Vista Rd	019-110-031 019-120-038	R3-M/PZ	N/A	N/A	Prezone for Annexation
B	PZ 2014-6	4/18/2016	Sywak/Powell St (8.04 acres)	Alex Sywak	Alex Sywak	408-309-9253	Powell St & A St	020-080-022	R1-L/PZ	N/A	N/A	Prezone for Annexation
C	PZ 2015-1	8/6/2018	Chappell Road (117.72 acres Residential; 17.43 acres NG Commercial)	PAD Investment Trust	Augie Dent	831-970-0318	Chappell Rd & Hwy 25 Bypass	019-170-083 019-170-084 019-330-005 019-330-011 019-350-006 019-350-008 019-350-009 019-350-010 019-350-011 019-350-012 019-350-013 019-350-014	R1-L/PZ & NG	N/A	N/A	Prezone for Annexation
D	PZ 2017-2	9/3/2019	Woodle (9.108 acres)	Hugh Bikle	Hugh Bikle	831-628-0826	1070 Buena Vista Rd	019-120-005	R3-M/PZ	N/A	N/A	Prezone for Annexation
E	PZ 2018-1	12/16/2019	Rosati (24.4 acres)	Highland Partners Group	Doug Ledeboer	925-683-7052	Santa Ana Rd & Memorial Dr Extension	019-310-002	R3-M/PZ	N/A	N/A	Prezone for Annexation
i	Allocations	4/28/2011	Pacific West Communities	Pacific West Communities	N/A	N/A	San Juan Rd	052-090-014	WG	MF	57	Allocations only
ii	Allocations	4/28/2011	Pivetti	John Pivetti	N/A	N/A	Valley View Rd & Juniper Dr	057-440-001	R4-H/PZ	SFD	24	Allocations only
iii	Allocations	5/28/2015	NATMAR	NATMAR, LP	N/A	N/A	Cienega Rd & Promise Wy	020-170-041	R1-L/PZ	SFD	11	Allocations only

Total Building Permits Issued From 2002 - 2019: 2002 - 2008: 0 building moratorium, **2009:** 33, **2010:** 19, **2011:** 166, **2012:** 28, **2013:** 39, **2014:** 110, **2015:** 68, **2016:** 271, **2017:** 377, **2018:** 239, **2019:** 395

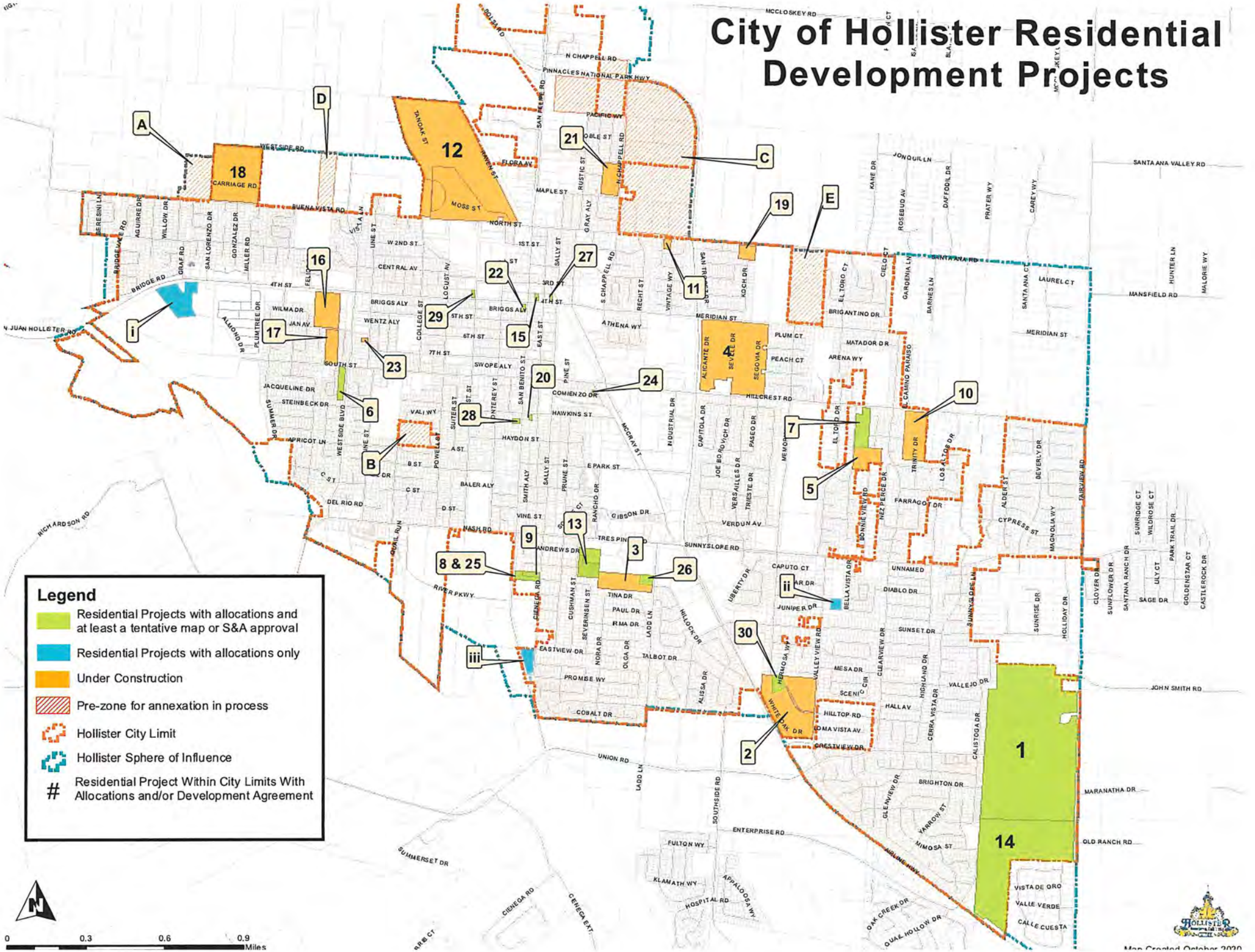
Note: In the Column "Approval Needed" projects that indicate "Final Map" have already received a tentative map approval by the planning commission and are required to submit for review a final/parcel/condo map which needs to be approved and recorded.

Note: In the Column "Approval Needed" projects that indicate "Engineering Review" will need to submit or have submitted improvement plans to the Engineering Department which must be reviewed and approved.

Note: In the Column "Approval Needed" projects that indicate "Building Permit" have received approval of improvement plans, but have not yet been issued a building permit for any vertical construction. Grading and other public improvements may be under construction prior to issuance of a building permit.

Note: In the Column "Approval Needed" projects that indicate "Allocations only" received allocations during the city's growth management ordinance and require additional entitlements such as Site & Architectural or Tentative Map approval from the planning commission.

Note: In the Column "Approval Needed" where it indicates "Pre-zone for Annexation" these area parcels in the process of being annexed from the County of San Benito to the City of Hollister. These properties currently have no residential or commercial entitlements.


City of Hollister Residential Development Projects
Legend
Residential Projects with allocations and at least a tentative map or S&A approval
Residential Projects with allocations only
Under Construction
Pre-zone for annexation in process
Hollister City Limit
Hollister Sphere of influence
Residential Project Within City Limits With Allocations and/or Development Agreement
0 0.3 0.6 0.9 Miles
Map Created October 2020

Sunnyslope County Water District
New Water Connections - Estimated Schedule

Project																						
High Zone (Single Family Residential)	**Homes**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
Santana Ranch	658	45	75	63	75	70	75	75	61	72	47											
Dividend Homes/Fairview Corners	189			52	55	62	20															
Hilden	3			1	1	1																
Ridgemark Golf Course Development	168				43		33		44	13	35											
Venture Estates (previously paid)	18					18																
Lee Property	137					35	67	35														
Vista Del Calabria - Lico South High Zone Portion	93				25	44	24															
Award Homes	471	45	60	55	72	73	69	42	38	62												
Roberts Ranch	194	45	74	75																		
Lompa Ridgemark Subdivison	90			45	45																	
Mota Property behind District Office 10 Acres	50											30	20									
East of Fairview, North of John Smith 95 Acres	475													75	75	75	75	75	75	25		
East of Fairview South of John Smith - Vigna Property 91 Acres	375																75	75	75	75	75	+80
East of Lee North of Venture Estates - Maldonado 29 Acres	145												75	70								
North of Maldonado - Igarashi 30 Acres	150													60	60	30						
Moheyuddin Property Gavilan College to High School 24 Acres	120											40	40	40								
Underwood Property East of Gavilan, South of Venture10 Acres	50											30	20									
High Zone (Multi Family Residential)	**Homes**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
Santana Ranch	56	56		56																		
Award Homes Apartments	100					33	33	34														
Award Homes Townhomes	60						30	30														
Roberts Ranch Townhomes	49	24	25																			
Gavilan On Campus Housing Apartments	60										30	30										
Ridgemark Assisted Living	155					50	50	55														
High Zone (Institutional/Government)	**AF**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
Santana Ranch School (Acre-Ft per year)	15	7.5	7.5																			
Gavilan College Campus Buildings (Acre-Ft per year)	45			15			15			15												
New High School (Acre-Ft per year)	45															30	15					
High Zone (Commercial)	**AF**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
NW Corner Fairview & Airline	0.5						0.5															
Ridgemark Hotel	26					10		10		6												
Ridgemark Commercial	30				5		10		10		5											
Gavilan College Retail (Acre-Ft per year)	10				5		5															
Middle Zone (Single Family Residential)	**Homes**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
Twin Oaks/Silver Oaks	147	40	30	37	40																	
Sunnyside Estates	65	65																				
Bennett Ranch	30	30																				
Vista Del Calabria - Lico South Middle Zone Portion	53		13	40																		
Cerro Verde	19	10	9																			
120 Enterprise Rd. - 10 Acres	50				25	25																
Bray Southside Rd	10		10																			
2910 Southside Rd - 5.3 Acres	26											26										
Bertuccio - Union & Southside Rd. - 97.5 Acres	450															75	75	75	75	75	75	+37
Lantz - SE of Well #2 - 3.8 Acres	19															19						
Lico North of Enterprise - 55.4 Acres	277										50	50	50	50	50	27						
King (APNs 57-770-040) 1.6 Acres	5		5																			
Piveetti (APN 57-440-001) 1.2 Acres	6								6													
Vandervoort (057-250-080) 3 Acres	15								15													
Churchill - Hillcrest & Fairview - 24 Acres	95				37	38	20															
Rovella - APN 025350058 - 14.7 Acres	74										40	34										
Williams - APN 019310009 - 20 Acres	40			20	20																	
Sywak - North of Hillcrest - 45 Acres	225									75	75	75										
Alves - APN 019310052 - 12 Acres	60									30	30											
King - APN 019310036 - 5 Acres	25									25												
Goodman - APN 019310037 - 4 Acres	20									20												
Barnes - APN 019310008 - 5 Acres	25									25												
Rosati East of Maze/Gabilan Schools - 23.5 Acres	135					35	35	65														
Dovin at Fairview & Mansfield - 42 Acres	210											75	75	60								
North of Santa Ana West of Kane - Berticcio 140 Acres	450															75	75	75	75	75	75	+250
South of McCloskey by Kane - 130 Aces	225																		75	75	75	+425
North of Edgewood - 28.5 Acres	143												73	70								
Russo - North of Santa Ana West of Carey - 10 Acres	50												30	20								
South of McCloskey at McCloskey Ct - 100 Acres	150																			75	75	+350
Moran - APN 025340001 - 39 Acres	195														65	65	65					
North of Santa Ana Valley West of Rodeo - 320 Acres	150																			75	75	+1450
Middle Zone (Multi Family Residential)	**AF**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
	0																					
Middle Zone (Commercial/Institutional)	**AF**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	
	0																					

	Units	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total Number of New Residential Units	**Homes**	**360**	**301**	**444**	**438**	**484**	**456**	**336**	**164**	**322**	**307**	**390**	**383**	**445**	**250**	**366**	**365**	**300**	**375**	**475**	**450**
Cumulative Number of New Residential Units from 2020	**Homes**	**360**	**661**	**1,105**	**1,543**	**2,027**	**2,483**	**2,819**	**2,983**	**3,305**	**3,612**	**4,002**	**4,385**	**4,830**	**5,080**	**5,446**	**5,811**	**6,111**	**6,486**	**6,961**	**7,411**
Total Population Served (3.31 persons/home)	**People**	**24,094**	**25,090**	**26,560**	**28,009**	**29,611**	**31,121**	**32,233**	**32,776**	**33,842**	**34,858**	**36,149**	**37,416**	**38,889**	**39,717**	**40,928**	**42,136**	**43,129**	**44,371**	**45,943**	**47,432**

New Acre Feet Commercial & Institutional	**AFY**	**7.5**	**7.5**	**15.0**	**10.0**	**10.0**	**30.5**	**10.0**	**10.0**	**21.0**	**5.0**	**0.0**	**0.0**	**0.0**	**0.0**	**30.0**	**15.0**	**0.0**	**0.0**	**0.0**	**0.0**
Cumulative New Acre Feet Commercial & Institutional from 2020	**AFY**	**7.5**	**15.0**	**30.0**	**40.0**	**50.0**	**80.5**	**90.5**	**100.5**	**121.5**	**126.5**	**126.5**	**126.5**	**126.5**	**126.5**	**156.5**	**171.5**	**171.5**	**171.5**	**171.5**	**171.5**

	Units	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Additional Water Supply Required (0.33 AFY / SFR)	**AFY**	**126**	**107**	**162**	**155**	**170**	**181**	**121**	**64**	**127**	**106**	**129**	**126**	**147**	**83**	**151**	**135**	**99**	**124**	**157**	**149**
Cumulative Additional Water Supply Required	**AFY**	**126**	**233**	**395**	**549**	**719**	**900**	**1,021**	**1,085**	**1,212**	**1,318**	**1,447**	**1,574**	**1,720**	**1,803**	**1,954**	**2,089**	**2,188**	**2,312**	**2,469**	**2,617**
Average Daily Supply Increase	**MGD**	**0.1**	**0.2**	**0.4**	**0.5**	**0.6**	**0.8**	**0.9**	**1.0**	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.9**	**2.0**	**2.1**	**2.2**	**2.3**

Legend

- **Under Construction**
- **Approved Tentative Map**
- **Tentative Map Application**
- **High Level Talk**
- **No Plans (Assume 5 homes/acre)**

Appendix D
Water Loss Audits

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Hollister (3510001)
Reporting Year: 2017 1/2017 - 12/2017

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ----------> Pcnt: Value:

Volume from own sources:	+ ?	4	594.286	MG/Yr	+ ?	2			MG/Yr
Water imported:	+ ?	4	386.063	MG/Yr	+ ?	6			MG/Yr
Water exported:	+ ?	4	1.437	MG/Yr	+ ?	6			MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 978.912 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

Pcnt: Value:

Billed metered:	+ ?	6	867.867	MG/Yr			
Billed unmetered:	+ ?	n/a		MG/Yr			
Unbilled metered:	+ ?	n/a		MG/Yr			
Unbilled unmetered:	+ ?	5	12.236	MG/Yr	1.25%		MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: ? 880.103 MG/Yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 98.809 MG/Yr

Apparent Losses

Pcnt: Value:

Unauthorized consumption:	+ ?		2.447	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	4	13.216	MG/Yr	1.50%		MG/Yr
Systematic data handling errors:	+ ?	6	2.170	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 17.833 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 80.975 MG/Yr

WATER LOSSES: 98.809 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 111.045 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	4	112.0	miles
Number of active AND inactive service connections:	+ ?	7	7,003	
Service connection density:	?		63	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 3 65.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	$7,863,568	$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	$4.39	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ?	5	$1,130.00	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 54 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Water imported
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Hollister (3510001)
Reporting Year: 2018 1/2018 - 12/2018

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

						Pcnt:	Value:	
Volume from own sources:	5	956.272	MG/Yr	2				MG/Yr
Water imported:	3	94.870	MG/Yr	8				MG/Yr
Water exported:	3	92.106	MG/Yr	8				MG/Yr
WATER SUPPLIED:		**959.036**	MG/Yr					

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	6	882.601	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	2.398	MG/Yr		2.398	MG/Yr
AUTHORIZED CONSUMPTION:		**884.999**	MG/Yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) **74.037** MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		2.398	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	13.441	MG/Yr	1.50%		MG/Yr
Systematic data handling errors:	5	2.207	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **18.045** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **55.993** MG/Yr

WATER LOSSES: **74.037** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **76.435** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	4	112.0	miles
Number of active AND inactive service connections:	8	7,003	
Service connection density:		63	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	4	65.0	psi

COST DATA

Total annual cost of operating water system:	10	$7,460,007	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$5.68	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$1,101.00	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 57 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Hollister (3510001)
Reporting Year: 2019 1/2019 - 12/2019

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED				Pcnt:	Value:	
Volume from own sources:	5	1,041.700	MG/Yr	2		MG/Yr
Water imported:	3	81.169	MG/Yr	8		MG/Yr
Water exported:	3	102.728	MG/Yr	8		MG/Yr
WATER SUPPLIED:		**1,020.141**	MG/Yr			

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION				Pcnt:	Value:	
Billed metered:	3	899.292	MG/Yr			
Billed unmetered:	n/a		MG/Yr			
Unbilled metered:	n/a		MG/Yr			
Unbilled unmetered:	5	2.550	MG/Yr		2.550	MG/Yr
AUTHORIZED CONSUMPTION:		**901.842**	MG/Yr			

Click here: ? for help using option buttons below

Use buttons to select percentage of water supplied OR value

				Pcnt:	Value:	
WATER LOSSES (Water Supplied - Authorized Consumption)		**118.299**	MG/Yr			
Apparent Losses						
Unauthorized consumption:		2.550	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	13.695	MG/Yr	1.50%		MG/Yr
Systematic data handling errors:	5	2.248	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **18.493** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **99.805** MG/Yr

WATER LOSSES: **118.299** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **120.849** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	5	112.0	miles
Number of active AND inactive service connections:	9	7,003	
Service connection density:		63	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	4	65.0	psi

COST DATA

Total annual cost of operating water system:	10	$7,460,007	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$5.69	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	5	$1,101.00	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 54 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: Sunnyslope County Water District (CA3510003)
Reporting Year: 2018 7/2018 - 6/2019

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED				Pcnt:	Value:	
Volume from own sources:	3	758.500	MG/Yr			MG/Yr
Water imported:	3	121.619	MG/Yr			MG/Yr
Water exported:	3	79.239	MG/Yr			MG/Yr
	3					
	5					
	5					
WATER SUPPLIED:		**800.880**	MG/Yr			

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION				Pcnt:	Value:	
Billed metered:	5	747.881	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	6	9.572	MG/Yr		9.572	MG/Yr
AUTHORIZED CONSUMPTION:		**757.453**	MG/Yr			

Click here: ? for help using option buttons below

Use buttons to select percentage of water supplied **OR** value

				Pcnt:	Value:	
WATER LOSSES (Water Supplied - Authorized Consumption)		**43.427**	MG/Yr			
Apparent Losses						
Unauthorized consumption:		2.002	MG/Yr	0.25%		MG/Yr
Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed						
Customer metering inaccuracies:	3	7.554	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:	5	1.870	MG/Yr	0.25%		MG/Yr
Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed						
Apparent Losses:		**11.426**	MG/Yr			
Real Losses (Current Annual Real Losses or CARL)						
Real Losses = Water Losses - Apparent Losses:		**32.001**	MG/Yr			
WATER LOSSES:		**43.427**	MG/Yr			

NON-REVENUE WATER			
NON-REVENUE WATER:		**52.999**	MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA			
Length of mains:	8	82.9	miles
Number of active AND inactive service connections:	9	6,116	
Service connection density:		74	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	5	72.0	psi

COST DATA				
Total annual cost of operating water system:	10	$5,948,188	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$4.04	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$256.16	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 51 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: Sunnyslope County Water District (CA3510003)
Reporting Year: 2019 7/2019 - 6/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED					Pcnt:	Value:	
Volume from own sources:	3	890.579	MG/Yr	3			MG/Yr
Water imported:	3	57.556	MG/Yr	5			MG/Yr
Water exported:	3	131.592	MG/Yr	5			MG/Yr
WATER SUPPLIED:		**816.543**	MG/Yr				

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION				Pcnt:	Value:	
Billed metered:	5	789.054	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	6	4.571	MG/Yr		4.571	MG/Yr
AUTHORIZED CONSUMPTION:		**793.625**	MG/Yr			

Click here: ? for help using option buttons below

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)			Pcnt:	Value:	
		22.918	MG/Yr		
Apparent Losses					
Unauthorized consumption:		2.041	MG/Yr	0.25%	MG/Yr
Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed					
Customer metering inaccuracies:	3	7.970	MG/Yr	1.00%	MG/Yr
Systematic data handling errors:	5	1.973	MG/Yr	0.25%	MG/Yr
Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed					
Apparent Losses:		**11.984**	MG/Yr		
Real Losses (Current Annual Real Losses or CARL)					
Real Losses = Water Losses - Apparent Losses:		**10.933**	MG/Yr		
WATER LOSSES:		**22.918**	MG/Yr		

NON-REVENUE WATER			
NON-REVENUE WATER:		**27.489**	MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA			
Length of mains:	8	82.9	miles
Number of active AND inactive service connections:	9	6,293	
Service connection density:		76	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	5	72.0	psi

COST DATA				
Total annual cost of operating water system:	10	$5,300,000	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$4.10	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$256.16	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 51 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access
+ Click to add a comment

Water Audit Report for: Sunnyslope County Water District (CA3510003)
Reporting Year: 2017 7/2017 - 6/2018

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

						Pcnt:	Value:	
Volume from own sources:	3	929.964	MG/Yr	3				MG/Yr
Water imported:	3	32.324	MG/Yr	6				MG/Yr
Water exported:	3	194.567	MG/Yr	6				MG/Yr
WATER SUPPLIED:		**767.721**	MG/Yr					

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option

				Pcnt:	Value:	
Billed metered:	5	726.101	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	6	7.009	MG/Yr		7.009	MG/Yr
AUTHORIZED CONSUMPTION:		**733.110**	MG/Yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

34.610 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.919	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	7.334	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:		1.815	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **11.069** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **23.542** MG/Yr

WATER LOSSES: **34.610** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **41.620** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	78.9	miles
Number of active AND inactive service connections:	7	5,917	
Service connection density:		75	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: 5 72.0 psi

COST DATA

Total annual cost of operating water system:	10	$5,948,188	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$3.77	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$256.16	$/Million gallons ☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 51 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access
+ Click to add a comment

Water Audit Report for: Sunnyslope County Water District (CA3510003)
Reporting Year: 2016 7/2016 - 6/2017

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

						Pcnt:	Value:	
Volume from own sources:	3	1,077.375	MG/Yr	3				MG/Yr
Water imported:	3	0.051	MG/Yr	6				MG/Yr
Water exported:	3	360.409	MG/Yr	6				MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 717.017 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option

				Pcnt:	Value:	
Billed metered:	4	660.724	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	6	5.753	MG/Yr		5.753	MG/Yr

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: 666.477 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 50.540 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.793	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	6.674	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:		1.652	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 10.118 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 40.422 MG/Yr

WATER LOSSES: 50.540 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 56.293 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	78.9	miles
Number of active AND inactive service connections:	9	5,731	
Service connection density:		73	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: 6 72.0 psi

COST DATA

Total annual cost of operating water system:	10	$5,948,188	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$3.31	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$367.92	$/Million gallons ☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 50 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Billed metered
3: Water exported

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access
+ Click to add a comment

Water Audit Report for: Sunnyslope County Water District
Reporting Year: 2015/2016 | 7/2015 - 6/2016

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

		Grading			Grading	Pcnt:	Value:	
Volume from own sources:	912.829	3	MG/Yr		3			MG/Yr
Water imported:	18.116	3	MG/Yr		6			MG/Yr
Water exported:	319.468	3	MG/Yr		6			MG/Yr
WATER SUPPLIED:	**611.477**		MG/Yr					

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option

		Grading		Pcnt:	Value:	
Billed metered:	598.251	4	MG/Yr			
Billed unmetered:	0.000	n/a	MG/Yr			
Unbilled metered:	0.000	n/a	MG/Yr			
Unbilled unmetered:	1.529	4	MG/Yr		1.529	MG/Yr
AUTHORIZED CONSUMPTION:	**599.780**		MG/Yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) **11.697** MG/Yr

Apparent Losses

		Grading		Pcnt:	Value:	
Unauthorized consumption:	1.529		MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

		Grading				
Customer metering inaccuracies:	6.043	3	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:	1.496		MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **9.067** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **2.630** MG/Yr

WATER LOSSES: **11.697** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **13.226** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

		Grading		
Length of mains:	78.9	8	miles	
Number of active AND inactive service connections:	5,562	9		
Service connection density:	70		conn./mile main	
Are customer meters typically located at the curbstop or property line?	Yes			(length of service line, beyond the property boundary, that is the responsibility of the utility)
Average length of customer service line:				

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

		Grading		
Average operating pressure:	72.0	5	psi	

COST DATA

		Grading		
Total annual cost of operating water system:	$5,442,218	10	$/Year	
Customer retail unit cost (applied to Apparent Losses):	$2.88	8	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	$367.92	5	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 49 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Billed metered
3: Water exported

Appendix E
Drought Reliability Assessment

Customer Water Use Worksheet (Potable and Non-Potable Combined) - Optional Planning Tool

= auto-filled cell

Indicate units: *[include pick list]*

Part 1: Current (2020) Gross Water Use

[use of monthly data is recommended]

	Use Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020 Tot.
2020	Single-family Residential	211	196	270	312	210	436	418	486	399	354	355	259	3,905
	Multi-family Residential	36	32	39	41	34	59	51	58	50	47	49	38	533
	Commercial	37	33	35	30	26	42	53	50	45	43	49	45	489
	Industrial	12	11	14	9	8	14	12	16	19	16	17	10	158
	Institutional and Governmental													0
	Landscape Irrigation	5	4	21	28	10	56	54	65	54	44	43	23	407
	Sales to Other Agencies													0
	Agricultural	0	0	0	0	0	1	1	1	1	0	0	0	5
	Other 1	0	1	0	3	0	7	3	4	2	4	3	3	30
	Non Potable Demand	7	4	6	6	7	8	11	12	11	13	9	7	100
	Other 3													0
	Customer Water Use Subtotal	309	281	385	430	296	622	603	691	580	520	524	386	5,627
	Distribution System Water Loss	80	80	80	80	80	80	80	80	80	80	80	80	956
	2020 Total Gross Water Use	389	361	465	509	375	702	682	771	660	600	603	465	6,583
Past Use	2016													
	2017													
	2018													
	2019													

Part 2: Projected Gross Water Use

2025	2030	2035	2040	2045 (opt)
4,050	4,060	4,070	4,080	
4,778	5,833	7,163	8,493	
591	634	634	634	
529	611	616	661	
158	158	158	158	
0	0	0	0	
265	265	265	265	
10,371	11,562	12,907	14,291	0
1,037	1,156	1,291	1,429	0
11,408	12,718	14,197	15,720	0

Part 3: Estimating Gross Water Use for next 5 years

[use of monthly data is recommended]

For Drought Risk Assessment	Change from 2020	5	4	7	8	4	14	13	15	12	11	11	7	111	
	2021 Gross Water Use	394	365	471	517	380	715	695	786	672	611	614	472	6,694	Used for Year 1 of DRA
	Change from 2021	7	6	8	9	6	12	12	13	11	10	10	8	111	
	2022 Gross Water Use	401	371	479	526	386	727	707	799	683	621	624	480	6,806	Used for Year 2 of DRA
	Change from 2022	7	6	8	9	6	12	12	13	11	10	10	8	111	
	2023 Gross Water Use	407	377	487	535	392	739	718	813	695	631	635	488	6,917	Used for Year 3 of DRA
	Change from 2023	7	6	8	9	6	12	12	13	11	10	10	8	111	
	2024 Gross Water Use	414	383	495	543	399	751	730	826	706	641	645	496	7,028	Used for Year 4 of DRA
	Change from 2024	7	6	8	9	6	12	12	13	11	10	10	8	111	
	2025 Gross Water Use	420	389	503	552	405	763	742	839	717	651	655	504	7,140	Used for Year 5 of DRA

Water Supply Worksheet (Potable and Non-Potable Combined) - Optional Planning Tool

= auto-filled cell

Indicate units: *[include pick list]*

Part 1: SUMMARY: Existing Supply Tables *[use of monthly data is recommended]*

Total Supply		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
eAR (for comparison)														
2020 Actual Use		476	265	364	422	449	551	711	769	720	822	576	464	6,583
Normal Year		335	308	398	437	323	604	589	666	571	521	520	400	5,672
Single Dry Year		277	357	462	507	375	701	684	773	662	604	604	465	6,472
Multi-Year Drought	2021 (1st year)	355	328	424	466	342	644	626	708	605	550	553	425	6,025
	2022 (2nd year)	360	334	431	473	348	655	636	720	615	559	562	432	6,125
	2023 (3rd year)	366	339	438	481	353	665	647	732	625	568	571	439	6,225
	2024 (4th year)	372	345	445	489	359	676	657	743	635	577	580	446	6,326
	2025 (5th year)	378	350	452	497	364	687	668	755	645	586	590	453	6,426

Part 2: SUMMARY: Existing and Planned Supplies

Total Supply		2025	2030	2035	2040	2045 (opt)
Normal		100	100	100	100	0
Single Dry Year		13,088	13,088	13,088	13,088	0
Multi-Year Drought	Year 1	10,963	10,963	10,963	10,963	0
	Year 2	11,826	11,826	11,826	11,826	0
	Year 3	11,854	11,854	11,854	11,854	0
	Year 4	10,963	10,963	10,963	10,963	0
	Year 5	10,963	10,963	10,963	10,963	0

Part 1: Individual: Existing Supply (current monthly conditions *[use of monthly data is recommended]*

Supply Source		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Source 1: CVP		CVP (Lessalt and West Hills												
2020 Actual use of supply		373	203	268	335	294	374	529	520	533	502	310	324	4,564
Normal Year		328	304	392	431	316	595	579	655	560	508	511	393	5,572
Single Dry Year		222	206	266	292	214	403	392	443	379	344	346	266	3,775
Multi-Year Drought	2021 (1st year)	289	267	346	379	278	524	510	577	493	448	450	346	4,908
	2022 (2nd year)	275	255	330	362	266	500	486	550	470	427	430	330	4,681
	2023 (3rd year)	222	206	266	292	214	403	392	443	379	344	346	266	3,775
	2024 (4th year)	222	206	266	292	214	403	392	443	379	344	346	266	3,775
	2025 (5th year)	222	206	266	292	214	403	392	443	379	344	346	266	3,775
Source 2:		Groundwater												
2020 Actual use of supply		97	57	88	79	150	166	168	237	177	310	257	133	1,919
Normal Year														0
Single Dry Year		48	148	191	209	154	289	281	318	272	247	248	191	2,597
Multi-Year Drought	2021 (1st year)	60	55	72	79	58	109	106	120	102	93	93	72	1,017
	2022 (2nd year)	79	73	95	104	76	144	140	158	135	123	123	95	1,344
	2023 (3rd year)	138	128	165	182	133	251	244	276	236	214	216	166	2,350
	2024 (4th year)	144	133	172	189	139	262	255	288	246	224	225	173	2,451
	2025 (5th year)	150	139	180	197	145	273	265	300	256	233	234	180	2,551
Source 3:		CVP Supplemental												
2020 Actual use of supply		0												0
Normal Year		0												0
Single Dry Year														0
Multi-Year Drought	2021 (1st year)													0
	2022 (2nd year)													0
	2023 (3rd year)													0
	2024 (4th year)													0
	2025 (5th year)													0
Source 4:		Recycled Water												
2020 Actual use of supply		6	5	7	8	6	11	10	12	10	9	9	7	100
Normal Year		7	4	6	6	7	8	11	12	11	13	9	7	100
Single Dry Year		7	4	6	6	7	8	11	12	11	13	9	7	100
Multi-Year Drought	2021 (1st year)	6	5	7	8	6	11	10	12	10	9	9	7	100
	2022 (2nd year)	6	5	7	8	6	11	10	12	10	9	9	7	100
	2023 (3rd year)	6	5	7	8	6	11	10	12	10	9	9	7	100
	2024 (4th year)	6	5	7	8	6	11	10	12	10	9	9	7	100
	2025 (5th year)	6	5	7	8	6	11	10	12	10	9	9	7	100

Part 2: Individual: Existing and Planned Supplies

Supply Source		2025	2030	2035	2040	2045 (opt)
Normal		0	0	0	0	
Single Dry Year		5,388	5,388	5,388	5,388	
Multi-Year Drought	Year 1	3,013	3,013	3,013	3,013	
	Year 2	4,126	4,126	4,126	4,126	
	Year 3	3,904	3,904	3,904	3,904	
	Year 4	3,013	3,013	3,013	3,013	
	Year 5	3,013	3,013	3,013	3,013	
Normal		0	0	0	0	
Single Dry Year		5,600	5,600	5,600	5,600	
Multi-Year Drought	Year 1	5,600	5,600	5,600	5,600	
	Year 2	5,600	5,600	5,600	5,600	
	Year 3	5,600	5,600	5,600	5,600	
	Year 4	5,600	5,600	5,600	5,600	
	Year 5	5,600	5,600	5,600	5,600	
Normal		0	0	0	0	
Single Dry Year		2,000	2,000	2,000	2,000	
Multi-Year Drought	Year 1	2,250	2,250	2,250	2,250	
	Year 2	2,000	2,000	2,000	2,000	
	Year 3	2,250	2,250	2,250	2,250	
	Year 4	2,250	2,250	2,250	2,250	
	Year 5	2,250	2,250	2,250	2,250	
Normal		100	100	100	100	
Single Dry Year		100	100	100	100	
Multi-Year Drought	Year 1	100	100	100	100	
	Year 2	100	100	100	100	
	Year 3	100	100	100	100	
	Year 4	100	100	100	100	
	Year 5	100	100	100	100	

5-year Drought Risk Assessment Tool (potable and non-potable)

	= auto calculated	
	= From prior tables	

5-year Drought Risk Assessment Tables to address Water Code Section 10635(b)

2021	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total *Can use this column to populate Table 7-5*
Gross Water Use [Use Worksheet]	394	365	471	517	380	715	695	786	672	611	614	472	6,694
Total Supplies [Supply Worksheet]	355	328	424	466	342	644	626	708	605	550	553	425	6,025
Surplus/Shortfall w/o WSCP Action	-39	-36	-47	-52	-38	-72	-70	-79	-67	-61	-61	-47	-669
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit	39	36	47	52	38	72	70	79	67	61	61	47	669
Revised Surplus/(shortfall)	0	0	0	0	0	0	0	0	0	0	0	0	0
Resulting % Use Reduction from WSCP action	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

2022	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total
Gross Water Use [Use Worksheet]	401	371	479	526	386	727	707	799	683	621	624	480	6,806
Total Supplies [Supply Worksheet]	360	334	431	473	348	655	636	720	615	559	562	432	6,125
Surplus/Shortfall w/o WSCP Action	-40	-37	-48	-53	-39	-73	-71	-80	-68	-62	-62	-48	-681
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit	40	37	48	53	39	73	71	80	68	62	62	48	681
Revised Surplus/(shortfall)	0	0	0	0	0	0	0	0	0	0	0	0	0
Resulting % Use Reduction from WSCP action	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

2023	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total
Gross Water Use [Use Worksheet]	407	377	487	535	392	739	718	813	695	631	635	488	6,917
Total Supplies [Supply Worksheet]	366	339	438	481	353	665	647	732	625	568	571	439	6,225
Surplus/Shortfall w/o WSCP Action	-41	-38	-49	-54	-39	-74	-72	-81	-69	-63	-63	-49	-692
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit	41	38	49	53	39	74	72	81	69	63	63	49	692
Revised Surplus/(shortfall)	0	0	0	0	0	0	0	0	0	0	0	0	0
Resulting % Use Reduction from WSCP action	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

2024	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total
Gross Water Use [Use Worksheet]	414	383	495	543	399	751	730	826	706	641	645	496	7,028
Total Supplies [Supply Worksheet]	372	345	445	489	359	676	657	743	635	577	580	446	6,326
Surplus/Shortfall w/o WSCP Action	-42	-39	-50	-54	-40	-75	-73	-82	-70	-64	-64	-50	-703
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit	41	38	50	54	40	75	73	83	71	64	64	50	703
Revised Surplus/(shortfall)	0	0	0	0	0	0	0	0	0	0	0	0	0
Resulting % Use Reduction from WSCP action	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

2025	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total
Gross Water Use [Use Worksheet]	420	389	503	552	405	763	742	839	717	651	655	504	7,140
Total Supplies [Supply Worksheet]	378	350	452	497	364	687	668	755	645	586	590	453	6,426
Surplus/Shortfall w/o WSCP Action	-42	-39	-50	-55	-41	-76	-74	-84	-72	-65	-65	-50	-714
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit	42	39	50	55	41	76	74	84	72	65	66	50	714
Revised Surplus/(shortfall)	0	0	0	0	0	0	0	0	0	0	0	0	0
Resulting % Use Reduction from WSCP action	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

The Climate Change Vulnerability Assessment is taken from the Climate Change Handbook for Regional Water Planning, USEPA and DWR, 2011. The vulnerability assessment highlights those water-related resources that are important to a region and are sensitive to climate change.

I. Water Demand

☐ *Are there major industries that require cooling/process water in your planning region?*

- There are no major industries that require cooling water.

☒ *Does water use vary by more than 50% seasonally in parts of your region?*

- Seasonal water use, which is primarily outdoor water use, is expected to increase as average temperatures increase and droughts become more frequent.

☐ *Are crops grown in your region climate-sensitive? Would shifts in daily heat patterns, such as how long heat lingers before night-time cooling, be prohibitive for some crops?*

- The retailers do not provide any water to agricultural users.

☐ *Do groundwater supplies in your region lack resiliency after drought events?*

- Droughts are expected to become more frequent and more severe in the future. Droughts would result in additional groundwater production and decrease water levels in the short term. The basin can and has recovered from droughts lasting up to four years.

☒ *Are water use curtailment measures effective in your region?*

- The current drought and associated mandates, were effective reducing demand by 25 to 35 percent for Sunnyslope and Hollister

☐ *Are some instream flow requirements in your region either currently insufficient to support aquatic life, or occasionally unmet?*

- The San Benito River is ephemeral and does not have any in stream flow requirements. In addition, the river recharges groundwater over most of the basin increased groundwater production in the Hollister area is unlikely to significantly reduce flow

II. Water Supply

☒ *Does a portion of the water supply in your region come from snowmelt?*

- Snowmelt is expected to decrease as the climate warms. Water systems supplied by snowmelt are therefore potentially vulnerable to climate change.
- The retailers rely on imported CVP water that is supplied in part by snow melt.

☒ *Does part of your region rely on water diverted from the Delta, imported from the Colorado River, or imported from other climate-sensitive systems outside your region?*

- Some imported or transferred water supplies are sources from climate-sensitive watersheds, including water imported from the Delta.
- The retailers rely on imported CVP water that is supplied in part by the Delta system.

☐ *Does part of your region rely on coastal aquifers? Has salt intrusion been a problem in the past?*

☐ *Would your region have difficulty in storing carryover supply surpluses from year to year?*

- The basin has sufficient groundwater storage to potential store water as a reserve for droughts/ Systems that can store more water may be more resilient to droughts.

☐ *Has your region faced a drought in the past during which it failed to meet local water demands?*

- The region has handled the current multiple through municipal conservation and reliance on groundwater storage

☐ *Does your region have invasive species management issues at your facilities, along conveyance structures, or in habitat areas?*

III. Water Quality

☐ *Are increased wildfires a threat in your region? If so, does your region include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?*

- Some areas are expected to become more vulnerable to wildfires over time. To identify whether this is the case for parts of your region, the California Public Interest Energy Research (PIER)Program has posted wildfire susceptibility projections as a Google Earth application at: *http://cal-adapt.org/fire/*. These projections are only the results of a single study and are not intended for analysis, but can aid in qualitatively answering this question. Read the application's disclaimers carefully to be aware of its limitations.

☐ *Does part of your region rely on surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?*

- Warming temperatures will result in lower dissolved oxygen levels in water bodies, which are exacerbated by algal blooms and in turn enhance eutrophication. Changes in streamflows may alter pollutant concentrations in water bodies.

☐ *Are seasonal low flows decreasing for some waterbodies in your region? If so, are the reduced low flows limiting the waterbodies' assimilative capacity?*

- In the future, low flow conditions are expected to be more extreme and last longer. This may result in higher pollutant concentrations where loadings increase or remain constant.

☐ *Are there beneficial uses designated for some water bodies in your region that cannot always be met due to water quality issues?*

- In the future, low flows are expected decrease, and to last longer. This may result in higher pollutant concentrations where loadings increase or remain constant.

☐ *Does part of your region currently observe water quality shifts during rain events that impact treatment facility operation?*

- While it is unclear how average precipitation will change with temperature, it is generally agreed that storm severity will probably increase. More intense, severe storms may lead to increased erosion, which will increase turbidity in surface waters. Areas that already observe water quality responses to rainstorm intensity may be especially vulnerable.

IV. Sea Level Rise

☐ *Has coastal erosion already been observed in your region?*

- Coastal erosion is expected to occur over the next century as sea levels rise.

☐ *Are there coastal structures, such as levees or breakwaters, in your region?*

- Coastal structures designed for a specific mean sea level may be impacted by sea level rise.

☐ *Is there significant coastal infrastructure, such as residences, recreation, water and wastewater treatment, tourism, and transportation) at less than six feet above mean sea level in your region?*

- Coastal flooding will become more common, and will impact a greater extent of property, as sea levels rise. Critical infrastructure in the coastal floodplain may be at risk.
- Digital elevation maps should be compared with locations of coastal infrastructure.

☐ *Are there climate-sensitive low-lying coastal habitats in your region?*

- Low-lying coastal habitats that are particularly vulnerable to climate change include estuaries and coastal wetlands that rely on a delicate balance of freshwater and salt water.

☐ *Are there areas in your region that currently flood during extreme high tides or storm surges?*

- Areas that are already experiencing flooding during storm surges and very high tides, are more likely to experience increased flooding as sea levels rise.

☐ *Is there land subsidence in the coastal areas of your region?*

- Land subsidence may compound the impacts of sea level rise.

☐ *Do tidal gauges along the coastal parts of your region show an increase over the past several decades?*

- Local sea level rise may be higher or lower than state, national, or continental projections.
- Planners can find information on local tidal gauges at *http://tidesandcurrents.noaa.gov/sltrends/sltrends_states.shtml?region=ca*

V. Flooding

☐ *Does critical infrastructure in your region lie within the 200-year floodplain? DWR's best available floodplain maps are available at: http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/best_available_maps/*

- While it is unclear how average precipitation will change with temperature, it is generally agreed that storm severity will probably increase. More intense, severe storms may lead to higher peak flows and more severe floods.
- Refer to FEMA floodplain maps and any recent FEMA, US Army Corps of Engineers, or DWR studies that might help identify specific local vulnerabilities for your region. Other follow-up questions that might help answer this question:

    1. What public safety issues could be affected by increased flooding events or intensity? For example, evacuation routes, emergency personnel access, hospitals, water treatment and wastewater treatment plants, power generation plants and fire stations should be considered.
    2. Could key regional or economic functions be impacted from more frequent and/or intense flooding?

☐ *Does part of your region lie within the Sacramento-San Joaquin Drainage District?*

- The SSJDD contains lands that are susceptible to overflows from the Sacramento and San Joaquin Rivers, and are a key focus of the Central Valley Flood Protection Plan. (*http://www.water.ca.gov/cvfmp/program.cfm*).

☐ *Does aging critical flood protection infrastructure exist in your region?*

- Levees and other flood protection facilities across the state of California are aging and in need of repair. Due to their overall lowered resiliency, these facilities may be particularly vulnerable to climate change impacts.
- DWR is evaluating more than 300 miles of levees in the San Joaquin and Sacramento Rivers Valleys and the Delta (*http://www.water.ca.gov/levees/*).

☐ *Have flood control facilities (such as impoundment structures) been insufficient in the past?*

- Reservoirs and other facilities with impoundment capacity may be insufficient for severe storms in the future. Facilities that have been insufficient in the past may be particularly vulnerable.

☐ *Are wildfires a concern in parts of your region?*

- Wildfires alter the landscape and soil conditions, increasing the risk of flooding within the burn and downstream areas. Some areas are expected to become more vulnerable to wildfires over time. To identify whether this is the case for parts of your region, the California Public Interest Energy Research Program (PIER) has posted wildfire susceptibility projections as a Google Earth application at: *http://cal-adapt.org/fire/*. These projections are the results of only a single study and are not intended for analysis, but can aid in qualitatively answering this question. Read the application's disclaimers carefully to be aware of its limitations.

VI. Ecosystem and Habitat Vulnerability

☐ *Does your region include inland or coastal aquatic habitats vulnerable to erosion and sedimentation issues?*

- Erosion is expected to increase with climate change, and sedimentation is expected to shift. Habitats sensitive to these events may be particularly vulnerable to climate change.

☐ *Does your region include estuarine habitats which rely on seasonal freshwater flow patterns?*

- Seasonal high and low flows, especially those originating from snowmelt, are already shifting in many locations.

☐ *Do climate-sensitive fauna or flora populations live in your region?*

- Some specific species are more sensitive to climate variations than others.

- ☐ *Do endangered or threatened species exist in your region? Are changes in species distribution already being observed in parts of your region?*
  - Species that are already threatened or endangered may have a lowered capacity to adapt to climate change.

- ☐ *Does the region rely on aquatic or water-dependent habitats for recreation or other economic activities?*
  - Economic values associated with natural habitat can influence prioritization.

- ☐ *Are there rivers in your region with quantified environmental flow requirements or known water quality/quantity stressors to aquatic life?*
  - Constrained water quality and quantity requirements may be difficult to meet in the future.

- ☐ *Do estuaries, coastal dunes, wetlands, marshes, or exposed beaches exist in your region? If so, are coastal storms possible/frequent in your region?*
  - Storm surges are expected to result in greater damage in the future due to sea level rise. This makes fragile coastal ecosystems vulnerable.

- ☐ *Does your region include one or more of the habitats described in the Endangered Species Coalition's Top 10 habitats vulnerable to climate change (http://www.itsgettinghotoutthere.org/)?*
  - These ecosystems are particularly vulnerable to climate change.

- ☐ *Are there areas of fragmented estuarine, aquatic, or wetland wildlife habitat within your region? Are there movement corridors for species to naturally migrate? Are there infrastructure projects planned that might preclude species movement?*
  - These ecosystems are particularly vulnerable to climate change.

VII. Hydropower

- ☐ *Is hydropower a source of electricity in your region?*
  - As seasonal river flows shift, hydropower is expected to become less reliable in the future.

☐ *Are energy needs in your region expected to increase in the future? If so, are there future plans for hydropower generation facilities or conditions for hydropower generation in your region?*

- Energy needs are expected to increase in many locations as the climate warms. This increase in electricity demand may compound decreases in hydropower production, increasing its priority for a region.

Appendix F
SB 20x2020 Compliance

SB X7-7 2020 Compliance Forms: Hollister

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	25,963
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use

Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use*	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
	3,319			-		-	**3,319**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	CVP Water

This water source is *(check one)* **:**

☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	2,114	-	2,114

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	COH Wells
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	950		950

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	SSWD
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	255		255

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

2020 Compliance Year	2020 Surface Reservoir Augmentation					2020 Groundwater Recharge			Total Deductible Volume of Indirect Recycled Water Entering the Distribution System
	Volume Discharged from Reservoir for Distribution System Delivery[1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss[1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility[1,2]	Transmission/ Treatment Losses[1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
			-		-			-	-

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility **(For use only by agencies that are deducting process water) Choose Only One**	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.1: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 1)*

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction	2020 Industrial Water Use	Percent Industrial Water	**Eligible for Exclusion Y/N**
	3,319		0%	NO

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.2: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 2)*

Criteria 2
Industrial water use is equal to or greater than 15 GPCD

2020 Compliance Year	2020 Industrial Water Use	2020 Population	2020 Industrial GPCD	**Eligible for Exclusion Y/N**
		25,963	-	NO

NOTES:

Data from this table will not be entered into WUEdata. Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.3: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 3)*

Criteria 3
Non-industrial use is equal to or less than 120 GPCD

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	2020 Industrial Water Use	2020 Non-industrial Water Use	2020 Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
	3,319		3,319	25,963	114	YES

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility ***(For** use only by agencies that are deducting process water using Criteria 4)*

Criteria 4

Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE

"Disadvantaged Community" status was determined using one of the methods listed below:

1. IRWM DAC Mapping tool https://gis.water.ca.gov/app/dacs/

☐	If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

2. 2020 Median Income

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
☐	**2020**	**$75,235**		0%	YES

*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.

NOTES

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
3,319	25,963	**114**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD Enter "0" if Adjustment Not Used Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]	TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
114	-	-	-	-	114	119	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

SB X7-7 2020 Compliance Forms: Sunnyslope

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	23,704
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
		2020 Deductions					
Compliance Year 2020	**2020 Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**Exported Water ***	**Change in Dist. System Storage*** (+/-)	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use***	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	**2020 Gross Water Use**
	3,164			-		-	**3,164**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	CVP Water
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	2,449	-	2,449

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	COH Wells
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	-		0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	SSWD
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	715		715

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 4
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 5
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 6
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 7
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 8
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 9
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 10
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 11
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 12
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 13
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 14
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Enter Name of Source 15
This water source is *(check one)* **:**	
☐	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
			0

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

2020 Compliance Year	2020 Surface Reservoir Augmentation					2020 Groundwater Recharge			Total Deductible Volume of Indirect Recycled Water Entering the Distribution System
	Volume Discharged from Reservoir for Distribution System Delivery[1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss[1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility[1,2]	Transmission/ Treatment Losses[1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
			-		-			-	-

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility **(For use only by agencies that are deducting process water) Choose Only One**	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.1: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 1)*

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction	2020 Industrial Water Use	Percent Industrial Water	**Eligible for Exclusion Y/N**
	3,164		0%	NO

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.2: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 2)*

Criteria 2
Industrial water use is equal to or greater than 15 GPCD

2020 Compliance Year	2020 Industrial Water Use	2020 Population	2020 Industrial GPCD	**Eligible for Exclusion Y/N**
		23,704	-	NO

NOTES:

Data from this table will not be entered into WUEdata. Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.3: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 3)*

Criteria 3
Non-industrial use is equal to or less than 120 GPCD

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	2020 Industrial Water Use	2020 Non-industrial Water Use	2020 Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
	3,164		3,164	23,704	119	YES

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility ***(For** use only by agencies that are deducting process water using Criteria 4)*

Criteria 4

Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE

"Disadvantaged Community" status was determined using one of the methods listed below:

1. IRWM DAC Mapping tool https://gis.water.ca.gov/app/dacs/

☐	If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

2. 2020 Median Income

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
☐	**2020**	**$75,235**		0%	YES

*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.

NOTES

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
3,164	23,704	**119**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD Enter "0" if Adjustment Not Used Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]	TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
119	-	-	-	-	119	135	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

SBX7-7 Verification Forms: Hollister

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent with Submittal Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	3,402	Acre Feet
	2008 total volume of delivered recycled water	-	Acre Feet
	2008 recycled water as a percent of total deliveries	0%	**See Note 1**
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1996	
	Year ending baseline period range[3]	2005	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1] If the 2008 recycled water delivery is less than 10 percent of total water deliveries, then the 10-15year baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater of total deliveries, the 10-15 year baseline period is a continuous 10- to 15-year period.

[2] The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

[3] The ending year for the 10-15 year baseline period must be between December 31, 2004 and December 31, 2010.

[4] The ending year for the 5 year baseline period must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	1996	19,268
Year 2	1997	20,420
Year 3	1998	21,254
Year 4	1999	22,742
Year 5	2000	23,254
Year 6	2001	24,027
Year 7	2002	24,394
Year 8	2003	24,222
Year 9	2004	24,400
Year 10	2005	24,400
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	24,222
Year 2	2004	24,400
Year 3	2005	24,400
Year 4	2006	24,215
Year 5	2007	24,124
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year *Fm SB X7-7 Table 3*		Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	Deductions					Acre Feet
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	Annual Gross Water Use
10 to 15 Year Baseline - Gross Water Use								
Year 1	1996	3,386			-		-	3,386
Year 2	1997	3,848			-		-	3,848
Year 3	1998	3,441			-		-	3,441
Year 4	1999	3,558			-		-	3,558
Year 5	2000	4,021			-		-	4,021
Year 6	2001	3,851			-		-	3,851
Year 7	2002	4,130			-		-	4,130
Year 8	2003	4,001			-		-	4,001
Year 9	2004	3,888			-		-	3,888
Year 10	2005	3,950			-		-	3,950
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**3,807**
5 Year Baseline - Gross Water Use								
Year 1	2003	4,001			-		-	4,001
Year 2	2004	3,888			-		-	3,888
Year 3	2005	3,950			-		-	3,950
Year 4	2006	3,322			-		-	3,322
Year 5	2007	3,383			-		-	3,383
5 year baseline average gross water use								**3,709**

*** Units of measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	CVP Water
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System[1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1996			-
Year 2	1997			-
Year 3	1998			-
Year 4	1999			-
Year 5	2000			-
Year 6	2001			-
Year 7	2002	10		10
Year 8	2003	1,247		1,247
Year 9	2004	1,023		1,023
Year 10	2005	710		710
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	1,247		1,247
Year 2	2004	1,023		1,023
Year 3	2005	710		710
Year 4	2006	702		702
Year 5	2007	358		358

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	COH Wells
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1996	3,386		3,386
Year 2	1997	3,848		3,848
Year 3	1998	3,441		3,441
Year 4	1999	3,558		3,558
Year 5	2000	4,021		4,021
Year 6	2001	3,851		3,851
Year 7	2002	4,120		4,120
Year 8	2003	2,754		2,754
Year 9	2004	2,865		2,865
Year 10	2005	3,240		3,240
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003	2,754		2,754
Year 2	2004	2,865		2,865
Year 3	2005	3,240		3,240
Year 4	2006	2,620		2,620
Year 5	2007	3,025		3,025

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	SSCWD
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1996			0
Year 2	1997			0
Year 3	1998			0
Year 4	1999			0
Year 5	2000			0
Year 6	2001			0
Year 7	2002			0
Year 8	2003			0
Year 9	2004			0
Year 10	2005			0
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003			0
Year 2	2004			0
Year 3	2005			0
Year 4	2006			0
Year 5	2007			0

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustmen*** *t - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

Baseline Year *Fm SB X7-7 Table 3*		**Surface Reservoir Augmentation**					**Groundwater Recharge**			**Total Deductible Volume of Indirect Recycled Water Entering the Distribution System**
		Volume Discharged from Reservoir for Distribution System Delivery [1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss [1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility [1, 2]	Transmission/ Treatment Losses [1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
10-15 Year Baseline - Indirect Recycled Water Use										
Year 1	1996			-		-			-	-
Year 2	1997			-		-			-	-
Year 3	1998			-		-			-	-
Year 4	1999			-		-			-	-
Year 5	2000			-		-			-	-
Year 6	2001			-		-			-	-
Year 7	2002			-		-			-	-
Year 8	2003			-		-			-	-
Year 9	2004			-		-			-	-
Year 10	2005			-		-			-	-
Year 11	0			-		-			-	-
Year 12	0			-		-			-	-
Year 13	0			-		-			-	-
Year 14	0			-		-			-	-
Year 15	0			-		-			-	-
5 Year Baseline - Indirect Recycled Water Use										
Year 1	2003			-		-			-	-
Year 2	2004			-		-			-	-
Year 3	2005			-		-			-	-
Year 4	2006			-		-			-	-
Year 5	2007			-		-			-	-

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C: Process Water Deduction Eligibility *(For use only by agencies that are deducting process water) Choose Only One*	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.1: Process Water Deduction Eligibility

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

Baseline Year *Fm SB X7-7 Table 3*		Gross Water Use Without Process Water Deduction	Industrial Water Use *	Percent Industrial Water	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1996	3,386		0%	NO
Year 2	1997	3,848		0%	NO
Year 3	1998	3,441		0%	NO
Year 4	1999	3,558		0%	NO
Year 5	2000	4,021		0%	NO
Year 6	2001	3,851		0%	NO
Year 7	2002	4,130		0%	NO
Year 8	2003	4,001		0%	NO
Year 9	2004	3,888		0%	NO
Year 10	2005	3,950		0%	NO
Year 11	0	-			NO
Year 12	0	-			NO
Year 13	0	-			NO
Year 14	0	-			NO
Year 15	0	-			NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003	4,001		0%	NO
Year 2	2004	3,888		0%	NO
Year 3	2005	3,950		0%	NO
Year 4	2006	3,322		0%	NO
Year 5	2007	3,383		0%	NO

*** Units of Measure** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.2: Process Water Deduction Eligibility

Criteria 2
Industrial water use is equal to or greater than 15 GPCD

Baseline Year *Fm SB X7-7 Table 3*		Industrial Water Use *	Population	Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1996		19,268	-	NO
Year 2	1997		20,420	-	NO
Year 3	1998		21,254	-	NO
Year 4	1999		22,742	-	NO
Year 5	2000		23,254	-	NO
Year 6	2001		24,027	-	NO
Year 7	2002		24,394	-	NO
Year 8	2003		24,222	-	NO
Year 9	2004		24,400	-	NO
Year 10	2005		24,400	-	NO
Year 11	0		-		NO
Year 12	0		-		NO
Year 13	0		-		NO
Year 14	0		-		NO
Year 15	0		-		NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003		24,222	-	NO
Year 2	2004		24,400	-	NO
Year 3	2005		24,400	-	NO
Year 4	2006		24,215	-	NO
Year 5	2007		24,124	-	NO

**** Units of Measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

Data from this table will not be entered into WUEdata. Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.3: Process Water Deduction Eligibility

Criteria 3
Non-industrial use is equal to or less than 120 GPCD

Baseline Year *Fm SB X7-7 Table 3*		Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	Industrial Water Use *	Non-industrial Water Use	Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility							
Year 1	1996	3,386		3,386	19,268	157	NO
Year 2	1997	3,848		3,848	20,420	168	NO
Year 3	1998	3,441		3,441	21,254	145	NO
Year 4	1999	3,558		3,558	22,742	140	NO
Year 5	2000	4,021		4,021	23,254	154	NO
Year 6	2001	3,851		3,851	24,027	143	NO
Year 7	2002	4,130		4,130	24,394	151	NO
Year 8	2003	4,001		4,001	24,222	147	NO
Year 9	2004	3,888		3,888	24,400	142	NO
Year 10	2005	3,950		3,950	24,400	145	NO
Year 11	0	-		-	-		NO
Year 12	0	-		-	-		NO
Year 13	0	-		-	-		NO
Year 14	0	-		-	-		NO
Year 15	0	-		-	-		NO
5 Year Baseline - Process Water Deduction Eligibility							
Year 1	2003	4,001		4,001	24,222	147	NO
Year 2	2004	3,888		3,888	24,400	142	NO
Year 3	2005	3,950		3,950	24,400	145	NO
Year 4	2006	3,322		3,322	24,215	122	NO
Year 5	2007	3,383		3,383	24,124	125	NO

**** Units of Measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.4: Process Water Deduction Eligibility

Criteria 4
Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE
"Disadvantaged Community" status was determined using one of the methods listed below:

☑ **1. IRWM DAC Mapping tool https://gis.water.ca.gov/app/dacs/**

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

☐ **2. 2010 Median Income**

California Median Household Income		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
2010	$60,883		0%	YES

NOTES:

SB X7-7 Table 5: Baseline Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1996	19,268	3,386	157
Year 2	1997	20,420	3,848	168
Year 3	1998	21,254	3,441	145
Year 4	1999	22,742	3,558	140
Year 5	2000	23,254	4,021	154
Year 6	2001	24,027	3,851	143
Year 7	2002	24,394	4,130	151
Year 8	2003	24,222	4,001	147
Year 9	2004	24,400	3,888	142
Year 10	2005	24,400	3,950	145
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**149**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	24,222	4,001	147
Year 2	2004	24,400	3,888	142
Year 3	2005	24,400	3,950	145
Year 4	2006	24,215	3,322	122
Year 5	2007	24,124	3,383	125
5 Year Average Baseline GPCD				**136**
NOTES:				

SB X7-7 Table 6: Baseline GPCD *From Table SB X7-7 Table 5*	*Summary*
10-15 Year Baseline GPCD	149
5 Year Baseline GPCD	136
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		**Supporting Tables**
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator *Located in the WUE Data Portal at wuedata.water.ca.gov* Resources *button*
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
149	**119**
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-B: Target Method 2

Target Landscape Water Use

Units of Measure		Acre Feet
Reference Evapotranspiration Rate (ET0)[1] for Service Area (inches/year)		
Acres of Irrigated Landscape and Applicable ETAF	**Acres**	**Water Use[3]**
Acres of landscape installed pre-2010 (ETAF 0.8)[2]		-
Acres of landscape installed post-2010 (ETAF 0.7)[2]		-
Acres of residential landscape installed post 2015 (ETAF .55)		-
Acres of CII landscape installed post 2015 (ETAF .45)		-
Acres of Special Landscape Area (ETAF 1.0)[2]		-
Target Landscape Water Use for 2020		**-**

[1] ETo information can be found at https://cimis.water.ca.gov. If the water supplier's service area spans more than one ETo Zone, the supplier will use multiple versions of SB X7-7 Table 7B for each ETo zone that they serve.

[2] ETAF - Evapotranspiration Adjustment Factor. Refer to the Model Water Efficient Landscape Ordinance at https://water.ca.gov/Programs/Water-Use-And-Efficiency/Model-Water-Efficient-Landscape-Ordinance

[3] Water Use Unit of Measure (AF, MG, CCF) is automatically converted to the units selected by the user in Table 0.

NOTES

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-C: Target Method 2
Target CII Water Use

Baseline Year *Fm SB X7-7 Table 3*		CII Water Use [1,2]	Process Water Exclusion (Optional) *Fm SB X7-7 Table 4*	CII Water Use Minus Process Water	Population *Fm SB X7-7 Table 3*	CII GPCD
Unit of Measure						**Acre Feet**
Year 1	1996		0	0	19,268	0
Year 2	1997		0	0	20,420	0
Year 3	1998		0	0	21,254	0
Year 4	1999		0	0	22,742	0
Year 5	2000		0	0	23,254	0
Year 6	2001		0	0	24,027	0
Year 7	2002		0	0	24,394	0
Year 8	2003		0	0	24,222	0
Year 9	2004		0	0	24,400	0
Year 10	2005		0	0	24,400	0
Year 11	0		0	0	-	
Year 12	0		0	0	-	
Year 13	0		0	0	-	
Year 14	0		0	0	-	
Year 15	0		0	0	-	
Average Annual 10 to 15 Year Baseline CII Water Use (GPCD)						0
10% Reduction						0.0
2020 Target CII Water Use						**0**

[1] *CII water use for each year of the baseline period must be provided by the user.*

[2] *Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-D: Target Method 2 Summary		
2020 Population	Enter 2020 Population	
Sector	**Volume** **Acre Feet**	**GPCD**
Target Indoor Residential Water Use		55
Target Landscape Water Use* *From SB X7-7 Table 7-B*	-	
Target CII Water Use *From SB X7-7 Table 7-C*		0
2020 Target	-	**55**

**Additional rows may be added for Target Landscape Water Use if the service area spans more than one Eto Zone.*

NOTES:

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☐		Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
			2020 Target *(If more than one region is selected, this value is calculated.)*	**0**
NOTES:				

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]			Confirmed 2020 Target[4]
		As calculated by supplier in this SB X7-7 Verification Form	Special Situations[3]		
			Prorated 2020 Target	Population Weighted Average 2020 Target	
136	130	119			**119**

[1] ***Maximum 2020 Target*** *is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.*

[2] ***Calculated 2020 Target*** *is the target calculated by the Supplier based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target. Supplier may only enter one calculated target.*

[3] ***Prorated targets and population weighted target*** *are allowed for special situations only. These situations are described in Appendix P, Section P.3*

Confirmed Target *is the lesser of the Calculated 2020 Target (C5, D5, or E5) or the Maximum 2020 Target (Cell B5)*

NOTES:

SBX7-7 Verification Forms: Sunnyslope

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent with Submittal Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	3,066	Acre Feet
	2008 total volume of delivered recycled water	-	Acre Feet
	2008 recycled water as a percent of total deliveries	0%	**See Note 1**
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range[3]	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1] If the 2008 recycled water delivery is less than 10 percent of total water deliveries, then the 10-15year baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater of total deliveries, the 10-15 year baseline period is a continuous 10- to 15-year period.

[2] The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

[3] The ending year for the 10-15 year baseline period must be between December 31, 2004 and December 31, 2010.

[4] The ending year for the 5 year baseline period must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	1999	15,773
Year 2	1997	16,318
Year 3	1998	16,721
Year 4	1999	16,987
Year 5	2000	17,087
Year 6	2001	17,225
Year 7	2002	17,362
Year 8	2003	17,466
Year 9	2004	17,444
Year 10	2005	17,569
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	17,087
Year 2	2004	17,225
Year 3	2005	17,362
Year 4	2006	17,466
Year 5	2007	17,444
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year *Fm SB X7-7 Table 3*		Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	Deductions					Acre Feet
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	Annual Gross Water Use
10 to 15 Year Baseline - Gross Water Use								
Year 1	1999	2,820			-		-	2,820
Year 2	1997	3,214			-		-	3,214
Year 3	1998	3,290			-		-	3,290
Year 4	1999	3,267			-		-	3,267
Year 5	2000	3,300			-		-	3,300
Year 6	2001	3,468			-		-	3,468
Year 7	2002	2,922			-		-	2,922
Year 8	2003	3,304			-		-	3,304
Year 9	2004	3,523			-		-	3,523
Year 10	2005	3,058			-		-	3,058
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**3,216**
5 Year Baseline - Gross Water Use								
Year 1	2003	3,300			-		-	3,300
Year 2	2004	3,468			-		-	3,468
Year 3	2005	2,922			-		-	2,922
Year 4	2006	3,304			-		-	3,304
Year 5	2007	3,523			-		-	3,523
5 year baseline average gross water use								**3,303**

*** Units of measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	CVP Water
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System[1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999			-
Year 2	1997			-
Year 3	1998			-
Year 4	1999	11		11
Year 5	2000	1,247		1,247
Year 6	2001	1,078		1,078
Year 7	2002	1,085		1,085
Year 8	2003	1,170		1,170
Year 9	2004	1,118		1,118
Year 10	2005	851		851
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	1,247		1,247
Year 2	2004	1,078		1,078
Year 3	2005	1,085		1,085
Year 4	2006	1,170		1,170
Year 5	2007	1,118		1,118

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	COH Wells
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999			0
Year 2	1997			0
Year 3	1998			0
Year 4	1999			0
Year 5	2000			0
Year 6	2001			0
Year 7	2002			0
Year 8	2003			0
Year 9	2004			0
Year 10	2005			0
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003			0
Year 2	2004			0
Year 3	2005			0
Year 4	2006			0
Year 5	2007			0

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	SSCWD Wells
This water source is:	
☐	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1999	2820		2,820
Year 2	1997	3214		3,214
Year 3	1998	3290		3,290
Year 4	1999	3256		3,256
Year 5	2000	2053		2,053
Year 6	2001	2390		2,390
Year 7	2002	1837		1,837
Year 8	2003	2133		2,133
Year 9	2004	2405		2,405
Year 10	2005	2206		2,206
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003	2053		2,053
Year 2	2004	2390		2,390
Year 3	2005	1837		1,837
Year 4	2006	2133		2,133
Year 5	2007	2405		2,405

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustmen*** *t - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

Baseline Year *Fm SB X7-7 Table 3*		**Surface Reservoir Augmentation**					**Groundwater Recharge**			**Total Deductible Volume of Indirect Recycled Water Entering the Distribution System**
		Volume Discharged from Reservoir for Distribution System Delivery [1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss [1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility [1, 2]	Transmission/ Treatment Losses [1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
10-15 Year Baseline - Indirect Recycled Water Use										
Year 1	1999			-		-			-	-
Year 2	1997			-		-			-	-
Year 3	1998			-		-			-	-
Year 4	1999			-		-			-	-
Year 5	2000			-		-			-	-
Year 6	2001			-		-			-	-
Year 7	2002			-		-			-	-
Year 8	2003			-		-			-	-
Year 9	2004			-		-			-	-
Year 10	2005			-		-			-	-
Year 11	0			-		-			-	-
Year 12	0			-		-			-	-
Year 13	0			-		-			-	-
Year 14	0			-		-			-	-
Year 15	0			-		-			-	-
5 Year Baseline - Indirect Recycled Water Use										
Year 1	2003			-		-			-	-
Year 2	2004			-		-			-	-
Year 3	2005			-		-			-	-
Year 4	2006			-		-			-	-
Year 5	2007			-		-			-	-

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C: Process Water Deduction Eligibility *(For use only by agencies that are deducting process water) Choose Only One*	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.1: Process Water Deduction Eligibility

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

	Baseline Year *Fm SB X7-7 Table 3*	Gross Water Use Without Process Water Deduction	Industrial Water Use *	Percent Industrial Water	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1999	2,820		0%	NO
Year 2	1997	3,214		0%	NO
Year 3	1998	3,290		0%	NO
Year 4	1999	3,267		0%	NO
Year 5	2000	3,300		0%	NO
Year 6	2001	3,468		0%	NO
Year 7	2002	2,922		0%	NO
Year 8	2003	3,304		0%	NO
Year 9	2004	3,523		0%	NO
Year 10	2005	3,058		0%	NO
Year 11	0	-			NO
Year 12	0	-			NO
Year 13	0	-			NO
Year 14	0	-			NO
Year 15	0	-			NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003	3,300		0%	NO
Year 2	2004	3,468		0%	NO
Year 3	2005	2,922		0%	NO
Year 4	2006	3,304		0%	NO
Year 5	2007	3,523		0%	NO

*** Units of Measure** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.2: Process Water Deduction Eligibility

Criteria 2
Industrial water use is equal to or greater than 15 GPCD

Baseline Year *Fm SB X7-7 Table 3*		Industrial Water Use *	Population	Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility					
Year 1	1999		15,773	-	NO
Year 2	1997		16,318	-	NO
Year 3	1998		16,721	-	NO
Year 4	1999		16,987	-	NO
Year 5	2000		17,087	-	NO
Year 6	2001		17,225	-	NO
Year 7	2002		17,362	-	NO
Year 8	2003		17,466	-	NO
Year 9	2004		17,444	-	NO
Year 10	2005		17,569	-	NO
Year 11	0		-		NO
Year 12	0		-		NO
Year 13	0		-		NO
Year 14	0		-		NO
Year 15	0		-		NO
5 Year Baseline - Process Water Deduction Eligibility					
Year 1	2003		17,087	-	NO
Year 2	2004		17,225	-	NO
Year 3	2005		17,362	-	NO
Year 4	2006		17,466	-	NO
Year 5	2007		17,444	-	NO

**** Units of Measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

Data from this table will not be entered into WUEdata. Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.3: Process Water Deduction Eligibility

Criteria 3
Non-industrial use is equal to or less than 120 GPCD

Baseline Year *Fm SB X7-7 Table 3*		Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	Industrial Water Use *	Non-industrial Water Use	Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
10 to 15 Year Baseline - Process Water Deduction Eligibility							
Year 1	1999	2,820		2,820	15,773	160	NO
Year 2	1997	3,214		3,214	16,318	176	NO
Year 3	1998	3,290		3,290	16,721	176	NO
Year 4	1999	3,267		3,267	16,987	172	NO
Year 5	2000	3,300		3,300	17,087	172	NO
Year 6	2001	3,468		3,468	17,225	180	NO
Year 7	2002	2,922		2,922	17,362	150	NO
Year 8	2003	3,304		3,304	17,466	169	NO
Year 9	2004	3,523		3,523	17,444	180	NO
Year 10	2005	3,058		3,058	17,569	155	NO
Year 11	0	-		-	-		NO
Year 12	0	-		-	-		NO
Year 13	0	-		-	-		NO
Year 14	0	-		-	-		NO
Year 15	0	-		-	-		NO
5 Year Baseline - Process Water Deduction Eligibility							
Year 1	2003	3,300		3,300	17,087	172	NO
Year 2	2004	3,468		3,468	17,225	180	NO
Year 3	2005	2,922		2,922	17,362	150	NO
Year 4	2006	3,304		3,304	17,466	169	NO
Year 5	2007	3,523		3,523	17,444	180	NO

**** Units of Measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES:

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Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.4: Process Water Deduction Eligibility

Criteria 4
Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE
"Disadvantaged Community" status was determined using one of the methods listed below:

☑ **1. IRWM DAC Mapping tool https://gis.water.ca.gov/app/dacs/**

If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

☐ **2. 2010 Median Income**

California Median Household Income		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
2010	$60,883		0%	YES

NOTES:

SB X7-7 Table 5: Baseline Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1999	15,773	2,820	160
Year 2	1997	16,318	3,214	176
Year 3	1998	16,721	3,290	176
Year 4	1999	16,987	3,267	172
Year 5	2000	17,087	3,300	172
Year 6	2001	17,225	3,468	180
Year 7	2002	17,362	2,922	150
Year 8	2003	17,466	3,304	169
Year 9	2004	17,444	3,523	180
Year 10	2005	17,569	3,058	155
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**169**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	17,087	3,300	172
Year 2	2004	17,225	3,468	180
Year 3	2005	17,362	2,922	150
Year 4	2006	17,466	3,304	169
Year 5	2007	17,444	3,523	180
5 Year Average Baseline GPCD				**170**
NOTES:				

SB X7-7 Table 6: Baseline GPCD *From Table SB X7-7 Table 5*	*Summary*
10-15 Year Baseline GPCD	169
5 Year Baseline GPCD	170
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		**Supporting Tables**
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator *Located in the WUE Data Portal at wuedata.water.ca.gov* Resources *button*
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
169	**135**
NOTES:	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-B: Target Method 2

Target Landscape Water Use

Units of Measure		Acre Feet
Reference Evapotranspiration Rate (ET0)[1] for Service Area (inches/year)		
Acres of Irrigated Landscape and Applicable ETAF	**Acres**	**Water Use[3]**
Acres of landscape installed pre-2010 (ETAF 0.8)[2]		-
Acres of landscape installed post-2010 (ETAF 0.7)[2]		-
Acres of residential landscape installed post 2015 (ETAF .55)		-
Acres of CII landscape installed post 2015 (ETAF .45)		-
Acres of Special Landscape Area (ETAF 1.0)[2]		-
Target Landscape Water Use for 2020		**-**

[1] ETo information can be found at https://cimis.water.ca.gov. If the water supplier's service area spans more than one ETo Zone, the supplier will use multiple versions of SB X7-7 Table 7B for each ETo zone that they serve.

[2] ETAF - Evapotranspiration Adjustment Factor. Refer to the Model Water Efficient Landscape Ordinance at https://water.ca.gov/Programs/Water-Use-And-Efficiency/Model-Water-Efficient-Landscape-Ordinance

[3] Water Use Unit of Measure (AF, MG, CCF) is automatically converted to the units selected by the user in Table 0.

NOTES

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-C: Target Method 2
Target CII Water Use

Baseline Year *Fm SB X7-7 Table 3*		CII Water Use [1,2]	Process Water Exclusion (Optional) *Fm SB X7-7 Table 4*	CII Water Use Minus Process Water	Population *Fm SB X7-7 Table 3*	CII GPCD
Unit of Measure						**Acre Feet**
Year 1	1999		0	0	15,773	0
Year 2	1997		0	0	16,318	0
Year 3	1998		0	0	16,721	0
Year 4	1999		0	0	16,987	0
Year 5	2000		0	0	17,087	0
Year 6	2001		0	0	17,225	0
Year 7	2002		0	0	17,362	0
Year 8	2003		0	0	17,466	0
Year 9	2004		0	0	17,444	0
Year 10	2005		0	0	17,569	0
Year 11	0		0	0	-	
Year 12	0		0	0	-	
Year 13	0		0	0	-	
Year 14	0		0	0	-	
Year 15	0		0	0	-	
Average Annual 10 to 15 Year Baseline CII Water Use (GPCD)						0
10% Reduction						0.0
2020 Target CII Water Use						**0**

[1] *CII water use for each year of the baseline period must be provided by the user.*

[2] *Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

NOTES

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 7-D: Target Method 2 Summary		
2020 Population	Enter 2020 Population	
Sector	**Volume** **Acre Feet**	**GPCD**
Target Indoor Residential Water Use		55
Target Landscape Water Use* *From SB X7-7 Table 7-B*	-	
Target CII Water Use *From SB X7-7 Table 7-C*		0
2020 Target	-	**55**

**Additional rows may be added for Target Landscape Water Use if the service area spans more than one Eto Zone.*

NOTES:

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☐		Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
			2020 Target *(If more than one region is selected, this value is calculated.)*	**0**
NOTES:				

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]			Confirmed 2020 Target[4]
		As calculated by supplier in this SB X7-7 Verification Form	Special Situations[3]		
			Prorated 2020 Target	Population Weighted Average 2020 Target	
170	162	135			**135**

[1] ***Maximum 2020 Target*** *is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.*

[2] ***Calculated 2020 Target*** *is the target calculated by the Supplier based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target. Supplier may only enter one calculated target.*

[3] ***Prorated targets and population weighted target*** *are allowed for special situations only. These situations are described in Appendix P, Section P.3*

[4] ***Confirmed Target*** *is the lesser of the Calculated 2020 Target (C5, D5, or E5) or the Maximum 2020 Target (Cell B5)*

NOTES:

Appendix G
Water Shortage Contingency Plan

Calculating Effectiveness of Response Actions

The effectiveness of each management action was informed by several larger trends and assumptions:

- Outdoor irrigation was assumed to be 50% of residential use and 40% of total water use in HUA.
- In 2015, during a drought, HUA decreased water demand by 23% with restrictions similar to those of Stage 2. The area is expected to future droughts.
- A Study in Colorado (Kenney et al., 2004) showed that 4-12% reduction in total residential use from Colorado Study when there are voluntary restrictions similar to those in Stage 1. In this study , cities had a 18-56% reduction when there are mandatory restrictions. The study attributed the bulk of these water savings to outdoor water use.
- 2013 supply (total demand of 5686 AFY) is used as the normal year water use
- Annual demand was considered, with the expectation that monthly demand savings may vary.
- Several actions, such as restaurants not serving water, may not save much water, but they serve as reminders that the community is experiencing a water shortage. These actions may encourage consumers to use water more responsibly at home.
- Other actions, such as not washing down driveways, may not save much water relative to other restrictions, but prevent unnecessary uses of water. v

Landscape - Restrict or prohibit runoff from landscape irrigation

This may be the most useful as a guideline to prevent overwatering. In total, up to 50% of water for landscape irrigation can be saved through efficient irrigation (U.S. EPA, 2021a). However, we do not expect all residents to have completely efficient irrigation, and irrigation savings may be better derived from programming to promote irrigation efficiency, more so than restrictions. In total, 5% for mandatory restrictions and 2% from voluntary restrictions are estimated.

Landscape - Limit landscape irrigation to specific times

Up to 25% of irrigation water can be lost to evaporation when landscapes are watered during the day (California Drought Preparedness). Additionally, the restrictions can encourage homeowners to water their lawns less often. Homeowners may still overwater their lawns and not account for normal evaporative losses. A 10% reduction is estimated for mandatory measures, and a 2% reduction is estimated for voluntary measures.

Landscape - Limit landscape irrigation to specific days

A study of the effectiveness of mandatory restrictions in Colorado noted the importance of limiting watering to once every three days and twice a week (Kenney et al., 2004). Watering twice a week was linked to 24-45% total water savings. Watering every three days was linked to 18-27% water savings. These savings were in conjunction with other water savings.

Landscape - Prohibit certain types of landscape irrigation

The total amount of water used for medians and new homes is unknown. Water savings of 1% are estimated.

Landscape - Irrigation within 48 hours after rainfall is prohibited in Stage 4, 5, and 6.

During dry periods, it is not expected that rain would occur often. Additionally, lawns are being watered only twice a week in Stage 4. This is expected to cause <1% reduction.

Commercial car washes are required to have recirculating systems.
An estimated 45 gallons are saved per wash by using recirculated water (Western Carwash Association), compared to washing a car at home. The average carwash is expected to have about 20,000 washes in a year to be productive. There are 4 carwashes in Hollister. In total, water savings would be 11 AFY, or about 0.2% of annual water use.

CII - Lodging establishment must offer opt out of linen service
A 150-room hotel can save 72,000 gallons a year through a linen reuse program (Rogers, 2011). There are roughly 7 hotels within HUA. Most of these hotels are much smaller than 150 rooms. If 200,000 gallons per year are saved, that would only decrease the total water use by less than 0.01%.

CII - Restaurants may only serve water upon request
An estimated 63 gallons per year per person, assuming they eat out 5 times per week (Gleick, 2014). A more reasonable expectation is that most people eat out at sit-down restaurants once a week, and about 20% of people may want water at the table. With an estimated 50,000-person population, the total amount of water saved would be less than 0.02% of the 2013 total use.

CII- Installation of Single Pass Cooling Systems are discouraged in Stage 1 and prohibited for Stage 2 and above
Single pass cooling systems are extremely wasteful. In some cases they can waste millions of gallons a year (U.S. EPA, 2014). The number of facilities in HUA using single pass cooling systems are unknown. If an estimated 2 million gallons are saved by this measure, 1% of the total HUA water use would decrease.

CII Restaurants encouraged to use water conserving dishwash spray valves
A rough count shows 81 restaurants in Hollister and 11 restaurants in San Juan Bautista. Each commercial kitchen can save 7,000 gallons per year by switching to a pre-rinse spray valve (U.S. EPA, 2020)**.** If 50% of restaurants were not already using one and make the switch, 1 AFY, or 0.02% of all water used annually, would be saved.

CII- Washing a vehicle with a hose with a shut valve.

Washing a vehicle at home can range from 30-100 gallons (Maryland Department of the Environment). Using a shutoff valve may lower the amount of water by 50 gallons per wash. There is no available data about the percentage of people who wash their cars at home or the frequency. If 10% of the population is assumed to wash their cars at home each month and 75% of them would normally use a hose with a shut valve anyway, then 2.3 AF, or 0.04% of all annual water use would be saved.

Water features- Operating a decorative water feature that does not use recirculated water is prohibited.

Most fountains use recirculated water. Recognizing that public and commercial landscaping water use in HUA dropped by 212 AFY during restrictions suggests that this may make a small difference. 1% is estimated.

Water Feature- Filling or refilling ornamental lakes and ponds

This is difficult to calculate because the total area of ornamental lakes and ponds in HUA is unknown. About 55 inches per year are lost to evaporation in this area. 1% savings are estimated.

Pools and Spas-The installation and filling of new pools are prohibited
Because the population of HUA is only 50,000 and new pools are not expected to built during water crises, the estimated savings are <1%

Pools and Spas - Require covers for pools and spas
Covers reduce evaporation by about 55 inched per year. The total surface area of pools in HUA is unknown, but the water savings are estimated to be about 1%.

Other - Customers must repair leaks, breaks, and malfunctions in a timely manner

An estimated 10 percent of homes waste 90 gallons or more water per day (U.S. EPA, 2021b). If 1000 homes in HUA fix their leaks, about 33 million gallons per year could be saved. This would be about 2% of all water used in HUA.

Other - Prohibit use of potable water for washing hard surfaces
Washing down a driveway for 5 minutes can unnecessarily use 50 gallons of water (Atagi, 2014). If 1000 homes and businesses were to stop this practice and save an assumed 30 gallons a week, 4.6 AF, or 0.08% of water would be saved each year.

Other - Prohibit vehicle washing except at facilities using recycled or recirculating water

Assuming everybody is already using a shut valve for at-home carwashes, using a carwash with recirculating water could decrease the amount of water used for a carwash from 30 to 12 gallons. If 5000 people each month either decide to not wash their car or get their car washed professionally (20 gallons per person per month), about 3.7 AF of water would be saved in one year. This is about 0.07% of all water used in a year.

Other - Prohibit use of potable water for construction and dust control

Dust suppression can use up to 4000 gallons per acre. Chemical dust suppressants are an alternative. The average area under construction at a given time in HUA is unknown. If 4000 gallons are used for dust suppression daily, 5.6 AF of water would be saved in a year.

Other- Limits on new water service, building permits, and annexation

The projected annual increase in water demand for 2020-2025 is about 186 AFY. If there are limits on new water services and 100 AF are saved in a year, that would be 2% of all annual water use.

Other- Any HUA Agencies reserve the right to restrict water for priority uses in Phases 4,5,and 6

Other- Agencies may consider drought rates, if applicable in Stages 4,5, and 6.

If drought rates are put into effect on top of other restrictions and cause a 10% decrease in residential indoor water, this would be about 3% of total water use in HUA.

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TODD GROUNDWATER

June 14, 2016

MEMORANDUM

To: Shawn Novak, San Benito County Water District

From: Maureen Reilly, PE

Re: Water Shortage Contingency Plan (WSCP)

The Urban Water Management Plan requires agencies to document their Water Shortage Contingency Plan (WSCP). The current Hollister Urban Area (HUA) plan is a general plan and does not provide detailed prohibitions and limits for end users in the area. Mindful of recent drought conditions, we recommend that a new WSCP be developed and approved by each agency, in parallel with the UWMP process.

The following is a recommended four-stage rationing plan with voluntary and mandatory rationing depending on the severity of the water supply shortage. This water shortage response was based in part on the Sunnyslope *No Water Waste* Ordinance No. 45 and was first documented for the HUA as part of the 2000 UWMP. Due to recent drought conditions and state mandated water demand reduction, the prohibited uses and restrictions were refined and expanded. In order to support consistency within the greater Pajaro River region, the Santa Clara County Model Water Conservation Ordinance has been used as a template and is included as Attachment A. This WSCP is draft and intended for review by each agency: City of Hollister, Sunnyslope County Water District, and San Benito County Water District.

DECLARATION OF SHORTAGE CONDITIONS

The Water Supply Shortage conditions may be declared by Resolution of any one of the agencies and adopted at a regular or special public meeting held in accordance with state law Procedures for Determination/Notification of Water Supply Shortage. The mandatory conservation requirements applicable to the level of Water Supply Shortage conditions will take effect immediately after the shortage level is declared.

Causes of supply shortages could include but are not limited to:

- reduced CVP allocations
- groundwater levels declining at a critical rate or reaching a critical level
- drought with reduced runoff and recharge from precipitation
- infrastructure failure (e.g., failed well, ruptured tank, severed pipeline)

- water quality impacts
- natural disasters interrupting supply.

A declaration of shortage would be justified through description of the causes, including one or more of the above, and depending on the shortage severity (e.g., rapidity of onset, magnitude, potential duration) would indicate a stage of action (see below). Each stage includes a required amount of demand reduction; however, the supply shortage itself does not have to be quantified. This allows timely response and provides flexibility to decision makers.

STAGES OF ACTION

The four stages are responsive to the severity of a supply reduction and expressed in terms of an appropriate reduction in demand. We recommend description of the stages as a percent demand reduction regardless of the cause of the shortage.

The table below shows the four stages of action, the desired demand reduction, and a summary of actions.

Stage	Program	Demand Reduction	Summary of actions
1	Voluntary	Up to 15 %	• Restrictions on outdoor irrigation to avoid waste • Fix Leaks
2	Mandatory	Up to 25 %	• Stage 1 activities become mandatory • The operation of non-recirculating decorative fountains using potable water is restricted • No refilling of swimming pools
3	Mandatory	Up to 35 %	• Continue Stage 1-2 activities • No irrigation with 48 hours of rainfall • No new landscaping or plantings installed between May and October • Leaks must be fixed within 48 hours
4	Mandatory	Above 50%	• Continue Stage 1-3 activities • Irrigation of outdoor landscaping with potable water is forbidden at all times • Leaks must be fixed within 24 hours

PROHIBITIONS AND LIMITATIONS BY STAGE

On May 9, 2016 Governor Brown issued Executive Order B-37-16 subtitled Making Conservation a California Way of Life. Five temporary water waste prohibitions are now always prohibited regardless of stage. These include:

- 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 prohibited except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low- volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom
- Non-Recirculating Water for Water Fountains and Decorative Water Features: Operating a water fountain or other decorative water features that does not use recirculated water is prohibited.
- Irrigating Within 48 Hours of Rainfall: The applications of potable water to outdoor landscapes during and within 48 hours following measurable rainfall is prohibited.
- 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 prohibited, 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 required.
- Prohibition against Watering Turf in Medians: The irrigation with potable water of ornamental turf on public street medians, including roundabouts is prohibited.

Stage 1

The first stage applies voluntary rationing to reach the demand reduction goal of 15 percent.

1.1. 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.

1.2. 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% efficiency standard. The use of recycled water is exempt from this prohibition.

1.3. 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.

1.4. 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.

1.5. 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.

1.6. 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.

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

1.8. 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.

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

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

1.11. 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 25 percent reduction of future supplies, and uses restricted building permits, mandatory rationing, and reduction by customer types. Stage 2 continues the voluntary reductions in Stage 1. In addition, the following reduction requirements become mandatory:

2.1. 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.

2.2. 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% efficiency standard. The use of recycled water is exempt from this prohibition.

2.3. 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.

2.4. 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.

2.5. 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.

2.6. 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.

2.7. 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.

2.8. 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.

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

2.10. 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.

2.11. 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.

2.12. 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

Stage 3 aims for a 35 percent reduction. It allows the agencies to restrict water uses to priority needs and the prohibited or limited uses of water become more restrictive.

3.1. 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.

3.2. 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.

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

3.4. 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.

3.5. 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.

3.6. New Pools. Installation and filling of new private pools are prohibited,

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

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

Stage 4

The final stage seeks a 50 percent reduction and 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.

4.1. 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.

- a. 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;
- b. Maintenance of existing landscape necessary for fire protection;
- c. Maintenance of existing landscape for soil erosion control;
- d. Maintenance of plant materials identified to be rare or essential to the well-being of protected species;
- e. 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.
- f. Actively irrigated environmental mitigation projects.

4.2. 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 city.

4.3. Limits on New Potable Water Service: Upon declaration of a Level 4 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:

a. A valid, unexpired building permit has been issued for the project; or
b. The project is necessary to protect the public health, safety, and welfare; or
c. 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.
d. 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.

4.4. Limits on Building Permits. Upon declaration of a Stage 4 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.

4.5. No New Annexations. Upon the declaration of Stage 4, 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.

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

HARDSHIP WAIVER (APPLICABLE AT ANY STAGE)

A person or property can apply for a waiver to the requirements in 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.

ENFORCEMENT (APPLICABLE AT ANY STAGE)

-
- First Violation - written notice with an opportunity to correct violation.
- Second Violation - $100 penalty for a violation within 12 months of First Violation.
- Third Violation - $250 penalty for a violation within 12 months of Second Violation.

- Fourth Violation - $500 penalty and installation of a flow restrictor at the water meter at the customer's expense for each and every violation within 12 months of a Third Violation.

Subsequent Violations: 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.

Willful Violations

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.

Appendix H
Water Shortage Emergency Response

Sunnyslope County Water District

Emergency/Disaster Response Plan

(SEMS-NIMS)

PWS 3510003

Emergency/Disaster Response Plan

SEMS-NIMS

Revision Date:
September 24, 2003
May 2005
December 2006
July 2007
September 2009

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)
Table of Contents

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)

1. Introduction

Objective

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, the Sunnyslope County Water District proposes the following plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Disasters/emergencies that are likely to occur in the water system's service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contamination, and acts of sabotage.

2. Planning Group Partners

Sunnyslope County Water District has established emergency planning partnerships with other parties who have agreed to help the utility in an emergency situation. A list of these agencies and brief description of their emergency capabilities is provided in section "SSCWD Telephone List"

3. Water System Information

System Identification Number	PWS 3510003	
System name and address	Sunnyslope County Water District 3570 Airline Highway Hollister CA 95023	
Connections/Population Served	5,300 service connections	16,713 population
Type of Source	5 Groundwater Wells	1 Surface Water Treatment Plant
Type of Treatment Provided	Disinfection treatment is provided using Sodium Hypochlorite 12.5% at Wells and LESSALT Surface Water Treatment Plant in addition adds Sodium Hydroxide 25% (Caustic Soda) for pH control.	
Number of Storage Tanks	4 Treated Water Tanks totaling 6,000,000 gallons	

Emergency Water Supply

Average Water Demand	2.7 mgd	
Max Water Demand	5.0 mgd	
Max Water Production	6.3 mgd	
Max Emergency Electrical Generator Water Supply Capacity	SSCWD Supply 6.3 mgd	City of Hollister Supply 0.9 mgd
Days of Emergency Supply	Unlimited at Average Demand	Unlimited at Max Demand

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)

Typical residential water usage in the United States is on the order of 300 to 500 gallons per residence per day, or 100 to 150 gallons per capita per day. Although these amounts can typically be significantly reduced during crisis situations, Sunnyslope County Water District has found it useful to develop an estimate for the quantity of supplemental water required for a number of potential outage scenarios. These estimates are as follows:

Outage Period	Number of Customers (service connections) Affected	Quantity of water needed
1 hour	5300 connections	110,416 gph
12 hours	5300 connections	1,324,999 g/12hr
1 day	5300 connections	2,650,000 gpd
2 days	5300 connections	5,300,000 g/2days
1 week	5300 connections	18,550,000 gpw

CITY OF HOLLISTER/SUNNYSLOPE COUNTY WATER DISTRICT INTER-TIES			
COH/SSCWD Inter-tie Location	Description	Flow Direction	(GPM Range) Actual
Santa Ana & La Baig	Pressure Reduction Valve Water meters & totalizer 2" & 6" Meter	Flow to the COH Only	(0 - 1000 GPM) 250 - 600 GPM
Hillcrest & Memorial Booster Station	Pressure Reduction Valve, 2 Booster Pumps, Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 250 - 600 GPM
Sunnyslope & Memorial	Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 150-250 GPM
Sunset Dr. & Memorial	Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 150-250 GPM
San Benito County Public Works Yard	Pressure Reduction Valves Water meters & totalizers 2" & 6"	Flow to COH Only	(0 – 1000 GPM) 150-250 GPM

The City of Hollister maintains a potable community water system that is capable of supplying water to Sunnyslope County Water District during an emergency.

During Normal operations, the exchange of water is as required by demand and metered through a series of five inter-ties between the City of Hollister and the Sunnyslope County Water Distribution

Systems. This exchange includes the routine daily transfer of the City of Hollister's share of water from the LESSALT Water Treatment Plant. Additional flows to and from the Sunnyslope Distribution System are based on seasonal water supply demands.

These inter-ties typically involve pressure reduction valves, water meters and a booster pump station at one location with associated appurtenances.

A higher water pressure in the Sunnyslope County Water District Distribution System results in Hollister's share of LESSALT surface water to flow through the Sunnyslope Fairview Pressure Zone primarily through the Santa Ana and Hillcrest Pressure Reducing Valve Inter-ties. Flows can vary from 0 to 1000 GPM but typically are between 400-600 gallons per minute (GPM) range at Santa Ana and 100-300 GPM range at Hillcrest, Sunset and Sunnyslope. Seasonal demands also allow Sunset and Sunnyslope inter-ties to provide LESSALT water to the City.

Water can be transferred into the Sunnyslope system using the City of Hollister's booster pump station at Hillcrest and Memorial Drive or Airline Highway City Well #6 to pump water against the pressure gradient. The demand in the City's sub system west of Memorial Drive is first met then surplus water will flow back to the Sunnyslope system through the Sunset, Sunnyslope and Hillcrest inter-tie connections.

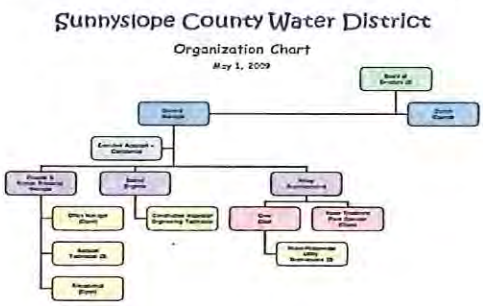
The San Benito County Public Works Inter-tie provides water from the Sunnyslope Ridgemark Water Pressure Zone though a series of pressure reducing valves to the City of Hollister Cienega Pressure Zone. Transfer at this site typically falls within the 0-300 GPM range depending on seasonal demands.

Emergency Area Map

A map of the Sunnyslope County Water District which identifies water well sources, inter-ties with the City of Hollister water distribution system, pressure zones, booster pumps, pressure reducing stations, and District owned wastewater facilities and also establishes emergency response areas. See section "SSCWD Emergency Area Map".

Designated Responsible Personnel

For designated responsible personnel, chain of command, identified responsibilities, and additional resources see section" SSCWD Employee Phone List."



Sunnyslope County Water District

Organization Chart

May 1, 2009

- Board of Directors
  (Date Elected/Appointed – Term Expires)
  - Douglas G. Keck, President (11/08 – 11/10)
  - Marshall Nelson, Vice President (11/08 – 11/10)
  - Dawn V. Anderson (11/08 – 11/10)
  - Stephen B. Hallstone (12/08 – 11/10)
  - Dave Maraz (11/08 – 11/12)
- District Counsel
  - Lloyd Lowrey, Esq.
- General Manager
  - Bryan M. Yamacka
- Executive Assistant-Confidential
  - Marsha A. Nelson
- Finance & Human Resource Manager
  - Cathy L. Buck
- Office Manager
  - Open Position
- Account Technician
  - Kelly L. Brill
  - Carol A. Porteur
  - Anabel G. Zavala
- Receptionist
  - Open Position
- District Engineer
  - Kenneth R. Girouard
- Construction Inspector/ Engineering Technician
  - Patrick L. Imperatrice
- Water Superintendent
  - James L. Fillis
- Water Treatment Plant Operator
  - Open Position
- Crew Chief
  - Patrick W. Jackson
- Water/Wastewater Utility Maintenance
  - Abel Alvarez
  - Kevin G. Castro
  - Manuel T. Chavez
  - Ernesto P. Eclarin
  - Thomas A. Estrada
  - Patrick M. Hagins
  - Walter R. Norman III
  - David Padilla
  - Scott Watson

Inventory of Resources

Equipment and system resources that are used for normal operations and available for emergencies; including maps and schematic diagrams of the water system, emergency equipment, equipment suppliers, mutual aid with planning group partners, repair parts and equipment are located at the Sunnyslope County Water District Office 3570 Airline Highway. Additional District equipment and resources available include:

- Electrical generators
- Backhoe
- Air compressors
- High pressure hydro flushing equipment
- Utility vehicles equipped with tool, valve turners, lift gate, air compressor.
- Dump trailers
- Box Truck containing repair equipment and supplies
- Welder and cutting torch
- Cell phones, two way radio communications
- Shop vacuums
- Pumps
- Emergency spill kits
- Mutual aid with the City of Hollister, San Benito County Water District, San Benito County Public Works

Sunnyslope County Water District has established procedures for equipment maintenance. See Operation and Maintenance Procedures.

4. Standardized Emergency Management System (SEMS/NIMS)

The Standardized Emergency Management System/National Incident Management System (SEMS/NIMS) is the system required by Government Code §8607 (a) for managing response to multi-agency and multi-jurisdiction emergencies in California. The system was created for several purposes. First, it allows rapid and effective coordination at the field level using the Incident Command System (ICS) to manage multi-agency response to an incident. Secondly, SEMS/NIMS create a common management structure at all levels of response, which allows entities to work with common terminology, staffing organizations, and facilities for more efficient interagency coordination. Thirdly, it creates an ordering process for requesting resources from the field through local government, to the County (Operational Area) to the state and eventually the federal government. It also allows each level of organization to track requests and resources that are dispatched to the incident or necessary for support. Local public agencies (cities, counties, special

districts) must use SEMS/NIMS to be eligible for State funding of certain response-related personnel costs resulting from a disaster. State agencies are required by the law to utilize SEMS/NIMS during emergencies.

NOTE: Depending on the circumstances of the incident, when a request is made by the water system to local first response agencies, such as Fire or Law Enforcement, ICS will be implemented by these first response agencies to manage the resources at the site. Water system personnel that will interface with these response agency personnel, in the field, should understand their role in the ICS structure. Water systems can and will provide tactical and precautionary measures through their Emergency Operations Center or the Water Utility Emergency Response Manager (WUERM). It will be important to coordinate these activities with the field (Incident) through an Agency Representative or Technical Specialist in the ICS structure.

Water System Personnel may function in the ICS structure (Field Level) as an Agency Representative or Technical Specialist.

Five Principle Functions of SEMS/NIMS

Management - In a Water System Emergency Operations Center (EOC), the EOC Director has overall responsibility for all emergency functions. This person may initially be designated as the Water Utility Emergency Response Manager (WUERM) prior to the activation of an EOC. The EOC Director may retain and/or delegate authority for functions listed below.

In the field, under ICS, an Incident Commander or Unified Command is established depending on statutory authorities for the Incident. The Incident Commander's responsibility is the overall management of the incident.

Operations - The Operations Section is responsible for the management of all operations directly applicable to the primary mission established for the response. The Operations Section Chief activates and supervises organization elements in accordance with the Incident Action Plan and directs its execution.
For water utilities, coordinates emergency response activities at the water utility EOC level and implements the priorities established by management or the Incident Command. Operation Section staff include field coordinators, as necessary, linked to water utility personnel at other fixed facilities or assigned to incidents within the water utility. The field coordinator should receive and pass information up the chain of command, as well as, receive and coordinate requests for services and support.

Planning/Intelligence - Oversees the collection, evaluation, verification, and display of current information related to the emergency. This section is also responsible for preparing action plans and maintaining documentation related to the emergency. The information collected is needed to 1) understand current situation 2) predict probable course of the incident events 3) prepare alternative strategies and control operations for the incident.

Logistics - Provides facilities, services, and material in support of the Incident. Oversees the acquisition, storing, and distribution of essential resources and support services needed to

manage the emergency. It tracks the status of resources. Logistics provides services to all field units in terms of obtaining and meeting their personnel, materials and equipment needs including communications.

Finance/Administration - The Finance/Administration Section is responsible for all financial, administrative and cost analysis aspects of the incident. Finance/Administration prepares vendor contracts, maintains records of expenditures for personnel and equipment, and maintains records and processes claims. It also provides preliminary estimates of damage costs and losses.

General Staff - Each function listed above should have a delegated Chief to manage the Section. Depending on the nature and scope of the emergency, each Section can have several branches, divisions, groups, or units.

Command Staff - These positions report directly to and are directly subordinate to the Incident Commander or EOC Director. They are the Public Information, Liaison and Safety Officers.

Water Utility Emergency Operations Center

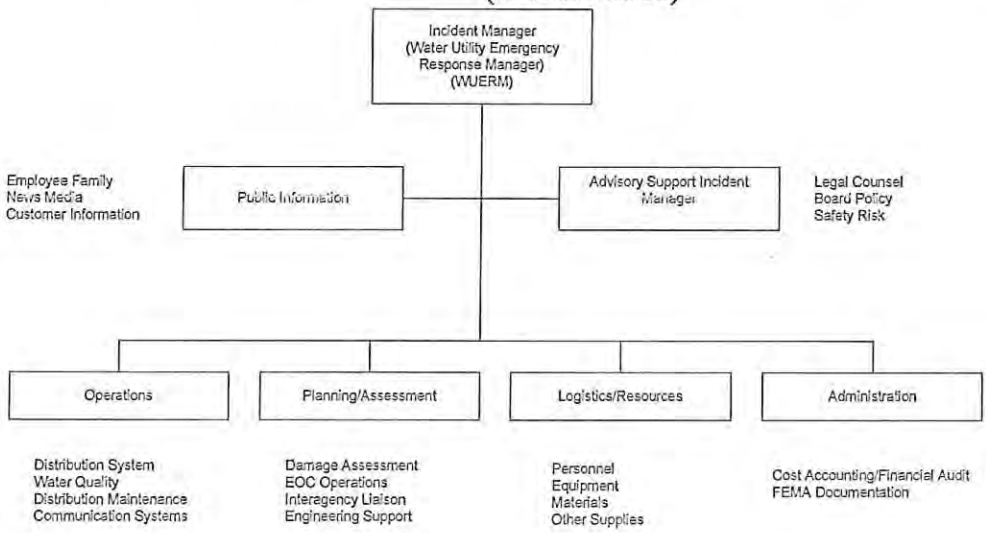
Depending on the Magnitude of the Incident, Water Utilities may have to establish an Emergency Operations Center (EOC) to manage its resources and coordinate with outside entities. An EOC is a physical location from which support for centralized emergency management can be performed. The essential functions necessary in the Water Utility EOC are described below:

- Establish an EOC Director to manage the Operations, Planning/Intelligence, Logistics, Finance/Administration Sections, and related sub-functions.
- Setting Priorities and developing Action Plans
- Coordination and support of all field level incident activities within the utility service area.
- Information gathering, processing, and reporting within the utility service area and to other levels of SEMS/NIMS
- Coordination with local government, operational areas, or regional EOCs as appropriate.
- Requesting Resources from higher SEMS/NIMS levels

Note: In general, at any level of activation, the Water Utility Emergency Response Manager (WUERM) should be aware of the following incident management principles:

- Establishing objectives and priorities for the incident
- Establish an Incident Action Plan (written or verbal)
- Awareness of his or her responsibility for the 5 primary functions of SEMS/NIMS
- Management, Operations, Planning, Logistics and Finance/Administration
- Ensure an effective span of control (only supervise 5-7 staff directly on an incident)
- Delegate authority and activate organizational elements within an Incident Command Structure only as necessary
- Provide for personnel accountability and a safe environment for staff
- Ensure effective communications

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)



Section Leader Assignments

SECTION	PRIMARY	ALTERNATE
Incident Manager	General Manager or Water Utility Emergency Response Manager (WUERM)	Chief Engineer
Operations	Water Quality/District Superintendent or WUERM	Field Main. Superintendent
Planning/Asssessment	Head of Engineering Services	Principal Engineer
Logistics/Resources	Asst. Field Maintenance Superintendent	Field Supervisor
Administration	Admin. Manager Accounting	Personnel Administrator Human Resources
COMMAND STAFF	PRIMARY	ALTERNATE
Public Information	Public Education Coordinator	Customer Service Admin.
Advisory Support	Safety Coordinator	Assistant Safety Coordinator

Sunnyslope County Water District Personnel

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)

Name and title	Responsibilities during an emergency
Bryan Yamaoka *Water System General Manager* *WUERM*	• Overall management and decision making for the water/wastewater system. • WUERM is lead for managing the emergency and contacting the regulatory agencies. • WUERM contacts the public and news media • All communications to external parties are approved by the WUERM
Ken Girouard *District Engineer*	• In charge of operating the water/wastewater system. • Performs inspections, maintenance, sampling of the system and relaying critical information to the WUERM. • Assess facilities, and provides recommendations to the WUERM.
Jim Filice *Water Superintendent* Pat Jackson *Crew Chief*	• In charge of running water/wastewater treatment plants • Performs inspections, maintenance, sampling of the WTP and relaying critical information to the WUERM. • Assess WTP facilities and treatment provided and provides recommendations to the WUERM.
Bryan Yamaoka Ken Girouard Jim Filice Pat Jackson	• In charge of collecting samples, having samples analyzed by certified labs, receiving the results. • Determines the quality of the water being served meets all drinking water and public health requirements.
Cathy Buck *Office Administrator*	• Responsible for administrative and financial functions in the office. • Cost accounting and tracking during emergencies. • Oversee customer phone calls and maintains a log of complaints and calls. • In an emergency, could provide a standard carefully pre-scripted message for customers who call with general questions.
Walter Norman III Pat Hagins David Padilla Manuel Chavez Jr. Ernie Eclarin Tom Estrada Kevin Castro Abel Alvarez Scott Watson *Water/Wastewater Maintenance*	• Delivers water quality notices or door hangers • Provides backup to water system operator. • Conducts site inspections of all facilities.
Bryan Yamaoka *Public Information Officer (PIO)*	• Coordinate with all the other agencies PIOs. • Report and work with the joint information center (JIC) if more than one agency is involved.

Drinking Water Field Operations Branch - Chain of Command

The primary contact for the water system during any emergency is their District Engineer. Water Systems should contact their District Engineer in the event of any emergency. From the District Engineer, authority moves up the line to the Regional Engineer, Branch Chiefs, Assistant Division Chief, to finally the Chief of the Division.

Emergency Operations Center

The Sunnyslope County Water District office (3570 Airline Highway) has been designated as the communication network Emergency Operations Center (EOC). (The designated backup Emergency Operation Center is the LESSALT Water Treatment Plant at 1391 Fairview Road) All District vehicles contain copies of the SSCWD Emergency Response Plan & Operation and Maintenance Procedures Manual. Emergency contact information for equipment suppliers is located in section "SSCWD Employee Phone List" of this manual. The telephone and FAX will be the primary mode of communication in an emergency. In addition, all District vehicles have Motorola Radios for inter company communication and the local fire department and law enforcement have a radio and SSCWD has made arrangements to use it to contact police, fire and other emergency response personnel should telephone communication be lost.

Personnel Accountability

The Sunnyslope County Water District Emergency Operations Center (EOC) is designated as the personnel assembly area. During catastrophic emergency situations outside of working hours all personnel will first respond to personal emergencies then will report to the Emergency Operations Center. During working hours, personnel will communicate with the Emergency Operations Center to report their status and receive instructions. If an employee fails to report their status, an investigation into the location and safety of that employee will be initiated.

Family members are urged to contact the EOC for personnel updates and assistance.

Response Procedures

Personnel will, as quickly as possible, assess damage to water and wastewater system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e., Department of Public Health Services (CDPH) and document damage and repairs.

Other Agency Coordination

Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan.

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)

During an emergency, it is important to contact and notify all the appropriate agencies and stakeholders that will be affected by the emergency. Some agencies will need to be notified immediately while others may be needed later in the incident, depending on the event. The following is a list of agencies and stakeholders that a water system should have updated contact information. Since this list has many contact names and phone numbers, this information should be reviewed annually to ensure that current information is provided.

The initial notification response to any emergency should be to "911" for the needed first responder and then to the Department of Public Health Services-Drinking Water Program. The Department of Public Health Services – Drinking Water Program is the Drinking Water Primacy Agency in California and has regulatory jurisdiction over all public water systems in the state.

Contact to the CDPH-DWP should be to their District Engineer. If the water system is unable to contact the District Engineer (or one of their staff), the water system should use the California Office of Emergency Services (OES) Warning Center Phone Number: 1-800-852-7550, which is a 24/7 phone number. A second phone number for the OES Warning Center is 916-845-8911. A duty officer will answer the CA OES Warning Center phone call and refer to statewide emergency phone numbers. In order to assist the duty officer-it will expedite response if you request the California Department of Public Health Services (CDPH) duty officer. The CDPH duty officer will then call management staff in the Drinking Water Program to respond to the emergency.

Depending on the magnitude of the event, the following state agencies may also need to be contacted:

- Office of Emergency Services (OES) Warning Control Center.
- Department of Water Resources.
- Department of Fish and Game.
- Regional Water Quality Control Board.
- Department of Toxic Substances Control.
- Federal Bureau of Investigation (FBI)
- USEPA
- Local County Health Department
- County Health Department
- County Environmental Health Departments
- Local Agencies/Facilities
- County and State Offices of Emergency Services
- Hospital and Critical Care Facilities
- Water District Customers

5. Initial Notifications

First Responders

911 - If the situation is an emergency that needs response from local fire, law enforcement, medical or hazardous materials team (HAZMAT), calling 911 should be the first immediate call.

Water system staff should be aware of where and how they are calling 911. If the water system staff call "911" from a cell phone, then the call is routed to the nearest California Highway Patrol Office, which may be in another city or county, and not in the immediate local 911 area. Typically, a direct phone number for the local 911 can be provided to the water system-contact your local first responders to get this phone number for cell phones.

Local Police and Sheriffs

Water systems should establish an ongoing relationship with the local police and sheriff offices that serve their service area. It is good practice to get them familiar with water system facilities. If they are called out to an incident, they will then be familiar with some basic aspects of the water system. Water systems that have large service areas that cover several cities or large areas should have contacts for each police and sheriff agency in their service area.

Fire and Hazmat

If the emergency incident involves an unknown substance and possible contamination of the water system, the first responders will more likely be the local fire department and/or HAZMAT team. Most Hazmat teams are part of the local fire department, but some may be special teams under county or city jurisdiction.

Like law enforcement agencies, water systems should know all the fire departments and/or HAZMAT teams that serve their service area and maintain contacts with those agencies. Contact your local county Office of Emergency Services to obtain the local HAZMAT teams that have jurisdiction in your area.

Drinking Water Primacy Agency

The Department of Public Health Services Drinking Water Program has regulatory jurisdiction for public water systems and should be one of the first agencies to be contacted in almost all emergency events. Contact should be to the District Engineer. In most emergency events, it is not appropriate to leave a message on the District Engineers voicemail. If the water system is not able to contact the District Engineer-they should call the State Warning Center 24/7 phone number as described in Section 6.3. The District Engineer will be able to assist the water system in:

- Inspections of water treatment plants, storage facilities, watersheds (chemical contamination, sewage spills, erosion, and drainage diversions).

- Water Quality Sampling.
- Consulting with water system staff/operators.
- Providing technical assistance.
- Documenting the disaster's effect on the water system through photographs and reports.
- Keeping local officials advised of the current drinking water situation.
- Review plans and specifications for reconstruction projects, and issue amended permits as needed.
- Laboratory Sampling Analysis

a. Depending the magnitude of the event, the following state agencies may also need to be contacted:
   - Office of Emergency Services (OES) Warning Control Center.
   - Department of Water Resources.
   - Department of Fish and Game.
   - Regional Water Quality Control Board.
   - Department of Toxic Substances Control.

Federal Agencies

Federal Bureau of Investigation (FBI) - If the event is a known terrorist incident or a direct written or phone threat against the water system, the FBI is to be contacted as soon as possible. There are four regional offices that have Key Asset Coordinators/Special Agents that should be contacted. The water system should report an emergency by calling the 24/7 phone numbers, which are listed below for each of the four regional offices in California. A link to the regional offices is also provided to allow water systems to check what region they should report an event.

San Francisco - (415) 553-7400 http://sanfrancisco.fbi.gov/

Los Angeles - (310) 477-6565 http://losangeles.fbi.gov/

Sacramento - (916) 481-9110 http://sacramento.fbi.gov/

San Diego - (858) 565-1255 http://sandiego.fbi.gov/

USEPA

The US Environmental Protection Agency Drinking Water Program is not a direct response agency. US EPA, through its "Superfund Response Program" has emergency response resources for incidents related to environmental chemical releases. These resources are not "first response" resources and should be requested through the SEMS/NIMS process.

County Health Department

The County Public Health Officer is responsible for all public health issues within their county. They should be notified of any event that could affect public health within their county. In the event of an emergency that will require financial and technical assistance through the CA Mutual Aide System, the County Public Health Officer will be one of the officials that can declare a "State of Emergency" and request assistance from the Regional and State OES. The County Public Health Officer also will have access to disease surveillance data within the county. If you do not have the contact information of the current County Health Officer, contact your District Engineer.

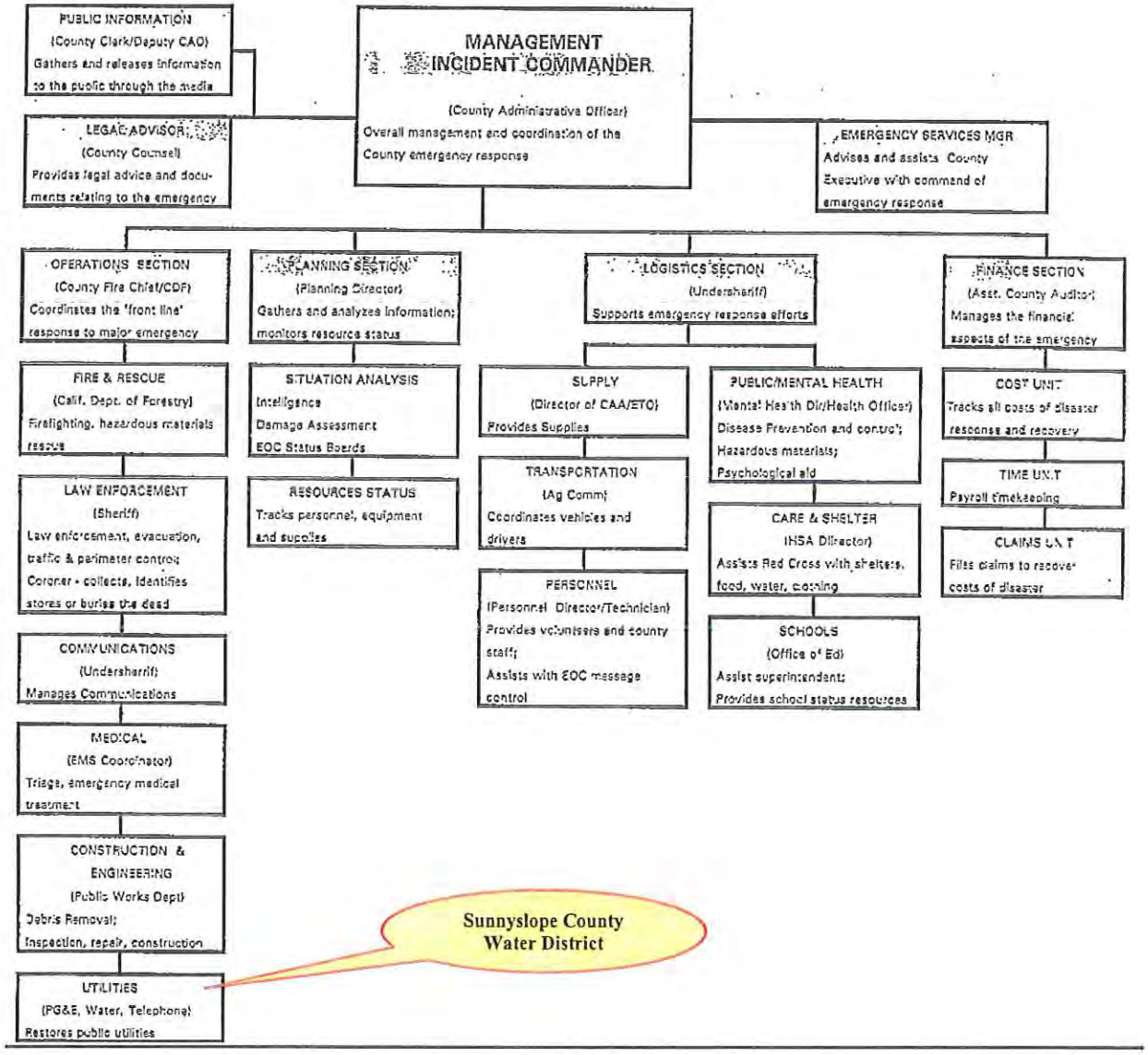
County Environmental Health Departments

Many County Environmental Health Departments have been delegated primacy for the small water systems serving less than 200 service connections within the county. The Environmental Health Departments have contacts with the Department of Public Health Services as well as many county HAZMAT teams. If you do not have the contact information of the current County Director of Environmental Health Department, contact your District Engineer.

County and State Offices of Emergency Services

The County and State Offices of Emergency Services (OES) provide support and coordination of resources during an emergency. Water systems should work with their County OES to establish requesting protocols for State OES resources utilizing SEMS/NIMS. If additional or specialized resources are needed during an emergency, OES should be able to dispatch those resources to the emergency.

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)
San Benito County
Operational Area Emergency Organization



Hospital and Critical Care Facilities

It is important to know location and contact information for all the critical care facilities and hospitals in your service area. An emergency or contamination event in the water system can effect the operations of these facilities.

Customers

It is important that a water system be able to communicate with their customers. All means of communication need to be explored to effectively communicate with customers. The Water Quality Emergency Notification Plan (WQENP), as required under Section 116460, California Health and Safety Code, is a significant part of a water system plan to communicate with their customers. The WQENP should be included in the Appendix of the ERP. The WQENP is a standard form that contains specific information for the CDPH District Engineer and the County. Contact your District Engineer for the current WQENP form.

6. Response Procedures

Personnel will, as quickly as possible, determine the status of other employees, assess damage to water and wastewater system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e., Department of Public Health Services (CDPH) or Local Primacy Agency (LPA)), and document damage and repairs.

7. Public Notice Procedures

Public notice procedures should be developed before the disaster and not during the event. Public notices are a significant part of communicating with customers. Standard public notifications for a water outage/low pressure problems, Boil Water Order (BWO), Unsafe Water Alert (UWA) or Do Not Drink Notices have been developed by CDPH for use during an emergency. Each utility will need to modify the standard forms with specific contact information and guidance to customers depending on the nature of the emergency event. In addition, water systems need to have copies of public notices in the appropriate languages used in their service areas.

A BWO, UWA or Do Not Drink Notice can be issued by one, or a combination of the following agencies:

- CDPH – Drinking Water Program (Designated personnel-District Engineer, Regional Engineer or Branch Chief).
- Local County Health Department (Designated personnel-County Health Officer or Director of Environmental Health Department for small water systems under county jurisdiction).
- Affected Water System (Designated personnel-responsible person in charge of the affected water system, i.e., Director of Water Quality, Manager, Director of Water

Department, Director of Public Works, Owner, etc. The water systems ERP should identify the designated personnel in their ERP).

All public notifications (BWO, UWA or Do Not Drink Notices) should be coordinated with the CDPH District Engineer, County Environmental Health Department and the County Health Officer prior to issuing a public notice. However, any one of the three agencies should act immediately to issue a BWO or UWA, if delays will jeopardize public health and safety. The CDPH District Engineer or the water system must notify the County Health Department and the County Health Officer prior to or immediately after issuing a public notice. Notice must be given to a person, a message left on voicemail is not sufficient. Coordination of this notification should be identified in the ERP. Whenever a BWO/UWA has been issued, the CDPH DWP also needs to notify two other CA Department of Public Health Services Agencies- CDPH Food and Drug and CDPH Licensing and Certification. The CDPH DWP District Engineer will notify the other two CDPH agencies of the BWO/UWA issued.

The following standard public notices are provided in the Appendix of this manual.

Consumer Alert During Water Outages or Periods of Low Pressure

If a water system is experiencing power outages, water outages or low pressure problems, a consumer alert may be issued to the public. The notice provides consumers information on conserving water and how to treat the water with household bleach if the water quality is questionable.

Boil Water Order (BWO)

A BWO should be issued when minimum bacteriological water quality standards cannot be reasonably assured. To assure public health protection a BWO should be issued as soon as it is concluded by the designated personnel that the water supply is or may be biologically unsafe. Examples of these situations include:

1. Biological contamination of water supply system, including but not limited to:
   - Positive total or fecal coliform bacteriological samples;
   - Prolonged water outages in areas of ruptured sewer and/or water mains;
   - Failed septic tank systems in close proximity to ruptured water mains;
   - Ruptured water treatment, storage, and/or distribution facilities in areas of known sewage spills
   - Known biological contamination;
   - Cross-connection contamination problems;
   - Illness attributed to water supply.
2. Unusual system characteristics, including but not limited to:
   - Prolonged loss of pressure;
   - Sudden loss of chlorine residual;
   - Severe discoloration and odor;

- Inability to implement emergency chlorination.

3. Implemented due to treatment inadequacies.

Unsafe Water Alert (UWA)/"Do Not Drink"

In the event a water quality emergency due to known or suspected chemical (non-bacteriological) contamination to a water system a UWA or "Do Not Drink" should be issued. Water should not be used for drinking and cooking, but may be used for sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to:
   - Ruptured water distribution system (storage tanks, mains) in area of known chemical spill coupled with loss of pressure;
   - Severe odor and discoloration;
   - Loss of chlorine residual;
   - Inability of existing water treatment process to neutralize chemical contaminants prior to entering the distribution system.
2. Threatened or suspected acts of sabotage confirmed by analytical results, including but not limited to:
   - Suspected contamination triggered by acts of sabotage or vandalism.
3. Emergency use of an unapproved source to provide a supplemental water supply.

Unsafe Water Alert (UWA)/"Do Not Use"

In the event a known or suspected contamination event to a water system, where the contaminate may be chemical, biological or radiological a UWA or "Do Not Use" should be issued. Water should not be used for drinking, cooking, or sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to
   - Terrorist contamination event.

The public information officer for a water system needs to be assigned before an emergency occurs. The water system public information officer (PIO) will need to coordinate with all the other agencies PIOs. If more than one agency is involved in an emergency, a joint information center (JIC) will probably be established. If a BWO or UWA is issued, the water system should notify the PIOs in the EOC immediately.

Media Notification

Dealing with and notifying the media is one of the most significant communication tasks. Any dealing with the media during an emergency should come from one unified source-typically from the

EOC. If more than one source communicates with the media, there will be conflicting information that will give the appearance all the agencies involved in the emergency do not know what they are doing. The media is a good way to communicate with water system customers. Boil Water Orders, Unsafe Water Alerts, and other public notices can be distributed through the media. Again, this is only effective if the information is coordinated through one source (the JIC) and one message is delivered to the public.

Cancellation of Public Notification

Once a BWO/UWA is issued, the only agency that can rescind the public notice is the drinking water primacy agency. CDPH DWP will not lift the BWO until two rounds, collected one day apart, of coliform bacteria samples have been analyzed and the results are negative. The two sets of sample results should be faxed to the CDPH DWP District Office for final approval before rescinding the BWO. Special chemical sampling will be required to rescind an UWA, please contact the CDPH DWP District Office to determine required sampling.

- See SSCWD public notices in Section "Public Notification" of this Manual.

8. Water Quality Sampling

NOTE: Laboratory protocols and procedures identified are still under development by Federal and State Agencies. This section will continue to evolve and updates will be provided as necessary.

During an emergency, there are several types of water quality sampling that may need to be analyzed depending on the actual event. If it is natural disaster, flood or power outage, sampling will probably only include bacteriological samples, turbidity and chlorine residual samples if the system is chlorinated. However, if the event is a terrorist act or contamination event, the sampling will include a full scan of Weapons of Mass Destruction (WMD) chemical, radiological and microbiological (unless the actual contaminant used is known).

Laboratory Resources

In general there are four different types or ownership of laboratory facilities in California that can analyze drinking water samples, which are listed below:

1. Commercial/private laboratories
2. County Public Health Laboratories
3. State Department of Health Services Laboratories
4. Research Facility/Specialty Laboratories

In general, laboratories are grouped into two broad categories – chemical or biological. Chemical laboratories include: general environmental chemistry laboratories, radiological laboratories, and specialty laboratories that may be able to handle and analyze exotic contaminants, such as chemical weapons and radionuclides. Biological laboratories include: environmental microbiology

laboratories and the Laboratory Response Network (LRN) that typically analyze clinical samples for pathogens and select biotoxins.

CDPH Laboratory

The CDPH Sanitation and Radiation Laboratories Branch (SRLB) is organized within the Division of Drinking Water and Environmental Management (DDWEM). SRLB is the State's primary drinking water quality testing laboratory and is the only State laboratory capable of measuring environmental radiation. Its primary mission is to provide analytical services, reference measurements and technical support pertaining to the State's Drinking Water and Radiologic Health Programs.

SRLB has two laboratories. The Southern California Section is located in Los Angeles and performs microbiological, inorganic and organic testing in various water matrices. The Northern California Section, located in Richmond, carries out inorganic and organic analyses in water, and radiochemical testing in various environmental matrices in addition to water. The SRLB in conjunction with the CDPH Microbial Disease Laboratory (MDL) does microbiological analyses including biotoxins.

California Mutual Aid Laboratory Network (CAMAL Net)

The CDPH SRLB, in conjunction with the water utilities, USEPA Region IX laboratory in Richmond, Lawerence Livermore National Laboratory, and the California Department of Water Resources, have formed a laboratory network, CAMAL Net, to address laboratory capacity issues associated with possible drinking water related contamination events. CAMAL Net establishes a triage system to process samples when water systems or commercial laboratory methods are not available or the water system lacks capacity within their own lab. The CAMAL Net system will not handle any samples where field screening indicates that the sample may contain a CDC listed WMD agent. The list of WMD agents can be found on the Centers for Disease Control and Prevention webpage at http://www.bt.cdc.gov/. Any request for analysis through the CAMAL Net system needs to be approved by the CDPH DWP District Engineer in your jurisdiction prior to collection of water quality samples to be processed.

Chemical Analysis Classification

The California Department of Public Health Services along with its stakeholders and federal partners are in the process of developing an algorithm to assist California water systems, public health agencies, law enforcement, and first responders with the identification of possible chemical agents in drinking water contamination events. A draft version has been developed and it is anticipated that a final version will be released in the near future. The final version will become an appendix to this document.

Biological Analysis Classification

The LRN for Bioterrorism has ranked laboratories (Level A, B, C or D) based on the type of safety procedures they practice.

- Level A Lab uses a Class II biosafety (BSL) cabinet
- Level B Lab is a BSL-2 facility + BSL-3 safety practices
- Level C Lab is a BSL-3 facility
- Level D Lab is a BSL-4 facility

- Level A Labs are used to rule out and forward organisms.
- Level B Labs are used for limited confirmation and transport.
- Level C Labs are used for molecular assays and reference capacity.
- Level D Labs are used for the highest level of characterization.

Currently, in California there are: 28 Level A labs, 10 Level B labs, 2 Level C labs. The two Level C laboratories are the LA County Public Health Laboratory, Los Angeles, CA and the CDPH MDL in Richmond, CA. Lawrence Livermore National Laboratory is also a Level C laboratory, but access to them is restricted. The only Level D laboratories available in the LRN are the national laboratories, such as those at the Center for Disease Control and Prevention (CDC) and the Department of Defense. These laboratories test and characterize samples that pose challenges beyond the capabilities of the Level A, B, and C reference labs, and provide support for other LRN members during a serious outbreak or terrorist event. The most dangerous or perplexing pathogens are handled only at the Bio-Safety Level 4 laboratories at CDC and the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID).

Natural Disaster

During a natural disaster, flood, earthquake, fire etc., sample collection and analysis will be available to the water system by their normal laboratory resources. Sampling will primarily consist of regulatory bacteriological samples and turbidity to show that the system has been flushed out. The water system may also be collecting chlorine residual samples throughout the system with a field chlorine test kit.

Terrorist Event/Contamination Event

Once a threat warning has occurred and the utility has deemed the threat confirmed, it will be necessary to collect water quality samples. The decisions made from the time of the threat warning to the time the threat is confirmed is specific to each individual event. This "credibility stage" as referred to in the EPA Response Toolbox may take the utility between 2 – 8 hours and should involve consultation with local first responders, CDPH DWP (Drinking Water Primacy Agency), local Public Health Department and regional FBI office.

Assuming the threat is confirmed and credible enough to warrant water quality sampling, several state and federal agencies are involved to collect samples, transport the samples to appropriate laboratory and analyze the samples. The water system's first step in this process is to contact the CDPH-District Engineer so they can notify the CDPH-SRLB of the incoming samples. The following steps are described in more detail below:

- Emergency Water Quality Sampling Kit (EWQSK)
- Sample Collection
- Laboratory Required for Analysis
- Sample Transport
- Sample Analysis

Emergency Water Quality Sampling Kit

Contains sample bottles needed for chemical, radiological and microbiological analysis (that could be split into 3 complete sample sets). The original sample kit was developed by Metropolitan Water Department to be used during a terrorist or contamination event. EPA reviewed the sample kit and provided a list of the sample bottles in the EPA Toolbox. The California Mutual Aid Laboratory Network (CAMAL Net) has also reviewed this kit and made some minor changes that will allow water quality samples to be collected under all conditions. The CAMAL Net version of the sample kit has been finalized for deployment. This kit will continue to evolve as the US EPA develops sampling protocols for these new constituents in drinking water. The estimated cost of one kit is approximately $200. The EWQSK should remain sealed before the sample is collected. Since some of the sample bottles contain reagents that expire, the bottles in each kit should be replaced annually.

CDPH-DWP will purchase the supplies to create enough EWQSK to supply 2-3 in each DWP District Office. If water systems do not want to purchase and maintain their own kits, then the DWP will provide one of these kits in the event of an emergency. Requests for these kits should be made to the District Engineer when the water system reports the incident. Travel time from the District Office to the water system should be incorporated in the water system's emergency response plan.

Sample Collection

Several types of samples may need to be collected depending on the event. The FBI will collect samples for the crime scene investigation. The water system needs to collect samples for public health to determine if the water is safe for consumption using the EWQSK for public health. The Department does not recommend that water system staff collect samples for the EWQSK due to liability issues. Several responding agencies are available for EWQSK sample collection – local HAZMAT, FBI, California National Guard Civilian Support Team (CST) or USEPA. Each agency has the proper personal protection material to minimize exposure to any possible agent. In addition, each agency has field screening kits that will provide a preliminary screen for several WMD agents that will help identify the required laboratory resources needed.

Laboratory

Depending on the results of the field screening and actual event, the required laboratories need to be notified and prepared to accept the samples. If an EWQSK (supplied by water system or CA CDPH DWP) is used, the CAMAL Net and the LRN need to be notified and involved in the process for laboratory selection. The first step in this process is for the District Engineer working with the water system to contact SRL.

Sample Transport

Depending on the responding agencies, field screening, the ICS will decide how the samples will be transported to the appropriate lab. Since the samples may be used for the crime investigation, proper chain-of-custody must be maintained. The possible agencies and field screening, depending on the event, are: local HAZMAT, CHP, FBI, CST, or US EPA.

Sample Analysis

Once the samples are delivered to the appropriate laboratory, they may be split for analysis to different laboratories. The transport and laboratory testing protocols will be handled by the CDPH SRLB laboratory. Sample results will be shared through the ICS. Please note that sample analysis may take days to weeks to complete depending on the complexity of analysis.

9. Restoration and Recovery

The CA OES "Emergency Planning Guidance, Public and Private Water Utilities", Section 12 is a good reference for restoration and recovery. The following excerpt was taken from the "Emergency Planning Guidance for Public and Private Utilities", March 1999. The entire document can be found on the Governor's Office of Emergency Services Website at: http://www.oes.ca.gov/

The recovery process begins during the response phase. It is important to start damage inspections, reporting, and recordkeeping as soon as the plan is activated. The items below may assist the water utility in recovery activities.

Initial Recovery Activities

- Designate a disaster recovery coordinator (may or may not be EOC director) and notify all appropriate regulatory agencies.
- Complete detailed evaluations of all affected water utility facilities and determine priorities for permanent repair, reconstruction, or replacement at existing or new locations.
- Begin repair activities design and make bids for contractor services.
- Make necessary repairs to the system and untag repaired facilities and equipment.
- Restore all telecommunications, data processing, and similar services to full operation.

- Complete assessment of losses and costs for repair and replacement, determine approximate reimbursements from insurance and other sources of financial assistance, and determine how residual costs will be financed by the water utility.
- Define needs for additional staff, initiate recruitment process, and adopt temporary emergency employment policies as necessary.
- Execute agreements with vendors to meet service and supply needs.
- Reevaluate need for maintaining the emergency management organization; consider returning to the normal organizational structure, roles, and responsibilities when feasible.
- Collect cost accounting information gathered during the emergency and prepare request for Emergency Disaster Funds (follow FEMA and State OES requirements).
- Debrief staff to enhance response and recovery efforts in the future by identifying lessons learned, developing action plans and follow-up mechanisms, and providing employee assistance programs if needed.
- Prepare After-Action Reports as required. Complete reports within six months of the event (90 days for public utilities which are part of a city or county government.).
- Identify recommendations

Long Term Recovery Activities

- Initiate permanent reconstruction of damaged water utility facilities and systems.
- Restore water utility operations and services to full pre-event levels.
- Continue to maintain liaison as needed with external agencies.

Assistance Programs - The State of California Office of Emergency Services administers several programs designed to assist victims of a disaster. They include Public Assistance, Individual Assistance, and Hazard Mitigation Public Assistance (PA) administers state disaster relief programs under the Natural Disaster Assistance Act, and federal disaster assistance programs under various federal laws and regulations, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288 as amended), the Code of Federal Regulations (CFR), and the State Administrative Manual. These regulations designate the State of California as "grantee" for all federal public assistance funding available to agencies of state government, local governments, and certain private non-profit organizations that provide essential services of a governmental nature to the general public, including water utilities. As grantee, the state is responsible for the processing of sub-grants to public assistance applicants in accordance with 44 CFR, parts 13, 14, and 206, and its own policies procedures. PA works closely with the Federal Emergency Management Agency to process Damage Survey Reports. It dispatches inspection teams and conducts applicant briefings. This unit is led by OES, with support drawn from other state agencies. Under the Public Assistance Program, public and private non-profit water utilities may be eligible for public assistance to reimburse the work and associated costs of responding to and recovering from a disaster if the costs:

- Are a direct result of the declared event and not a pre-disaster condition or result of some other event;
- Are located within the area designated by FEMA as eligible for assistance;
- Are the legal responsibility of the eligible applicant; and

- Are not eligible for assistance under another federal program (this applies to permanent restoration work only).

Hazard Mitigation - Following a presidential disaster declaration, the Hazard Mitigation Grant Program is activated. The program's purpose is to fund projects which are cost-effective and which substantially reduce the risk of future damage, hardship, loss, or suffering from a major natural disaster. Virtually all types of hazard mitigation projects are eligible provided they benefit the declared disaster area and meet basic project eligibility requirements. Types of eligible projects will be identified from those mitigation measures identified in the State Hazard Mitigation Plan, hazard mitigation team reports, and issues unique to the disaster event. The priorities of funding will be established and the program administered by OES.

Expenditure Documentation - One of the critical aspects of any major emergency or disaster is collecting information on the costs related to response and recovery. The ability of the utility to recover costs or receive disaster assistance from the state and federal governments is predicated on its eligibility and ability to document its costs.

10. Emergency Response Training

Training provides the means for staff involved in a response to acquire the skills necessary for them to fulfill their role during an emergency. Not only is training on the water utility's emergency response plan critical for effective implementation, individual training to perform certain functions expected in the plan is just as important. It is important for Water Utility management to create a training policy that emphasizes plan implementation, emergency management, and employee health and safety. The training policy can be an independent policy or part of an overall emergency preparedness policy for the utility. Individual roles established in the emergency response plan should dictate the type and level of training that is necessary.

Exercises and Drills

As a part of Sunnyslope County Water District's overall emergency preparedness periodic review of SSCWD Emergency Response Plan & Operations and Maintenance Procedures Manual which includes routine training drills, cross trained personnel, routine emergency equipment maintenance operation and testing. All key players are included in the exercises so everyone is familiar with emergency policies and procedures.

11. Resume Normal Operations

The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).

a. Leaks or service interruption (result of earthquake, etc.)

- Isolate leak. Turn power or flow off, if necessary, to control leak.
- Repair or isolate break to allow service to the maximum system population possible. Disinfect as per attached AWWA Standards; increase system disinfectant residual as precaution, until normal service is resumed.
- Do bacteriological sampling until 3 good consecutive samples are confirmed.
- Reestablish normal service.

b. Low pressure (result of earthquake, fire, storm)
- Increase production, if possible, to maximize system output.
- Increase disinfection residual as precaution to potential contamination.

c. Power outage
- Place emergency generator online to provide minimum water pressure to system.
- Increase disinfectant residual as precaution to potential contamination.

d. Contamination
- Identify location and source of contamination.
- If contamination is from system source, isolate or treat source.
- If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (CDPH or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility (sabotage)
- Immediately contact local law enforcement and regulatory agency for consultation.

All significant water outages (widespread and lasting more than eight hours) or disinfection failure will be reported to the California Department of Public Health Services (CDPH) District Office or Local Primacy Agency (LPA) by telephone or equally rapid means. All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

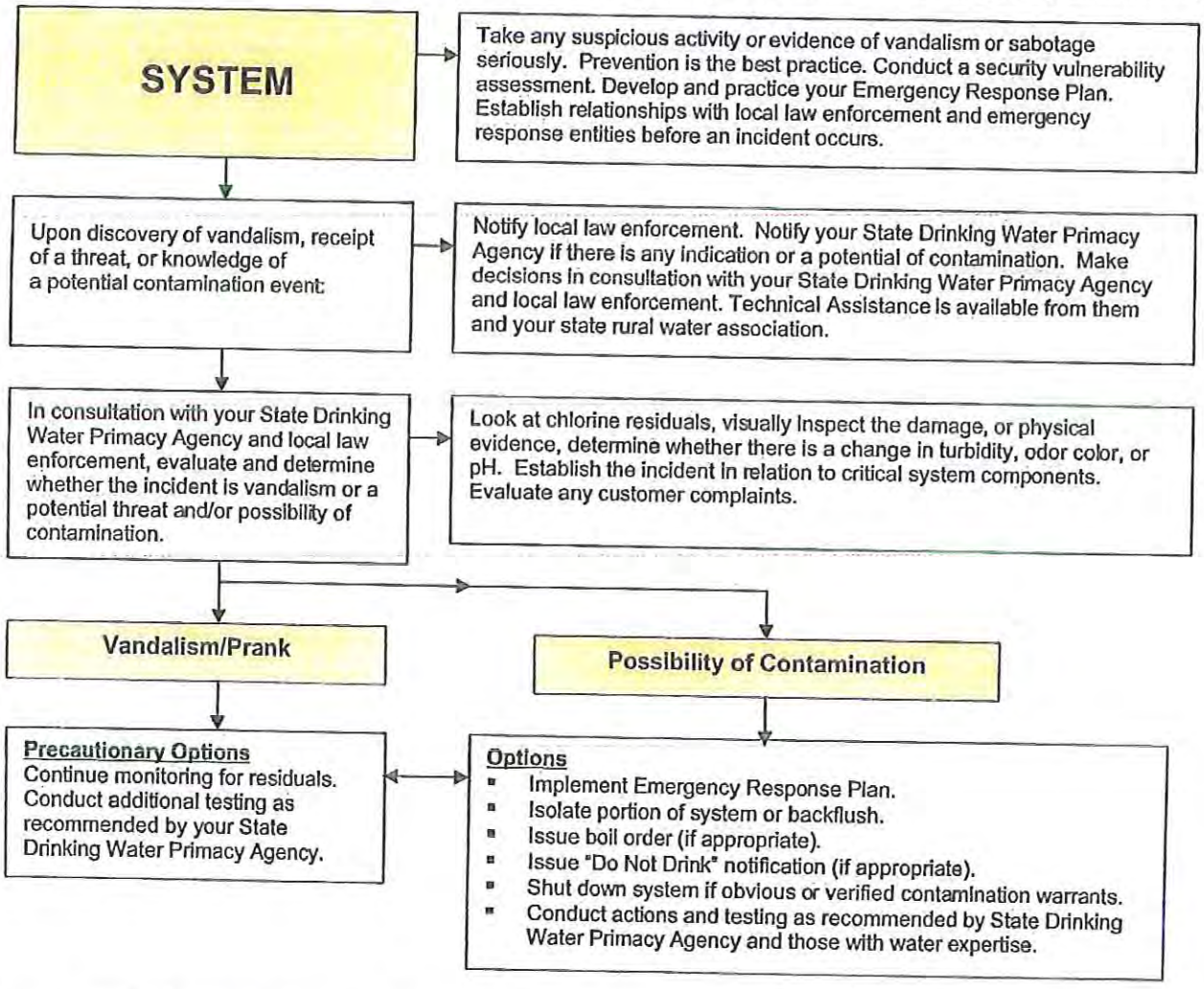
- **For Additional Information see the corresponding sections within Sunnyslope County Water District Emergency Response Plan and Operation and Maintenance Procedures Manual.**

- **For further Emergency Resources See County of San Benito Emergency Operations Plan Resources Section.**

Sunnyslope County Water District
Emergency/Disaster Response Plan
(SEMS-NIMS)

A Utility Guide for Security Decision Making

These guidelines are designed to assist utilities in determining the level of secuity concern if a break-in or threat occurs at the water system and to assist the utility in appropriate decision making and response actions. These various steps and actions can be adjusted to meet the needs of specific situations and to comply with individual state requirements. Specific actions should be undertaken in consultation with your State Drinking Water Primacy Agency. Technical assistance is available from your state drinking water primacy agency and state rural water association for prevention initiatives such as vulnerability assessments, emergency response planning, and security enhancements.



- Do not disturb evidence. Document what you see. Keep notes and take photos as you go.
- Collect samples for future analysis and store them appropriately.
- Alert other officials as appropriate and keep the public informed (designate one spokesperson).
- Use the expertise in public drinking water supplies and public health in the decision making process.
- Preventive measures are the best practice to prevent such an incident.
- Prior communication with local law enforcement authorities and local emergency response entities prevents confusion and defines who has responsibility for what, when an incident occurs.

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Aug 20, 2009

Desktop Computer $ 1,086.00

1 Intel Core2Duo E7400 2.8 GHz Dual-Core Processor
InWin-Mini Tower Case (Black) w/ 350W Power Supply
Asus P5KPL-SE Mainboard
4.0 GB DDR2-667 RAM
320 GB Hard Drive, Western Digital
Onboard Video (256 MB Shared), Audio, LAN (10/100 Mb)
Samsung 22X DVD+/-RW Optical Drive
Hyundai 19" LCD Monitor
Logitech S220 2.1 Speaker Set
Logitech Keyboard/Mouse (optical)
MS Windows XP Professional w/ SP3
MS Office 2007 Small Business Edition
- MS Outlook 2007
- MS Excel 2007
- MS Word 2007
- MS Powerpoint 2007
- MS Publisher
- MS Accounting Express 2008

Warranty: 1 Year Parts / 1 Year On-Site Labor

(Plus Shipping and Applicable Sales Tax)

Setup, Delivery, Installation, Configuration and Testing of Hardware & Software listed in this quote will be billed at a rate of $135 per hour.

ALL OF THE WORK IS TO BE PERFORMED BY PROFESSIONAL COMPUTER SOLUTIONS.

HARDWARE WARRANTY: - Unless otherwise specified, 12 Months Parts / On-Site Labor Provided by Professional Computer Solutions.

TERMS:

- **One half due upon placement of order.**
- **Balance due on delivery of system.**

TRAINING & ON-GOING SUPPORT: - Billed monthly at $135 per hour.

ESTIMATED DELIVERY DATE: - 1-2 weeks from placement of order.

THIS PRICE QUOTE IS VALID THRU – Sep 3, 2009.

If the above quote is accepted please sign and date below.
Please return a copy of this quote sheet with the appropriate Down Payment to Professional Computer Solutions.

Signature:_____ Date:_____

Sunnyslope County Water District
Emergency Response Plan
Power Failure

3570 Airline Office

When PG&E power is interrupted for more than 15 seconds the power transfer switch will change to generator power the emergency power generator will be activated.

During the operation of the emergency generator maintenance personnel will be required to monitor generator operating parameters and maintain sufficient diesel fuel levels to sustain operation.

Upon PG&E power return of more than 10 minutes the power transfer switch will again transfer to PG&E power and the generator will return to standby mode.

- Check generator oil and fluid levels.
- Refill all fuel tanks.

Sunnyslope County Water District
Emergency Response Plan
Power Failure

Sanitary Sewer

Main Lift Station Marks Drive.

- Check the main lift station on Marks Drive to see that the on site generator started and the lift pumps are operating properly.
- Check to see that the diesel fuel tank is kept full.
- If the on site generator will not function the backup main lift station can be operated using either the 150 KW portable generator at Well # 7 or the 75 KW portable generator at well # 8 using one of the following procedures.

See the following sections in the Sunnyslope County Water District Emergency Response Plan & Operation and Maintenance Procedures Manual

- **Emergency 150 KW Portable Generator use for the Backup Main Lift Station Section**

Or

- **Emergency 75 KW Portable Generator use for the Backup Main Lift Station**

Oak Canyon Lift Station

- Check the Oak Creek lift station for over flow condition.
- If pumping down the lift station is required to prevent overflow the lift station can be operated using either the 150 KW portable generator at Well # 7 or the 75 KW portable generator at well # 8 using one of the following procedure.

- **Emergency 150 KW Portable Generator use for the Oak Canyon Lift Station**

Or

- **Emergency 75 KW Portable Generator use for the Oak Canyon Lift Station**

Paullus Drive Lift Station

- Check the Paullus Drive lift station for over flow condition.
- If pumping down the lift station is required to prevent overflow the lift station can be operated using either the 150 KW portable generator at Well # 7 or the 75 KW portable generator at well # 8 using one of the following procedure.

- **Emergency 150 KW Portable Generator use for the Paullus Drive Lift Station**

Or

- **Emergency 75 KW Portable Generator use for the Paullus Drive Lift Station**

Sunnyslope County Water District
Emergency Response Plan
Power Failure

Sanitary Sewer
Power On

Return all equipment to normal run condition and check for proper operation.

- Lift stations = Oak Canyon, Paullus Drive, Marks Drive,
- Lift Pumps Pond 2, = South Ridgemark Ponds
- Force Main Lift Station Pond 4, = South Ridgemark Ponds
- Flow Meter = RM I (Old Ponds, Georges Drive)
- Flow Meter = RM II (New Ponds, Sonnys Way)
- Final Disposal Lift Pumps, = RM I (Old Ponds, Georges Drive)
- Aerators = RM I and RM II
- Reset timers
- Refill all fuel tanks to the top

Sunnyslope County Water District
Emergency Response Plan
Power Failure

Water
Wells #2, #5, #7, #8 and #11

- Visually check the water levels at each water tank.

Start the generators located at wells #2, #5, #7, #8 and #11 (Well 11 generator starts automatically) run the wells (if required). **See the following sections in the Sunnyslope County Water District Emergency Response Plan & Operation and Maintenance Procedures Manual under Emergency Generator Use for each Well.**

- Check to see that the chlorination equipment is operating properly.
- Check to see that the diesel fuel tanks on the generators are kept full.
- If diesel fuel is required refill with fuel trailer (contact Toro Petroleum at (831) 637-3300. Or 1285 Prospect Ave to refill Fuel Trailer).
- If chlorine is low, contact one of the following companies to order more.
- Sierra Chemical Co. (Sodium Hypochlorite 12.5%) (800)-777-8965
- Rick's Pool Service (Fresh Chlor) at (831) 637-1772. Or 337 Vista De Oro to order more.
- If required turn the City of Hollister Booster Pumps HAND-OFF-AUTO Switches located at Hillcrest and Memorial drive to the OFF position to prevent city water from being pumped into our system. Leave lockout tag and notify the City of Hollister Water Department.
- If required turn the City of Hollister Well pump located on the north side of Nob Hill Foods to the OFF position. Leave lockout tag and notify the City of Hollister Water Department.
- If required to maintain water level in the SSCWD system turn off the flow at the pressure reducing station on Santa Ana and La Baig. (Notify the COH)
- If required to maintain water level in the SSCWD system turn off the flow at the pressure reducing station at the San Benito County Maintenance Yard on Southside Road. (Notify the COH)

Power On
Return all equipment to normal run condition and check for proper operation.

- Booster Station (Enterprise & Airline)
- Well #2 and chlorinator
- Well #5 and chlorinator
- Well #7 and chlorinator
- Well #8 and chlorinator
- Well #11 and chlorinator (Well 11 generator should stop and return to normal operation automatically)
- Refill all fuel tanks.

- **For further Emergency Resources, See County of San Benito Emergency Operations Plan Resources Section.**

Emergency/Disaster Response Plan

PWS 3510003

Revision Date: May 13, 2011

Table of Contents

1. Introduction

Objective

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, the City of Hollister proposes the following plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Disasters/emergencies that are likely to occur in the water system's service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contamination, and acts of sabotage.

2. Planning Group Partners

City of Hollister has established emergency planning partnerships with other parties who have agreed to help the utility in an emergency situation. A list of these agencies and brief description of their emergency capabilities is provided in section "COH Telephone List"

3. Water System Information

System Identification Number	PWS 3510003	
System name and address	City of Hollister 375 Fifth Street Hollister CA 95023	
Connections/Population Served	6,050 service connections	22,500 population
Type of Source	6 Groundwater Wells	1 Surface Water Treatment Plant
Type of Treatment Provided	Disinfection treatment is provided using Sodium Hypochlorite 12.5% at Wells and LESSALT Surface Water Treatment Plant in addition adds Sodium Hydroxide 25% (Caustic Soda) for pH control.	
Number of Storage Tanks	3 Treated Water Tanks totaling 7,500,000 gallons	

Emergency Water Supply

Average Water Demand	2.7 mgd	
Max Water Demand	5.0 mgd	
Max Water Production	5.5 mgd	
Max Emergency Electrical Generator Water Supply Capacity	SSCWD Supply 4.55 mgd	City of Hollister Supply 5.6mgd
Days of Emergency Supply	Unlimited at Average Demand	Unlimited at Max Demand

Typical residential water usage in the United States is on the order of 300 to 500 gallons per residence per day, or 100 to 150 gallons per capita per day. Although these amounts can typically be significantly reduced during crisis situations, City of Hollister has found it useful to develop an estimate for the quantity of supplemental water required for a number of potential outage scenarios. These estimates are as follows:

Outage Period	Number of Customers (service connections) Affected	Quantity of water needed
1 hour	5300 connections 6000	110,416 gph
12 hours	5300 connections 6000	1,324,999 g/12hr
1 day	5300 connections 6000	2,650,000 gpd
2 days	5300 connections 6000	5,300,000 g/2days
1 week	5300 connections 6000	18,550,000 gpw

CITY OF HOLLISTER/SUNNYSLOPE COUNTY WATER DISTRICT INTER-TIES			
COH/SSCWD Inter-tie Location	**Description**	**Flow Direction**	**(GPM Range) Actual**
Santa Ana & La Baig	Pressure Reduction Valve Water meters & totalizer 2" & 6" Meter	Flow to the COH Only	(0 - 1000 GPM) 250 - 600 GPM
Hillcrest & Memorial Booster Station	Pressure Reduction Valve, 2 Booster Pumps, Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 250 - 600 GPM
Sunnyslope & Memorial	Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 150-250 GPM
Sunset Dr. & Memorial	Water meter & totalizer 8" Mag Meter	Flow to the COH can be pumped to SSCWD	(0 - 1000 GPM) 150-250 GPM
San Benito County Public Works Yard	Pressure Reduction Valves Water meters & totalizers 2" & 6"	Flow to COH Only	(0 – 1000 GPM) 150-250 GPM

The Sunnyslope County Water District maintains a potable community water system that is capable of supplying water to City of Hollister during an emergency.

During Normal operations the exchange of water is as required by demand and metered through a series of five inter-ties between the City of Hollister and the Sunnyslope County Water Distribution Systems. This exchange includes the routine daily transfer of the City of Hollister's share of water from the LESSALT Water Treatment Plant. Additional flows to and from the Sunnyslope Distribution System are based on seasonal water supply demands.

These inter-ties typically involve pressure reduction valves, water meters and a booster pump station at one location with associated appurtenances.

A higher water pressure in the Sunnyslope County Water District Distribution System results in Hollister's share of LESSALT surface water to flow through the Sunnyslope Fairview Pressure Zone primarily through the Santa Ana and Hillcrest Pressure Reducing Valve Inter-ties. Flows can vary from 0 to 1000 GPM but typically are between 400-600 gallons per minute (GPM) range at Santa Ana and 100-300 GPM range at Hillcrest, Sunset and Sunnyslope. Seasonal demands also allow Sunset and Sunnyslope inter-ties to provide LESSALT water to the City.

Water can be transferred into the Sunnyslope system using the City of Hollister's booster pump station at Hillcrest and Memorial Drive or Airline Highway City Well #6 to pump water against the pressure gradient. The demand in the City's sub system west of Memorial Drive is first met then surplus water will flow back to the Sunnyslope system through the Sunset, Sunnyslope and Hillcrest inter-tie connections.

The San Benito County Public Works Inter-tie provides water from the Sunnyslope Ridgemark Water Pressure Zone though a series of pressure reducing valves to the City of Hollister Cienega Pressure Zone. Transfer at this site typically falls within the 0-300 GPM range depending on seasonal demands.

Zone Map

A map of the City of Hollister which identifies water well sources, inter-ties with the City of Hollister water distribution system, pressure zones, booster pumps, pressure reducing stations, and District owned wastewater facilities and also establishes emergency response zones. See section "Sunnyslope County Water District Zone Map".

Designated Responsible Personnel

For designated responsible personnel, chain of command, identified responsibilities, and additional resources see section" COH Employee Phone List."

Inventory of Resources

Equipment and system resources that are used for normal operations and available for emergencies; including maps and schematic diagrams of the water system, emergency equipment, equipment suppliers, mutual aid with planning group partners, repair parts and equipment are located at the City of Hollister Utility Division Office. Additional equipment and resources available include:

- Electrical generators
- Backhoe
- Air compressor
- High pressure hydro flushing equipment
- Utility vehicles equipped with tool, valve turners, lift gate, air compressor.
- Dump trailer
- Utility trailer containing repair equipment and supplies
- Welder and cutting torch
- Cell phones, two way radio communications
- Shop vacuums
- Pumps
- Emergency spill kits
- Mutual aid with the Sunnyslope County Water District, San Benito County Water District, San Benito County Public Works

The City of Hollister has established procedures for equipment maintenance. See Operation and Maintenance Procedures.

4. Standardized Emergency Management System (SEMS/NIMS)

The Standardized Emergency Management System/National Incident Management System (SEMS/NIMS) is the system required by Government Code §8607 (a) for managing response to multi-agency and multi-jurisdiction emergencies in California. The system was created for several purposes. First it allows rapid and effective coordination at the field level using the Incident Command System (ICS) to manage multi-agency response to an incident. Secondly, SEMS/NIMS create a common management structure at all levels of response, which allows entities to work with common terminology, staffing organizations, and facilities for more efficient interagency coordination. Thirdly, it creates an ordering process for requesting resources from the field through local government, to the County (Operational Area) to the state and eventually the federal government. It also allows each level of organization to track requests and resources that are dispatched to the incident or necessary for support. Local public agencies (cities, counties, special districts) must use SEMS/NIMS to be eligible for State funding of certain response-related personnel costs resulting from a disaster. State agencies are required by the law to utilize SEMS/NIMS during emergencies.

NOTE: Depending on the circumstances of the incident, when a request is made by the water system to local first response agencies, such as Fire or Law Enforcement, ICS will be implemented by these first response agencies to manage the resources at the site. Water system personnel that will interface with this response agency personnel, in the field, should understand their role in the ICS structure. Water systems can and will provide tactical and precautionary measures through their Emergency Operations Center or the Water Utility Emergency Response Manager (WUERM). It will be important to coordinate these activities with the field (Incident) through an Agency Representative or Technical Specialist in the ICS structure.

Water System Personnel may function in the ICS structure (Field Level) as an Agency Representative or Technical Specialist.

Five Principle Functions of SEMS/NIMS

Management - In a Water System Emergency Operations Center (EOC), the EOC Director has overall responsibility for all emergency functions. This person may initially be designated as the Water Utility Emergency Response Manager (WUERM) prior to the activation of an EOC. The EOC Director may retain and/or delegate authority for functions listed below.

In the field, under ICS, an Incident Commander or Unified Command is established depending on statutory authorities for the Incident. The Incident Commander's responsibility is the overall management of the incident.

Operations - The Operations Section is responsible for the management of all operations directly applicable to the primary mission established for the response. The Operations Section Chief activates and supervises organization elements in accordance with the Incident Action Plan and directs its execution.
For water utilities, coordinates emergency response activities at the water utility EOC level and implements the priorities established by management or the Incident Command. Operation Section staff include field coordinators, as necessary, linked to water utility personnel at other fixed facilities or assigned to incidents within the water utility. The field coordinator should receive and pass information up the chain of command, as well as, receive and coordinate requests for services and support.

Planning/Intelligence - Oversees the collection, evaluation, verification, and display of current information related to the emergency. This section is also responsible for preparing action plans and maintaining documentation related to the emergency. The information collected is needed to 1) understand current situation 2) predict probable course of the incident events 3) prepare alternative strategies and control operations for the incident.

Logistics - Provides facilities, services, and material in support of the Incident. Oversees the acquisition, storing, and distribution of essential resources and support services needed to manage the emergency. It tracks the status of resources. Logistics provides services to all field units in terms of obtaining and meeting their personnel, materials and equipment needs including communications.

Finance/Administration - The Finance/Administration Section is responsible for all financial, administrative and cost analysis aspects of the incident. Finance/Administration prepares vendor contracts, maintains records of expenditures for personnel and equipment, and maintains records and processes claims. It also provides preliminary estimates of damage costs and losses.

General Staff - Each function listed above should have a delegated Chief to manage the Section. Depending on the nature and scope of the emergency each Section can have several branches, divisions, groups, or units.

Command Staff - These positions report directly to and are directly subordinate to the Incident Commander or EOC Director. They are the Public Information, Liaison and Safety Officers.

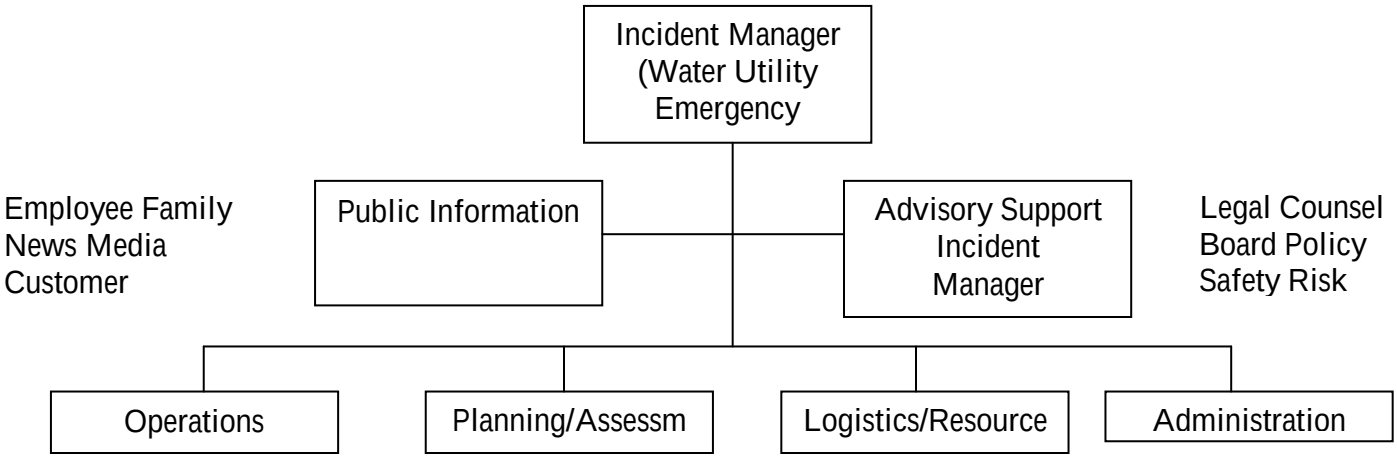
Water Utility Emergency Operations Center

Depending on the Magnitude of the Incident, Water Utilities may have to establish an Emergency Operations Center (EOC) to manage its resources and coordinate with outside entities. An EOC is a physical location from which support for centralized emergency management can be performed. The essential functions necessary in the Water Utility EOC are described below:

- Establish an EOC Director to manage the Operations, Planning/Intelligence, Logistics, Finance/Administration Sections, and related sub-functions.
- Setting Priorities and developing Action Plans
- Coordination and support of all field level incident activities within the utility service area.
- Information gathering, processing, and reporting within the utility service area and to other levels of SEMS/NIMS
- Coordination with local government, operational areas, or regional EOCs as appropriate.
- Requesting Resources from higher SEMS/NIMS levels

Note: In general, at any level of activation, the Water Utility Emergency Response Manager (WUERM) should be aware of the following incident management principles:

- Establishing objectives and priorities for the incident
- Establish an Incident Action Plan (written or verbal)
- Awareness of his or her responsibility for the 5 primary functions of SEMS/NIMS
- Management, Operations, Planning, Logistics and Finance/Administration
- Ensure an effective span of control (only supervise 5-7 staff directly on an incident)
- Delegate authority and activate organizational elements within an Incident Command Structure only as necessary
- Provide for personnel accountability and a safe environment for staff
- Ensure effective communications



Section Leader Assignments

SECTION	PRIMARY	ALTTERNATE
Incident Manager	City Manager or Water Utility Emergency Response Manager (WUERM)	Director of Community Services
Operations	Utilities Supervisor	Ray Rojas
Planning/Assessment	Director of Community Services	Senior Engineer
Logistics/Resources	City Engineer	Senior Engineer
Administration	Admin. Manager Accounting	Personnel Administrator Human Resources

COMMAND STAFF	PRIMARY	ALTERNATE
Public Information	Public Education Coordinator	Customer Service Admin.
Advisory Support	Safety Coordinator	Assistant Safety Coordinator

City of Hollister Personnel

Name and title	Responsibilities during an emergency
WUERM	♦ **Overall management and decision making for the water/wastewater system.** ♦ **WUERM is lead for managing the emergency and contacting the regulatory agencies.** ♦ **WUERM contacts the public and news media** ♦ **All communications to external parties are approved by the WUERM**
	♦ **In charge of operating the water/wastewater system.** ♦ **Performs inspections, maintenance, sampling of the system and relaying critical information to the WUERM.** ♦ **Assess facilities, and provides recommendations to the WUERM.**
	♦ **In charge of running water treatment plant** ♦ **Performs inspections, maintenance, sampling of the WTP and relaying critical information to the WUERM.** ♦ **Assess WTP facilities and treatment provided and provides recommendations to the WUERM.**
	♦ **In charge of collecting samples, having samples analyzed by certified labs, receiving the results.** ♦ **Determines the quality of the water being served meets all drinking water and public health requirements.**
	♦ **Responsible for administrative and financial functions in the office.** ♦ **Cost accounting and tracking during emergencies.** ♦ **Oversee customer phone calls and maintains a log of complaints and calls.** ♦ **In an emergency, could provide a standard carefully pre-scripted message for customers who call with general questions.**
	♦ **Delivers water quality notices or door hangers** ♦ **Provides backup to water system operator.** ♦ **Conducts site inspections of all facilities.**
	♦ **Coordinate with all the other agencies PIOs.** ♦ **Report and work with the joint information center (JIC) if more than one agency is involved.**

Drinking Water Field Operations Branch - Chain of Command

The primary contact for the water system during any emergency is their District Engineer. Water Systems should contact their District Engineer in the event of any emergency. From the District Engineer, authority moves up the line to the Regional Engineer, Branch Chiefs, Assistant Division Chief, to finally the Chief of the Division.

Emergency Operations Center

The City of Hollister Police Department has been designated as the communication network Emergency Operations Center (EOC). The designated backup location is the City's Corporation Yard at 1321 South Street All City water utility vehicles contain copies of the COH Emergency Response Plan & Operation and Maintenance Procedures Manual. Emergency contact information for equipment suppliers is located in section "COH Employee Phone List" of this manual. The telephone and FAX will be the primary mode of communication in an emergency.

Personnel Accountability

The COH Emergency Operations Center (EOC) is designated as the personnel assembly area. During catastrophic emergency situations outside of working hours all personnel will first respond to personal emergencies then will report to the Emergency Operations Center. During working hours personnel will communicate with the Emergency Operations Center to report their status and receive instructions. If an employee fails to report their status an investigation into the location and safety of that employee will be initiated.

Family members are urged to contact the EOC for personnel updates and assistance.

Response Procedures

Personnel will, as quickly as possible, assess damage to water and wastewater system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e., Department of Health Services (DHS) and document damage and repairs.

Other Agency Coordination

Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan.

During an emergency it is important to contact and notify all the appropriate agencies and stakeholders that will be affected by the emergency. Some agencies will need to be notified

immediately while others may be needed later in the incident, depending on the event. The following is a list of agencies and stakeholders that a water system should have updated contact information. Since this list has many contact names and phone numbers, this information should be reviewed annually to ensure that current information is provided.

The initial notification response to any emergency should be to "911" for the needed first responder and then to the Department of Health Services-Drinking Water Program. The Department of Health Services – Drinking Water Program is the Drinking Water Primacy Agency in California and has regulatory jurisdiction over all public water systems in the state.

Contact to the CDPH-DWP should be to their District Engineer. If the water system is unable to contact the District Engineer (or one of their staff), the water system should use the California Office of Emergency Services (OES) Warning Center Phone Number: 1-800-852-7550, which is a 24/7 phone number. A second phone number for the OES Warning Center is 916-845-8911. A duty officer will answer the CA OES Warning Center phone call and refer to statewide emergency phone numbers. In order to assist the duty officer-it will expedite response if you request the California Department of Health Services (CDPH) duty officer. The CDPH duty officer will then call management staff in the Drinking Water Program to respond to the emergency.

Depending on the magnitude of the event, the following state agencies may also need to be contacted:

- Office of Emergency Services (OES) Warning Control Center.
- Department of Water Resources.
- Department of Fish and Game.
- Regional Water Quality Control Board.
- Department of Toxic Substances Control.
- Federal Bureau of Investigation (FBI)
- USEPA
- Local County Health Department
- County Health Department
- County Environmental Health Departments
- Local Agencies/Facilities
- County and State Offices of Emergency Services
- Hospital and Critical Care Facilities
- Water District Customers

5. Initial Notifications

First Responders

911 - If the situation is an emergency that needs response from local fire, law enforcement, medical or hazardous materials team (HAZMAT), calling 911 should be the first immediate call.

Water system staff should be aware of where and how they are calling 911. If the water system staff calls "(831) 636-4100" from a cell phone, then the call is routed to the nearest California Highway Patrol Office, which may be in another city or county, and not in the immediate local 911 area. Typically a direct phone number for the local 911 can be provided to the water system-contact your local first responders to get this phone number for cell phones.

Local Police and Sheriffs

Water systems should establish an ongoing relationship with the local police and sheriff offices that serve their service area. It is good practice to get them familiar with water system facilities. If they are called out to an incident, they will then be familiar with some basic aspects of the water system. Water systems that have large service areas that cover several cities or large areas should have contacts for each police and sheriff agency in their service area.

Fire and Hazmat

If the emergency incident involves an unknown substance and possible contamination of the water system, the first responders will more likely be the local fire department and/or HAZMAT team. Most Hazmat teams are part of the local fire department, but some may be special teams under county or city jurisdiction.

Like law enforcement agencies, water systems should know all the fire departments and/or HAZMAT teams that serve their service area and maintain contacts with those agencies. Contact your local county Office of Emergency Services to obtain the local HAZMAT teams that have jurisdiction in your area.

Drinking Water Primacy Agency

California Department of Public Health Drinking Water Program has regulatory jurisdiction for public water systems and should be one of the first agencies to be contacted in almost all emergency events. Contact should be to the District Engineer. In most emergency events, it is not appropriate to leave a message on the District Engineers voicemail. If the water system is not able to contact the District Engineer-they should call the State Warning Center 24/7 phone number as described in Section 6.3. The District Engineer will be able to assist the water system in:

- Inspections of water treatment plants, storage facilities, watersheds (chemical contamination, sewage spills, erosion, and drainage diversions).
- Water Quality Sampling.
- Consulting with water system staff/operators.
- Providing technical assistance.

- Documenting the disaster's effect on the water system through photographs and reports.
- Keeping local officials advised of the current drinking water situation.
- Review plans and specifications for reconstruction projects, and issue amended permits as needed.
- Laboratory Sampling Analysis

a. Depending the magnitude of the event, the following state agencies may also need to be contacted:
   - Office of Emergency Services (OES) Warning Control Center.
   - Department of Water Resources.
   - Department of Fish and Game.
   - Regional Water Quality Control Board.
   - Department of Toxic Substances Control.

Federal Agencies

Federal Bureau of Investigation (FBI) - If the event is a known terrorist incident or a direct written or phone threat against the water system, the FBI is to be contacted as soon as possible. There are four regional offices that have Key Asset Coordinators/Special Agents that should be contacted. The water system should report an emergency by calling the 24/7 phone numbers, which are listed below for each of the four regional offices in California. A link to the regional offices is also provided to allow water systems to check what region they should report an event.

San Francisco - (415) 553-7400 http://sanfrancisco.fbi.gov/

Los Angeles - (310) 477-6565 http://losangeles.fbi.gov/

Sacramento - (916) 481-9110 http://sacramento.fbi.gov/

San Diego - (858) 565-1255 http://sandiego.fbi.gov/

USEPA

The US Environmental Protection Agency Drinking Water Program is not a direct response agency. US EPA, through its "Superfund Response Program" has emergency response resources for incidents related to environmental chemical releases. These resources are not "first response" resources and should be requested through the SEMS/NIMS process.

County Health Department

The County Public Health Officer is responsible for all public health issues within their county. They should be notified of any event that could affect public health within their county. In the event of an emergency that will require financial and technical assistance through the CA Mutual Aide System, the County Public Health Officer will be one of the officials that can declare a "State of Emergency" and request assistance from the Regional and State OES. The County

Public Health Officer also will have access to disease surveillance data within the county. If you do not have the contact information of the current County Health Officer, contact your District Engineer.

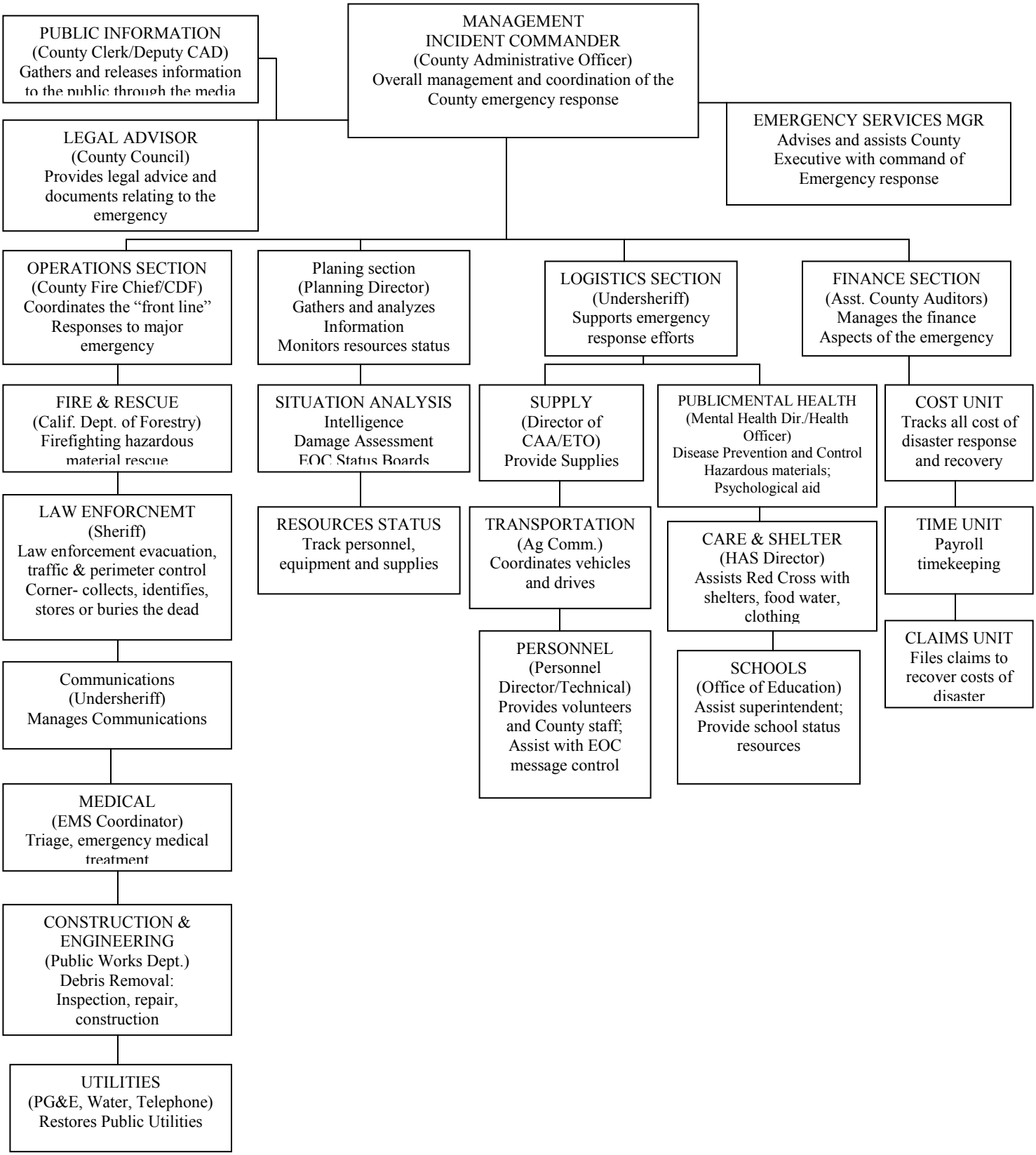
County Environmental Health Departments

Many County Environmental Health Departments have been delegated primacy for the small water systems serving less than 200 service connections within the county. The Environmental Health Departments have contacts with the Department of Health Services as well as many county HAZMAT teams. If you do not have the contact information of the current County Director of Environmental Health Department, contact your District Engineer.

County and State Offices of Emergency Services

The County and State Offices of Emergency Services (OES) provide support and coordination of resources during an emergency. Water systems should work with their County OES to establish requesting protocols for State OES resources utilizing SEMS/NIMS. If additional or specialized resources are needed during an emergency, OES should be able to dispatch those resources to the emergency.

San Benito County
Operational Area Emergency Organization



Hospital and Critical Care Facilities

It is important to know location and contact information for all the critical care facilities and hospitals in your service area. An emergency or contamination event in the water system can effect the operations of these facilities.

Customers

It is important that a water system be able to communicate with their customers. All means of communication need to be explored to effectively communicate with customers. The Water Quality Emergency Notification Plan (WQENP), as required under Section 116460, California Health and Safety Code, is a significant part of a water system plan to communicate with their customers. The WQENP should be included in the Appendix of the ERP. The WQENP is a standard form that contains specific information for the CDPH District Engineer and the County. Contact your District Engineer for the current WQENP form.

6. Response Procedures

Personnel will, as quickly as possible, determine the status of other employees, assess damage to water and wastewater system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e., Department of Health Services (DHS) or Local Primacy Agency (LPA)), and document damage and repairs.

7. Public Notice Procedures

Public notice procedures should be developed before the disaster and not during the event. Public notices are a significant part of communicating with customers. Standard public notifications for water outage/low pressure problems, Boil Water Order (BWO), Unsafe Water Alert (UWA) or Do Not Drink Notices have been developed by CDPH for use during an emergency. Each utility will need to modify the standard forms with specific contact information and guidance to customers depending on the nature of the emergency event. In addition, water systems need to have copies of public notices in the appropriate languages used in their service areas.

A BWO, UWA or Do Not Drink Notice can be issued by one, or a combination of the following agencies:

- CDPH – Drinking Water Program (Designated personnel-District Engineer, Regional Engineer or Branch Chief).
- Local County Health Department (Designated personnel-County Health Officer or Director of Environmental Health Department for small water systems under county jurisdiction).

- Affected Water System (Designated personnel-responsible person in charge of the affected water system, i.e., Director of Water Quality, Manager, Director of Water Department, Director of Public Works, Owner, etc. The water systems ERP should identify the designated personnel in their ERP).

All public notifications (BWO, UWA or Do Not Drink Notices) should be coordinated with the CDPH District Engineer, County Environmental Health Department and the County Health Officer prior to issuing a public notice. However, any one of the three agencies should act immediately to issue a BWO or UWA, if delays will jeopardize public health and safety. The CDPH District Engineer or the water system must notify the County Health Department and the County Health Officer prior to or immediately after issuing a public notice. Notice must be given to a person, a message left on voicemail is not sufficient. Coordination of this notification should be identified in the ERP. Whenever a BWO/UWA has been issued, the CDPH DWP also needs to notify two other CA Department of Health Services Agencies- DHS Food and Drug and DHS Licensing and Certification. The CDPH DWP District Engineer will notify the other two CDPH agencies of the BWO/UWA issued.

The following standard public notices are provided in the Appendix of this manual.

Consumer Alert During Water Outages or Periods of Low Pressure

If a water system is experiencing power outages, water outages or low pressure problems, a consumer alert may be issued to the public. The notice provides consumers information on conserving water and how to treat the water with household bleach if the water quality is questionable.

Boil Water Order (BWO)

A BWO should be issued when minimum bacteriological water quality standards cannot be reasonably assured. To assure public health protection a BWO should be issued as soon as it is concluded by the designated personnel that the water supply is or may be biologically unsafe. Examples of these situations include:

1. Biological contamination of water supply system, including but not limited to:
    - Positive total or fecal coliform bacteriological samples;
    - Prolonged water outages in areas of ruptured sewer and/or water mains;
    - Failed septic tank systems in close proximity to ruptured water mains;
    - Ruptured water treatment, storage, and/or distribution facilities in areas of known sewage spills
    - Known biological contamination;
    - Cross-connection contamination problems;
    - Illness attributed to water supply.

2. Unusual system characteristics, including but not limited to:
    - Prolonged loss of pressure;
    - Sudden loss of chlorine residual;
    - Severe discoloration and odor;
    - Inability to implement emergency chlorination.
3. Implemented due to treatment inadequacies.

Unsafe Water Alert (UWA)/"Do Not Drink"

In the event a water quality emergency due to known or suspected chemical (non-bacteriological) contamination to a water system a UWA or "Do Not Drink" should be issued. Water should not be used for drinking and cooking, but may be used for sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to:
    - Ruptured water distribution system (storage tanks, mains) in area of known chemical spill coupled with loss of pressure;
    - Severe odor and discoloration;
    - Loss of chlorine residual;
    - Inability of existing water treatment process to neutralize chemical contaminants prior to entering the distribution system.
2. Threatened or suspected acts of sabotage confirmed by analytical results, including but not limited to:
    - Suspected contamination triggered by acts of sabotage or vandalism.
3. Emergency use of an unapproved source to provide a supplemental water supply.

Unsafe Water Alert (UWA)/"Do Not Use"

In the event a known or suspected contamination event to a water system, where the contaminate may be chemical, biological or radiological a UWA or "Do Not Use" should be issued. Water should not be used for drinking, cooking, or sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to
    - Terrorist contamination event.

The public information officer for a water system needs to be assigned before an emergency occurs. The water system public information officer (PIO) will need to coordinate with all the other agencies PIOs. If more than one agency is involved in an emergency, a joint information center (JIC) will probably be established. If a BWO or UWA is issued, the water system should notify the PIOs in the EOC immediately.

Media Notification

Dealing with and notifying the media is one of the most significant communication tasks. Any dealing with the media during an emergency should come from one unified source-typically from the EOC. If more than one source communicates with the media, there will be conflicting information that will give the appearance all the agencies involved in the emergency do not know what they are doing. The media is a good way to communicate with water system customers. Boil Water Orders, Unsafe Water Alerts, and other public notices can be distributed through the media. Again this is only effective if the information is coordinated through one source (the JIC) and one message is delivered to the public.

Cancellation of Public Notification

Once a BWO/UWA is issued, the only agency that can rescind the public notice is the drinking water primacy agency. CDPH DWP will not lift the BWO until two rounds, collected one day apart, of coliform bacteria samples have been analyzed and the results are negative. The two sets of sample results should be faxed to the CDPH DWP District Office for final approval before rescinding the BWO. Special chemical sampling will be required to rescind an UWA, please contact the CDPH DWP District Office to determine required sampling.

- See SSCWD public notices in Section "Public Notification" of this Manual.

8. Water Quality Sampling

NOTE: Laboratory protocols and procedures identified are still under development by Federal and State Agencies. This section will continue to evolve and updates will be provided as necessary.

During an emergency, there are several types of water quality sampling that may need to be analyzed depending on the actual event. If it is natural disaster, flood or power outage, sampling will probably only include bacteriological samples, turbidity and chlorine residual samples if the system is chlorinated. However, if the event is a terrorist act or contamination event, the sampling will include a full scan of Weapons of Mass Destruction (WMD) chemical, radiological and microbiological (unless the actual contaminant used is known).

Laboratory Resources

In general there are four different types or ownership of laboratory facilities in California that can analyze drinking water samples, which are listed below:

1. Commercial/private laboratories
2. County Public Health Laboratories
3. State Department of Health Services Laboratories
4. Research Facility/Specialty Laboratories

In general, laboratories are grouped into two broad categories – chemical or biological. Chemical laboratories include: general environmental chemistry laboratories, radiological laboratories, and specialty laboratories that may be able to handle and analyze exotic contaminants, such as chemical weapons and radionuclides. Biological laboratories include: environmental microbiology laboratories and the Laboratory Response Network (LRN) that typically analyze clinical samples for pathogens and select biotoxins.

CDPH Laboratory

The CDPH Sanitation and Radiation Laboratories Branch (SRLB) is organized within the Division of Drinking Water and Environmental Management (DDWEM). SRLB is the State's primary drinking water quality testing laboratory and is the only State laboratory capable of measuring environmental radiation. Its primary mission is to provide analytical services, reference measurements and technical support pertaining to the State's Drinking Water and Radiologic Health Programs.

SRLB has two laboratories. The Southern California Section is located in Los Angeles and performs microbiological, inorganic and organic testing in various water matrices. The Northern California Section, located in Richmond, carries out inorganic and organic analyses in water, and radiochemical testing in various environmental matrices in addition to water. The SRLB in conjunction with the CDPH Microbial Disease Laboratory (MDL) does microbiological analyses including biotoxins.

California Mutual Aid Laboratory Network (CAMAL Net)

The CDPH SRLB, in conjunction with the water utilities, USEPA Region IX laboratory in Richmond, Lawerence Livermore National Laboratory, and the California Department of Water Resources, have formed a laboratory network, CAMAL Net, to address laboratory capacity issues associated with possible drinking water related contamination events. CAMAL Net establishes a triage system to process samples when water systems or commercial laboratory methods are not available or the water system lacks capacity within their own lab. The CAMAL Net system will not handle any samples where field screening indicates that the sample may contain a CDC listed WMD agent. The list of WMD agents can be found on the Centers for Disease Control and Prevention webpage at http://www.bt.cdc.gov/. Any request for analysis through the CAMAL Net system needs to be approved by the CDPH DWP District Engineer in your jurisdiction prior to collection of water quality samples to be processed.

Chemical Analysis Classification

The CDPH along with its stakeholders and federal partners are in the process of developing an algorithm to assist California water systems, public health agencies, law enforcement, and first responders with the identification of possible chemical agents in drinking water contamination events. A draft version has been developed and it is anticipated that a final version will be released in the near future. The final version will become an appendix to this document.

Biological Analysis Classification

The LRN for Bioterrorism has ranked laboratories (Level A, B, C or D) based on the type of safety procedures they practice.

- Level A Lab uses a Class II biosafety (BSL) cabinet
- Level B Lab is a BSL-2 facility + BSL-3 safety practices
- Level C Lab is a BSL-3 facility
- Level D Lab is a BSL-4 facility

- Level A Labs are used to rule out and forward organisms.
- Level B Labs are used for limited confirmation and transport.
- Level C Labs are used for molecular assays and reference capacity.
- Level D Labs are used for the highest level of characterization.

Currently, in California there are: 28 Level A labs, 10 Level B labs, 2 Level C labs. The two Level C laboratories are the LA County Public Health Laboratory, Los Angeles, CA and the CDPH MDL in Richmond, CA. Lawrence Livermore National Laboratory is also a Level C laboratory, but access to them is restricted. The only Level D laboratories available in the LRN are the national laboratories, such as those at the Center for Disease Control and Prevention (CDC) and the Department of Defense. These laboratories test and characterize samples that pose challenges beyond the capabilities of the Level A, B, and C reference labs, and provide support for other LRN members during a serious outbreak or terrorist event. The most dangerous or perplexing pathogens are handled only at the Bio-Safety Level 4 laboratories at CDC and the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID).

Natural Disaster

During a natural disaster, flood, earthquake, fire etc., sample collection and analysis will be available to the water system by their normal laboratory resources. Sampling will primarily consist of regulatory bacteriological samples and turbidity to show that the system has been flushed out. The water system may also be collecting chlorine residual samples throughout the system with a field chlorine test kit.

Terrorist Event/Contamination Event

Once a threat warning has occurred and the utility has deemed the threat confirmed, it will be necessary to collect water quality samples. The decisions made from the time of the threat warning to the time the threat is confirmed is specific to each individual event. This "credibility stage" as referred to in the EPA Response Toolbox may take the utility between 2 – 8 hours and should involve consultation with local first responders, CDPH DWP (Drinking Water Primacy Agency), local Health Department and regional FBI office.

Assuming the threat is confirmed and credible enough to warrant water quality sampling, several state and federal agencies are involved to collect samples, transport the samples to appropriate laboratory and analyze the samples. The water system's first step in this process is to contact the CDPH-District Engineer so they can notify the CDPH-SRLB of the incoming samples. The following steps are described in more detail below:

- Emergency Water Quality Sampling Kit (EWQSK)
- Sample Collection
- Laboratory Required for Analysis
- Sample Transport
- Sample Analysis

Emergency Water Quality Sampling Kit

Contains sample bottles needed for chemical, radiological and microbiological analysis (that could be split into 3 complete sample sets). The original sample kit was developed by Metropolitan Water Department to be used during a terrorist or contamination event. EPA reviewed the sample kit and provided a list of the sample bottles in the EPA Toolbox. The California Mutual Aid Laboratory Network (CAMAL Net) has also reviewed this kit and made some minor changes that will allow water quality samples to be collected under all conditions. The CAMAL Net version of the sample kit has been finalized for deployment. This kit will continue to evolve as the US EPA develops sampling protocols for these new constituents in drinking water. The estimated cost of one kit is approximately $200. The EWQSK should remain sealed before the sample is collected. Since some of the sample bottles contain reagents that expire, the bottles in each kit should be replaced annually.

CDPH-DWP will purchase the supplies to create enough EWQSK to supply 2-3 in each DWP District Office. If water systems do not want to purchase and maintain their own kits, then the DWP will provide one of these kits in the event of an emergency. Requests for these kits should be made to the District Engineer when the water system reports the incident. Travel time from the District Office to the water system should be incorporated in the water system's emergency response plan.

Sample Collection

Several types of samples may need to be collected depending on the event. The FBI will collect samples for the crime scene investigation. The water system needs to collect samples for public health to determine if the water is safe for consumption using the EWQSK for public health. The Department does not recommend that water system staff collect samples for the EWQSK due to liability issues. Several responding agencies are available for EWQSK sample collection – local HAZMAT, FBI, California National Guard Civilian Support Team (CST) or USEPA. Each agency has the proper personal protection material to minimize exposure to any possible agent. In addition, each agency has field screening kits that will provide a preliminary screen for several WMD agents that will help identify the required laboratory resources needed.

Laboratory

Depending on the results of the field screening and actual event, the required laboratories need to be notified and prepared to accept the samples. If an EWQSK (supplied by water system or CA DHS DWP) is used, the CAMAL Net and the LRN need to be notified and involved in the process for laboratory selection. The first step in this process is for the District Engineer working with the water system to contact SRL.

Sample Transport

Depending on the responding agencies, field screening, the ICS will decide how the samples will be transported to the appropriate lab. Since the samples may be used for the crime investigation, proper chain-of-custody must be maintained. The possible agencies and field screening, depending on the event, are: local HAZMAT, CHP, FBI, CST, or US EPA.

Sample Analysis

Once the samples are delivered to the appropriate laboratory, they may be split for analysis to different laboratories. The transport and laboratory testing protocols will be handled by the CDPH SRLB laboratory. Sample results will be shared through the ICS. Please note that sample analysis may take days to weeks to complete depending on the complexity of analysis.

9. Restoration and Recovery

The CA OES "Emergency Planning Guidance, Public and Private Water Utilities", Section 12 is a good reference for restoration and recovery. The following excerpt was taken from the "Emergency Planning Guidance for Public and Private Utilities", March 1999. The entire document can be found on the Governor's Office of Emergency Services Website at: http://www.oes.ca.gov/oeshomep.nsf/all/WaterUtilities/$file/H2o_.pdf

The recovery process begins during the response phase. It is important to start damage inspections, reporting, and recordkeeping as soon as the plan is activated. The items below may assist the water utility in recovery activities.

Initial Recovery Activities

- Designate a disaster recovery coordinator (may or may not be EOC director) and notify all appropriate regulatory agencies.
- Complete detailed evaluations of all affected water utility facilities and determine priorities for permanent repair, reconstruction, or replacement at existing or new locations.
- Begin repair activities design and make bids for contractor services.
- Make necessary repairs to the system and untag repaired facilities and equipment.

- Restore all telecommunications, data processing, and similar services to full operation.
- Complete assessment of losses and costs for repair and replacement, determine approximate reimbursements from insurance and other sources of financial assistance, and determine how residual costs will be financed by the water utility.
- Define needs for additional staff, initiate recruitment process, and adopt temporary emergency employment policies as necessary.
- Execute agreements with vendors to meet service and supply needs.
- Reevaluate need for maintaining the emergency management organization; consider returning to the normal organizational structure, roles, and responsibilities when feasible.
- Collect cost accounting information gathered during the emergency and prepare request for Emergency Disaster Funds (follow FEMA and State OES requirements).
- Debrief staff to enhance response and recovery efforts in the future by identifying lessons learned, developing action plans and follow-up mechanisms, and providing employee assistance programs if needed.
- Prepare After-Action Reports as required. Complete reports within six months of the event (90 days for public utilities which are part of a city or county government.).
- Identify recommendations

Long Term Recovery Activities

- Initiate permanent reconstruction of damaged water utility facilities and systems.
- Restore water utility operations and services to full pre-event levels.
- Continue to maintain liaison as needed with external agencies.

Assistance Programs - The State of California Office of Emergency Services administers several programs designed to assist victims of a disaster. They include Public Assistance, Individual Assistance, and Hazard Mitigation Public Assistance (PA) administers state disaster relief programs under the Natural Disaster Assistance Act, and federal disaster assistance programs under various federal laws and regulations, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288 as amended), the Code of Federal Regulations (CFR), and the State Administrative Manual. These regulations designate the State of California as "grantee" for all federal public assistance funding available to agencies of state government, local governments, and certain private non-profit organizations that provide essential services of a governmental nature to the general public, including water utilities. As grantee, the state is responsible for the processing of sub-grants to public assistance applicants in accordance with 44 CFR, parts 13, 14, and 206, and its own policies procedures. PA works closely with the Federal Emergency Management Agency to process Damage Survey Reports. It dispatches inspection teams and conducts applicant briefings. This unit is led by OES, with support drawn from other state agencies. Under the Public Assistance Program, public and private non-profit water utilities may be eligible for public assistance to reimburse the work and associated costs of responding to and recovering from a disaster if the costs:

- Are a direct result of the declared event and not a pre-disaster condition or result of some other event;
- Are located within the area designated by FEMA as eligible for assistance;
- Are the legal responsibility of the eligible applicant; and
- Are not eligible for assistance under another federal program (this applies to permanent restoration work only).

Hazard Mitigation - Following a presidential disaster declaration, the Hazard Mitigation Grant Program is activated. The program's purpose is to fund projects which are cost-effective and which substantially reduce the risk of future damage, hardship, loss, or suffering from a major natural disaster. Virtually all types of hazard mitigation projects are eligible provided they benefit the declared disaster area and meet basic project eligibility requirements. Types of eligible projects will be identified from those mitigation measures identified in the State Hazard Mitigation Plan, hazard mitigation team reports, and issues unique to the disaster event. The priorities of funding will be established and the program administered by OES.

Expenditure Documentation - One of the critical aspects of any major emergency or disaster is collecting information on the costs related to response and recovery. The ability of the utility to recover costs or receive disaster assistance from the state and federal governments is predicated on its eligibility and ability to document its costs.

10. Emergency Response Training

Training provides the means for staff involved in a response to acquire the skills necessary for them to fulfill their role during an emergency. Not only is training on the water utility's emergency response plan critical for effective implementation, individual training to perform certain functions expected in the plan is just as important. It is important for Water Utility management to create a training policy that emphasizes plan implementation, emergency management, and employee health and safety. The training policy can be an independent policy or part of an overall emergency preparedness policy for the utility. Individual roles established in the emergency response plan should dictate the type and level of training that is necessary.

Exercises and Drills

As a part of City of Hollister Water Department overall emergency preparedness periodic review of COH Emergency Response Plan & Operations and Maintenance Procedures Manual which includes routine training drills, cross trained personnel, routine emergency equipment maintenance operation and testing. All key players are included in the exercises so everyone is familiar with emergency policies and procedures.

11. Resume Normal Operations

The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).

a. Leaks or service interruption (result of earthquake, etc.)
   - Isolate leak. Turn power or flow off, if necessary, to control leak.
   - Repair or isolate break to allow service to the maximum system population possible. Disinfect as per attached AWWA Standards; increase system disinfectant residual as precaution, until normal service is resumed.
   - Do bacteriological sampling until 3 good consecutive samples are confirmed.
   - Reestablish normal service.

b. Low pressure (result of earthquake, fire, storm)
   - Increase production, if possible, to maximize system output.
   - Increase disinfection residual as precaution to potential contamination.

c. Power outage
   - Place emergency generator online to provide minimum water pressure to system.
   - Increase disinfectant residual as precaution to potential contamination.

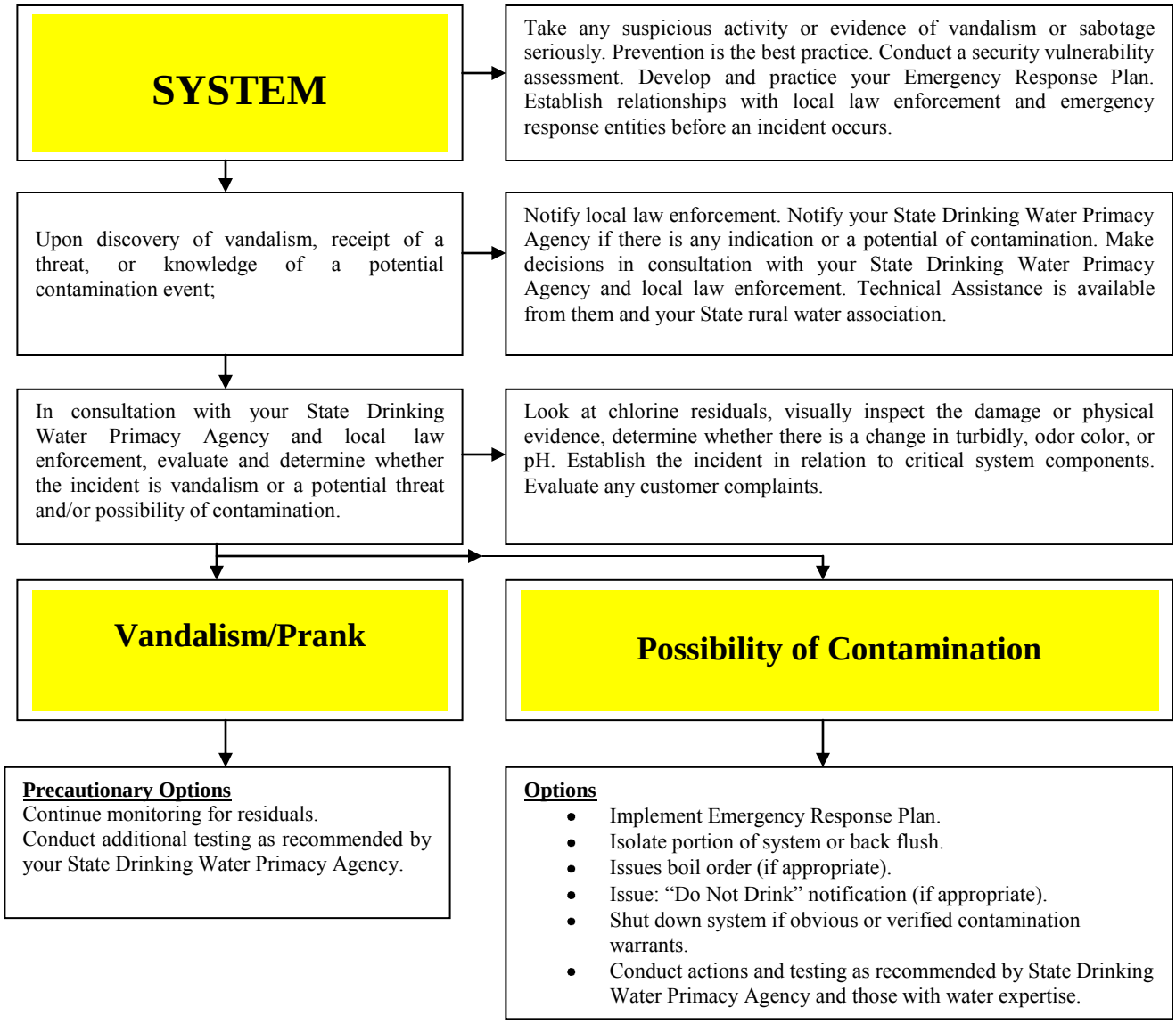
d. Contamination
   - Identify location and source of contamination.
   - If contamination is from system source, isolate or treat source.
   - If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (DHS or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility (sabotage)
   - Immediately contact local law enforcement and regulatory agency for consultation.

All significant water outages (widespread and lasting more than eight hours) or disinfection failure will be reported to the California Department of Health Services (CDPH) District Office or Local Primacy Agency (LPA) by telephone or equally rapid means. All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

A Utility Guide for Security Decision Making

These guidelines are deigned to assist utilities in determine the level of security concern if a break-in or threat occurs at the water system and to assist the utility in appropriate decision making and response actions. These various steps and actions can be adjusted to meet the needs of specific situations and to comply with individual state requirements. Specific actions should be undertaken in consultation with your State Drinking Water Primacy Agency. Technical assistance is available from you state drinking water primacy agency and state rural water association for prevention initiatives such as vulnerability assessments, emergency response planning, and security enhancements.



- **Don not disturb evidence. Document what you see. Keep notes and take photos as you go.**
- **Collect samples for future analysis and store them appropriately.**
- **Alert other officials as appropriate and keep the public informed (designate one spokesperson).**
- **Use the expertise in public drinking water supplies and public health in the decision making process.**
- **Preventive measures are the best practice to prevent such an incident.**
- **Prior communication with local law enforcement authorities and local emergency response entities prevents confusion and defines who has responsibility for what, when an incident occurs.**

CONTROLLED COPY DISTRIBUTION LISTING

COPY NUMBER	LOCATION
1	San Benito County Water District
2	San Benito County Water District
3	San Benito County Water District
4	San Benito County Water District
5	San Benito County Water District
6	South-Central California Area Office
7	Tracy Office
8	Tracy Office
9	Tracy Office
10	D-8470
11	D-8470
12	MP-200
13	MP-200
14	MP-430
15	MP-430
16	Central Valley Operations CVO-400
17	Central Valley Operations CVO-650
18	Commander, California Highway Patrol
19	County of San Benito Office of Emergency Services
20	County of Santa Cruz Office of Emergency Services
21	County of Monterey Office of Emergency Services

San Justo Dam
Emergency Action Plans

CERTIFICATION

We, the undersigned, on this date acknowledge the San Justo Dam Emergency Action Plan as an integral part of emergency response notification and operation procedures that will be implemented in order to protect life during emergency conditions affecting San Justo Dam. The Emergency Action Plan was developed in accordance with Bureau of Reclamation "Emergency Planning and Exercise Guidelines," dated March 1995, and meet the requirements listed in the Reclamation Manual.

Upon annual revision and update of the Emergency Action Plan, signatures and dates on this certification page shall be revised in order to reflect changes in personnel and to keep the Emergency Action Plan officially current on an annual basis.

John S. Gregg
Manager
San Benito County Water District

November 22, 1999
Date

William H. Luce
Area Manager
South Central California - Tracy Area Office

11/2/99
Date

This Emergency Action Plan has been reviewed and meets the requirements of the Commissioner of Reclamation as stated in the Commissioner's Memorandum dated February 27, 1995.

Stephen R. Herbst
Regional Emergency Manager
Mid-Pacific Regional Office

9/30/99
Date

SAN JUSTO DAM EMERGENCY ACTION PLAN
CENTRAL CALIFORNIA AREA OFFICE

MASTER TABLE OF CONTENTS

COMMUNICATIONS DIRECTORY

FIGURES

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REVISION SHEET

This copy includes the following revisions:

Revision No.	Date	Action
1	3/01/2000	Completely revised EAP to February 1995 Guidelines.
2	2/05/2002	Revised Communications Directory with new names and telephone numbers.
3	2/09/2004	Revised Communications Directory with updated names and telephone numbers.
4	5/24/2005	Revised Revision Sheet, Distribution List, and Communications Directory.
5	5/31/07	Revised Revision Sheet and Communications Directory pages Com-1 thru Com-5.

SAN JUSTO DAM EMERGENCY ACTION PLAN - BASIC PLAN
SOUTH CENTRAL CALIFORNIA AREA OFFICE

TABLE OF CONTENTS

I. GENERAL GUIDELINES

A. INTRODUCTION

San Justo Dam and Dike are zoned earth and rockfill structures that form San Justo Reservoir. The lake, with a capacity of 11,000 acre-feet, furnishes municipal, industrial, and irrigation water to Zone 6 of the San Benito County Water District (District) including the cities of San Juan Bautista and Hollister and numerous small community water systems.

San Justo Dam could present a significant hazard potential to the downstream area as a result of failure or misoperation. In the event of a dam failure, some loss of life and appreciable economic loss would probably occur.

Emergency preparedness is defined as being prepared ahead of time with a plan of action for use when unusual or hazardous situations arise. An Emergency Action Plan (EAP) was developed for San Justo Dam primarily for use by San Benito County Water District personnel who are responsible for operating the facility. The EAP defines "who does what, where, when, and how" in an emergency situation or unusual occurrence affecting San Justo Dam.

An emergency situation is an event that develops suddenly and unexpectedly. It demands immediate attention because it could endanger the structural integrity of the dam or endanger downstream property and persons.

An unusual occurrence is an event that takes place or a condition which develops that is not normally encountered in the routine operation of the dam and reservoir. It may endanger the dam, appurtenant structures, District personnel, or the public.

Certain conditions may develop at San Justo Dam that will require warning and evacuation of the population at risk located downstream. The EAP must be interconnected with local emergency operations plans (LEOP) and/or warning and evacuation plans/annexes developed by local public safety officials to help ensure warning and evacuation will be carried out in the event of an emergency situation at San Justo Dam.

Warning and evacuation planning and implementation are the responsibility of the downstream local authorities having jurisdiction in areas that will be inundated by flood releases from or failure of San Justo Dam and/or Dike.

This EAP is designed to help ensure:

- ✔ The public will receive and understand official information related to evacuation.
- ✔ The public will act in its own interest and evacuate dangerous areas when advised to do so by local authorities.

B. PURPOSE AND SCOPE

The San Justo Dam EAP is intended to help emergency officials save lives and reduce property damage in the event of flooding caused by large releases from the dam, dam failure, or other types of events that present hazardous conditions. The EAP will guide San Benito County Water District personnel in identifying, monitoring, responding to, and/or mitigating problems involving dam failure, potential dam failure, damaging or life-threatening inflows and releases, or other serious conditions at San Justo Dam.

C. RESPONSIBILITY AND AUTHORITY

General information on the purpose of the project, directions for traveling to San Justo Dam, and the responsibility and authority for operations are described in the Standing Operating Procedures, Chapter

I: General Information. The responsibility and authority for the emergency management personnel is as follows:

1. **San Benito County Water District (SBCWD) Operations and Maintenance Supervisor**

   The SBCWD Operations and Maintenance Supervisor will normally be the initial contact in the event of an unusual occurrence at San Justo Dam during normal working hours. The On-Call Supervisor will be the initial contact in the event of an unusual occurrence outside normal working hours. During an emergency event, the SBCWD Operations and Maintenance Supervisor will be notified by the employee reporting the unusual occurrence, or the On-Call Supervisor if after normal working hours. The SBCWD Operations and Maintenance Supervisor, or On-Call Supervisor along with the SBCWD Manager, shall determine the nature and severity of the emergency and notify appropriate disaster preparedness agencies of the situation. They will take whatever actions deemed necessary to save the structure or lessen the impact of failure to downstream populations should failure occur.

2. **SBCWD Manager**

   The SBCWD Manager will be notified of the situation by the SBCWD Operations and Maintenance Supervisor, or On-Call Supervisor during an unusual event. As previously stated, the SBCWD Operations and Maintenance Supervisor, or On-Call Supervisor along with the SBCWD Manager shall determine the nature and severity of the emergency and notify appropriate disaster preparedness agencies of the situation. They will take whatever actions deemed necessary to save the structure, or to lessen the impact of failure to downstream populations should failure occur.

3. **SBCWD Incident Commander (IC)**

   If the Incident Command System is deemed necessary by the Operations and Maintenance Supervisor and the SBCWD Manager, an Incident Commander will be appointed to direct the operations toward responding to the emergency situation.

   The IC is responsible for the onsite monitoring of conditions at San Justo Dam and for ensuring that notifications to the appropriate emergency response agencies are made in a timely and accurate manner. The IC is also responsible for providing subsequent notification and protective action recommendations, accompanied by appropriate emergency public information to the appropriate emergency response agencies to assist them in making timely and accurate decisions regarding their warning and evacuation responsibilities.

   To assist in the above tasks, the IC will appoint the following personnel as needed:

   a. **Planning/Intelligence Officer** - gathers and assesses information related to the emergency situation and forecasts or projects where the emergency situation is headed.

   b. **Operations Officer** - implements priorities established by the Incident Commander in the operation of San Justo Dam with respect to the emergency situation.

   c. **Public Information Officer** - acts as liaison between SBCWD and the media, will coordinate press releases, may aid the Incident Commander in making the notifications to pertinent agencies, etc.

   d. **Logistics Officer** - obtains the resources (materials or personnel) to support the emergency operations.

   e. **Finance/Administration Officer** - tracks all costs related to the emergency operations, will coordinate requisitions and contracts.

4. **SBCWD Personnel**

During an unusual occurrence, the appropriate SBCWD personnel will be notified by the SBCWD Operations and Maintenance Supervisor. During an emergency event, the appropriate SBCWD personnel will be notified by SBCWD Dispatch. The following is a listing of SBCWD personnel who will be notified:

District Manager
Data Processing Supervisor
Water Programmer III
Administrative Services Officer
Engineer

The SBCWD Personnel shall begin measures to mitigate the emergency condition as directed by the Operations and Maintenance Supervisor and the SBCWD Manager.

5. **South Central California Area Office Emergency Official (EO)**

The SCCAO EO will be responsible for ensuring that the San Benito County Water District has enough support to implement the Incident Command System if the situation warrants.

6. **San Benito County Office of Emergency Services**

The Office of Emergency Services is responsible for beginning the call-down sequences and initiating and coordinating emergency operations with other appropriate local, State, and Federal authorities as outlined in their local emergency operations plans or warning and evacuation plans specific to San Justo Dam.

7. **Local Authorities**

Responsible for carrying out warning and evacuation of populations at risk located downstream from San Justo Dam should conditions warrant.

D. EXERCISING AND UPDATING PLAN

1. **Exercising Plan**

Emergency incidents at dams or dam failures are not common events; therefore, training and exercises are necessary to maintain operational readiness, timeliness, and responsiveness. An emergency exercise program should include the following five components:

a. **Orientation Exercise** - The Orientation introduces participants to the EAP and procedures within the EAP. It may involve all levels of personnel from SBCWD to the Bureau of Reclamation. It may also include a review of past cases for lessons learned.

b. **Communications Drill** - The Drill tests single emergency response functions and usually involves actual field response, for example, a communications drill where actual phone calls would be made. The drill focuses on a single limited portion of the overall response system.

c. **Tabletop Exercise** - A discussion exercise that is based on an emergency situation. It creates an environment for coordinated problem solving and response with an ongoing discussion of appropriateness of actions taken and decisions made and clarification of roles and responsibilities. This is a low-stress exercise, often in combination with the Orientation Exercise, that is based on the EAP.

d. **Functional Exercise** - The Functional provides a realistic training experience for the

participants and can be an exercise of one particular function of the EAP or of all functions. It coordinates the emergency management teams, reinforces established policies, and evaluates resource capabilities. This is a high-stress exercise that involves a sequence of timed messages (bits of information that are given to the participants as the emergency unfolds) and simulated communication.

e. **Full-scale Exercise** - The Full-scale exercise is the closest experience to a real event. In this exercise, resources are deployed, real-time is used, and there is a very high stress level. A real emergency event may count toward a Full-scale Exercise.

For Reclamation and the dam operating organizations, the orientation exercise, communications drill, tabletop exercise, and functional exercise should receive the most emphasis in their emergency exercise schedules.

Orientation seminars should be conducted annually and prior to conducting any tabletop exercises. The Communications Drill should be performed quarterly and any resulting revisions be promptly distributed. Tabletop exercises should be conducted every 3 years for high hazard dams, as required in the Commissioner's *Policy for Establishing an Emergency Management Program at Reclamation Facilities*, dated February 27, 1995. The policy also states that Functional exercises be conducted every 6 years. Tabletop exercises should be conducted prior to any Functional exercises. Full-scale exercises should be considered as optional emergency exercise activities.

Key personnel from State and local emergency management agencies should be invited to participate in any training and exercises of the dam operating organization whenever possible and as appropriate.

Testing of monitoring and sensing equipment at remote/unattended dams should be included in emergency exercise activities.

Emergency exercises and equipment tests should be evaluated in writing; and the emergency action plan should be revised and corrected, as appropriate, for any identified deficiencies.

2. **Updating Plan**

Emergency action plans should be considered "living" documents. This means that:

a. They will never be complete.

b. They will be reviewed annually.

c. Reviews should include participation of local authorities when possible.

d. All updates should be made promptly. Updated pages should have the revision date printed as a footer.

Changes that may frequently require revision and update of emergency action plans include changes in personnel of involved organizations and changes in communications systems. As a minimum, review of office telephone numbers and appropriate personnel included in notification flowcharts should be conducted.

During the review of emergency action plans, a comprehensive evaluation of the adequacy of the plan should be made as well. This evaluation should include participation of local authorities and should be in addition to any emergency exercises that are conducted.

A random sampling of telephone numbers listed in the communications directory should actually be called quarterly and during any emergency exercises conducted in order to verify their

accuracy.

An evaluation should be made of any changes to the dam and/or flood plain. Changes should be noted in the emergency action plan. A notice and summary of the review should be sent to all participants.

II. EMERGENCY PROCEDURES

A. DETECTION OF EVENT

Being able to detect an event at San Justo Dam is a mandatory first step for developing any emergency procedures. A detailed list and explanation of critical events or conditions that could be observed during developing emergency incidents are included in section "IV. Emergency Events and Initiating Conditions" of this plan.

B. DECISION MAKING

Once an event has been detected and analyzed at San Justo Dam, an effective transition into a clearly defined decision making process will occur as outlined in section "III. Response Levels System" of this Plan. The Response Levels System will assist the SBCWD Operations and Maintenance Supervisor, SBCWD Manager, and other involved personnel in making critical decisions and implementing procedures and responses. These actions will effectively provide for the public safety of populations at risk located downstream from San Justo Dam while also guiding dam operators in gathering data and taking action to manage and control the incident at the site.

When and if the Incident Command System is implemented, the SBCWD Incident Commander, as head of the emergency operations organization, will be the designated authority who will make needed decisions and who will authorize immediate expenditures so that repair work will not be delayed. To assist the SBCWD Incident Commander in making effective decisions regarding repair work on the dam or facility, Section IV.D. "Equipment, Materials, Labor, Engineering, and Underwater Examiners" of these plans includes a listing of resources for use during an emergency. The materials portion includes sources for clay, sand, gravel, stone, riprap, sandbags, cement, plastic sheeting, etc.

C. NOTIFICATION

Initial notification of a problem affecting San Justo Dam will be made in one of the following ways: via 911 if San Justo Dam appears to be in imminent danger of failing or is failing, via SBCWD Dispatchers, or via radio. If the problem warrants, the SBCWD Operations and Maintenance Supervisor along with the SBCWD Manager, will implement the Incident Command System and appoint an Incident Commander who will assume responsibility for the problem and subsequent actions.

Once notified of an event, initial documentation of that event is critical. The following report forms are to be used when recording various emergency situations and unusual occurrences:

1. **Emergency Event/Unusual Occurrence Report** - for reporting emergency events and unusual occurrences *other than* earthquakes, bomb threats, and oil and hazardous spills (Figure 1).

2. **Earthquake Damage Report** - for reporting earthquakes (Figure 2).

3. **Oil and Hazardous Spill Report** - for reporting oil and hazardous spills (Figure 3).

4. **Bomb Threat Report (Threatening Telephone Call Report)** - for reporting bomb threats and other threatening telephone calls (Figure 4).

In addition to these report forms, all persons involved, including their name, title, and phone number, and all agencies notified should be documented. Also, recommendations for corrective actions to be taken, source of funding required, and status of incident should be included in the report.

Notification to San Benito County Office of Emergency Services will be made according to procedures

developed and agreed to by all involved organizations, including Reclamation and other Federal, State, and local agencies, and incorporated into the Response Levels System for San Justo Dam.

The EAP for San Justo Dam includes a range of expected actions that the SBCWD IC, dam operating personnel, and other appropriate District and Reclamation personnel would implement for each response level and includes appropriate notifications that need to be made by every organization in the chain.

Both spontaneous and pre-scripted messages (see section "III. Response Levels System" of this Plan) will be disseminated to local 24-hour warning points during developing emergency incidents at San Justo Dam.

Emergency public information will be disseminated through designated local organizations. In most circumstances, a Public Information Officer (PIO) from the SBCWD IC's staff will represent SBCWD in development of public safety information to be disseminated to the population at risk. The PIO will also be the spokesperson for the organization. This person will provide continuing information updates to the media, as appropriate, during emergency incidents affecting San Justo Dam and appurtenant structures. The PIO will physically relocate to SBCWD's Emergency Operations Center after Response Level II has been declared in order to better facilitate coordinating the release of emergency public information with local authorities. The PIO may also serve as a Liaison Officer between the SBCWD IC and San Benito County Office of Emergency Services public safety official.

The SBCWD IC staff will keep a record of all occurrences at the dam or facility during emergency events. The records should contain the date, time, location of the observation, and the reservoir elevation. During periods of continuous monitoring, a reading should be taken at least every hour. During periods of flood, high runoff, or high water conditions, attendance at San Justo Dam would be 24 hours a day.

It is desirable for all officials receiving reports from dam operating personnel to maintain a diary and tape-recorded messages, if possible. Photographs are essential to provide complete documentation. Final reports should briefly include the following information:

Subject	What happened and type of incident
Time and date	Daylight or standard time
Location	Where the incident occurred
Summary of incident	Briefly describe the incident
Names and titles	List all contacts (successful or unsuccessful) and brief report of conversation
Agencies notified	Examples: local 24-hour warning point/County Sheriffs, Highway Patrol, County emergency management agency, State agencies, National Weather Service, or media
Status of incident	Completed and pending actions and/or decisions
Photographs	Include photographs for complete documentation

D. EMERGENCY PUBLIC INFORMATION

1. Emergency Public Information will be disseminated to the public through designated local organizations.

2. The San Benito County Water District Incident Commander will designate a Public Information Officer during emergency operations. During most emergency operations for San Justo Dam, and if time permits, a request could be made to the South Central California Area Office or Mid-Pacific Regional Office for that office to provide an individual to assist with the responsibilities of the Public Information Officer.

3. The PIO will be the spokesperson for the organization and will provide continuing information updates to the media, as appropriate during emergency events affecting San Justo Dam and appurtenant structures.

4. The San Justo Dam PIO will physically relocate to the San Benito County Emergency Operations Center once it is activated to better facilitate coordinating the release of emergency public information with local authorities.

E. RESPONSE LEVELS SYSTEM

Emergency events occur with varying, sometimes unpredictable, degrees of severity. This means the event could be slowly developing and steadily tracked, or it could mean the event occurs with sudden, catastrophic results, which would require immediate and drastic action to evacuate people out of harm's way. For all developing emergency conditions, an attempt will be made to classify emergency events according to the following, ascending and progressive order of severity:

- ✔ Internal Alert - "something has happened..."
- ✔ RESPONSE LEVEL I - "get ready"
- ✔ RESPONSE LEVEL II - "Get Set!"
- ✔ RESPONSE LEVEL III - "GO!!"

Specific information on the Response Levels System is presented in section "III. Response Levels System" of this Plan.

As soon as an emergency event has been observed and identified at San Justo Dam, an Internal Alert will be activated. The SBCWD Operations and Maintenance Supervisor and the SBCWD Manager will determine whether or not the Incident Command System should be implemented. If the ICS is implemented, the Incident Commander will determine which one of the three Response Levels should be in effect. The IC will declare the next higher level as it occurs. However, if conditions are such that immediate declaration of Response Level III becomes necessary without passing through Response Levels I and II, the IC will immediately declare Response Level III and will directly notify San Benito County Office of Emergency Services' 24-hour warning point, the State Office of Emergency Services, and the National Weather Service that Response Level III has been declared. Response Level I or Response Level II will not be declared or passed through under these conditions.

Assignment of a specific response level for emergency events will be made based on the following criteria:

- ✔ Observation of the event
- ✔ Identification of the event

- ✔ Analysis of the event
- ✔ Severity of the event
- ✔ When the event occurs

F. EXPECTED ACTIONS

The Hazard Specific Appendix included in the EAP for San Justo Dam contains the expected actions of dam operations personnel, the SBCWD IC, and other appropriate District and Reclamation offices for each response level. The expected actions that would be implemented in response to emergency incidents affecting San Justo Dam by organizations having emergency responsibilities under the EAP begin on Page HAZ-9.

Reclamation defines expected actions as emergency response actions that responsible organizations would implement whenever emergency incidents affecting San Justo Dam occurs. The expected actions are tailored to fit the Internal Alert and three Response Levels.

G. EMERGENCY DURATION

The IC is responsible for declaring each response level to be in effect. Emergency situations at San Justo Dam require that status reports and situation assessments be provided to appropriate organizations for the duration of the incident. Upon declaration, each response level will be in effect for all agencies and/or individuals having assigned tasks in the San Justo Dam Hazard Specific Appendix whenever, and for however long, the following criteria apply:

1. As long as reservoir levels are other than "normal" and require emergency operations as specified for Response Level 1, 2, or 3.

2. As long as a threatening condition exists that has not been managed or controlled at the dam site and that requires continued emergency operations as specified for Response Level 1, 2, or 3.

3. As long as San Justo Dam operations are other than "normal" and require emergency operations as specified for Response Level 1, 2, or 3.

4. For as long as it takes the IC to decide to escalate to a higher Response Level as required or to downgrade to a lower Response Level.

5. For the period of time between initial declaration of Response Level 1, 2, or 3 and receipt of verbal notification to terminate ("close out") the response level.

H. EMERGENCY TERMINATION

The IC is responsible for deciding an emergency condition no longer exists at San Justo Dam. Together with local authorities, the IC will prepare and issue a news release which can be used by the media to broadcast to the general public, informing them that emergency conditions have ceased.

Information to be disseminated to the general public will include:

- ✔ Name and location of dam.

- ✔ Statement of conditions; suggested example: "Emergency conditions at San Justo Dam are under control. Evacuation of residents from inundation areas is no longer necessary."

- ✔ Advice as to when those residents who have evacuated inundation areas may safely return to their homes.

The process that will be used to declare that an emergency condition no longer exists at San Justo Dam and subsequent notification to the public is as follows:

1. Termination procedures for Response Level 1, 2, or 3 will be implemented when the threatening condition is managed or controlled at the dam site.

2. Termination of a Response Level is automatic if escalation to a higher Response Level is required.

3. Termination of a Response Level is automatic if downgrading to a lower Response Level is required.

4. Additional termination activities for Response Level 1, 2, or 3 will follow the established procedures of each individual agency involved.

III. RESPONSE LEVELS SYSTEM DEFINED

A. INTERNAL ALERT

An Internal Alert is just that: an internal alert. This first phase of the Response Level system only involves the personnel of San Benito County Water District and possibly Reclamation, if deemed necessary. In this level, something unusual has been discovered at the dam that could possibly evolve into something more serious. Once the unusual occurrence has been discovered or reported, it should be monitored closely by SBCWD personnel.

Declaration of an Internal Alert means that an internal alert will be conducted in which emergency response activities including internal notifications for affected organizations will be carried out.

This means that these organizations will observe and analyze the event, and that they will "be aware" that nothing "serious" is happening yet, but indications are that something unusual definitely is happening that could develop into a potentially significant threatening event only if it intensifies.

The Internal Alert and Response Level I are very similar in design. The difference lies in the fact that the Internal Alert involves procedures and activities that are solely internal to personnel of affected organizations.

The Internal Alert does NOT represent an emergency that would require external notifications, but may require increased surveillance.

Events that would prompt declaration of an Internal Alert do NOT pose a hazard either at the dam or to downstream populations at risk.

An Internal Alert will be declared and initiated after developing conditions have been observed, and it has been determined that declaration of the Internal Alert is necessary.

Any developing events that belong to an Internal Alert will be identified as being of a level of intensity where they can be managed and brought under control by dam operating personnel with no negative impacts downstream.

As more serious indicators are identified, Response Level I, Response Level II, or Response Level III will be declared.

B. RESPONSE LEVEL I

1. Definition

Response Level I is the least serious of the response levels and involves procedures and activities primarily, but not exclusively, internal to personnel of San Benito County Water District and Reclamation. Nothing serious has developed yet, but indications are that something definitely is happening that could progress into a potentially significant threatening event if it continues or intensifies.

Response Level I does not represent an emergency yet, but may be perceived as such by the media or general public. Level I means involved organizations need to "get ready" for emergency response activities. Nothing significant really needs to be done for Response Level I except to stay aware of the event after it is detected, and observe and analyze it for possible action.

The SBCWD IC will initiate and implement a "communications check" upon declaration of Response Level I. The communications check will include a notification to the South Central California Area Office Emergency Official, San Benito County Office of Emergency Services' 24-hour warning point, the State Office of Emergency Services, and the National Weather Service that Response Level I has been declared and that local emergency management officials of jurisdictions downstream may want to conduct their own communications check to their response organizations which may wish to go into an "alert" status.

Response agencies generally do not mobilize resources as a result of a declaration of Response Level I. The SBCWD IC will contact the South Central California Area Office Emergency Official via the Central Valley Control Center and relay the same information.

Response Level I does not pose a hazard, at the dam or to downstream populations at risk, at the time of observation.

Response Level I will be declared and initiated by the SBCWD IC after developing conditions have been assessed and evaluated, and it has been determined that declaration of Response Level I is necessary.

Any developing events that belong in Response Level I will be identified as being of a level of intensity that can be managed and controlled by the dam operating personnel and the South Central California Area Office, with no negative impacts downstream.

If more serious indicators develop and are identified, Response Level II will be declared by the SBCWD IC, or, if conditions warrant, Response Level III will be declared.

2. **Pre-scripted Message to be used for Response Level I**

This is the San Benito County Water District, monitoring San Justo Dam. My name and title are _____. Conditions at the dam are _____ and this necessitates that I inform you that San Justo Dam is at a Response Level I. Teledyne and San Juan Oaks are immediately downstream of this facility.

Note: The pre-scripted message above is the minimum amount of information to be relayed. The person relaying the information may provide more information to the downstream entities and answer any questions they may have to aid them in assessing the situation.

C. RESPONSE LEVEL II

1. Definition

Declaration of Response Level II means that involved organizations should "Get Set!" because conditions are now more serious than those experienced in Response Level I but are still less serious than those that would be experienced in Response Level III.

For this response level, the dam has not failed, nor is failure imminent. The current condition of the structure is stable, but may become unstable, or releases will be such that they could become life-threatening, or a hazardous event has progressed to a point that the public may be at risk.

This means that the dam may yet be stable, or that releases may not actually impact populations

at risk if conditions diminish in intensity or are brought under control, but circumstances at the dam are such that populations at risk MUST BE placed on "standby" status which means notifications to populations at risk should include directions to standby and prepare to leave flood inundation areas for higher ground and safe shelter. Conditions could worsen that would require an evacuation if not brought under control effectively. It could also mean that the special populations at risk might start evacuating or that a voluntary evacuation may be in order; however, a total evacuation of the populations at risk is not yet required.

Upon notification that Response Level II has been declared, local emergency management officials and response agencies should mobilize response resources and position them at staging areas out of flood inundation areas.

Declaration of Response Level II could mean that conditions have gotten worse since declaration of Response Level I, or that conditions started out serious enough to warrant declaration of Response Level II without passing through Response Level I first.

Response Level II will be declared and initiated by the SBCWD IC after having assessed developing conditions and determined it necessary.

Notification will be made to the South Central California Area Office Emergency Official, the San Benito County Office of Emergency Services' 24-hour warning point, the State Office of Emergency Services, and the National Weather Service by the SBCWD IC anytime declaration of Response Level II becomes necessary. The San Benito County Office of Emergency Services' 24-hour warning point will notify appropriate public safety officials that Response Level II has been declared and that they should implement their expected actions for this response level. The National Weather Service will utilize their resources to distribute the appropriate information directly to the populations at risk via radio and television messages.

2. **Prescripted Message to be used for Response Level II**

> This is the San Benito County Water District monitoring San Justo Dam. My name and title are _____. Conditions at the dam are _____ and this necessitates that I inform you that San Justo Dam is at a Response Level II. Teledyne and San Juan Oaks are immediately downstream of this facility.

Note: The pre-scripted message above is the minimum amount of information to be relayed. The person relaying the information may provide more information to the downstream entities and answer any questions they may have to aid them in assessing the situation.

D. RESPONSE LEVEL III

1. Definition

Declaration of Response Level III means involved organizations must "GO!!" (initiate evacuation) because conditions at this response level will affect the populations at risk. This is the most dangerous response level.

Declaration and implementation of Response Level III means the situation is extremely serious and will be based on the certainty that life-threatening floodwater or a hazardous event will affect populations at risk. For this response level, major life-threatening releases will be made, major

structural damage to San Justo Dam will occur, the physical condition of the dam will have deteriorated such that stabilization is not possible and the dam will fail, or a hazardous event has become life threatening.

For Response Level III, one or more of the following emergency conditions will be present:

- ✔ Releases have become life-threatening.
- ✔ It has been determined that the dam will definitely fail.
- ✔ The dam is actually beginning to fail.
- ✔ The dam has failed.

Declaring this response level means populations at risk are in imminent danger and that evacuation of populations at risk in all, or a part of, the dam failure flood inundation area, or affected area is required and must take place immediately.

Declaring Response Level III may be as a result of worsening conditions since declaration of Response Levels I or II or because conditions have developed right away that are so serious an immediate declaration of Response Level III is warranted without passing through of the less serious response levels first.

For this condition, the SBCWD IC would immediately notify the South Central California Area Office Emergency Official, the San Benito County Office of Emergency Services' 24-hour warning point, the State Office of Emergency Services, and the National Weather Service that an evacuation is required. The San Benito County Office of Emergency Services' 24-hour warning point will notify appropriate public safety officials that Response Level III has been declared and that they should implement their expected actions for this response level. The National Weather Service will utilize their resources to distribute the appropriate information directly to the populations at risk via radio and television messages.

Response Level III will be declared and initiated by the SBCWD IC for all situations anytime that it becomes obvious, through analysis of threatening events, that immediate evacuation of all or part of the populations at risk located downstream from San Justo Dam is necessary.

Local authorities are responsible for advising the public on safe evacuation routes and where to go for safe shelter. Response organizations will fully mobilize and physically implement evacuation procedures for Response Level III.

2. **Prescripted Message to be used for Response Level III**

> This is the San Benito County Water District, monitoring San Justo Dam. My name and title are _____. Conditions at the dam are _____ and this necessitates that I inform you that San Justo Dam is at a Response Level III. Teledyne and San Juan Oaks are immediately downstream of this facility.

Note: The pre-scripted message above is the minimum amount of information to be relayed. The person relaying the information may provide more information to the downstream entities and answer any questions they may have to aid them in assessing the situation.

IV. MISCELLANEOUS

A. ATTENDANCE AND COMMUNICATIONS PROCEDURES

San Justo Dam is not attended on a regular schedule. Dam operating personnel can be contacted by phone pager, by radio, through San Benito County Water District Dispatch, or South Central California Area Office listed in the "Communications Directory for Dams."

B. INUNDATION MAPS

Inundation maps are available showing the areas affected by exceptionally large water releases downstream of San Justo Dam (Figure 6).

The reservoir surcharge storage can safely store the entire PMF and therefore no failure of the dam or dike due to overtopping from inflow is addressed in this EAP.

The inundation study San Justo Reservoir Dam and Dike includes the following four breach scenarios due to piping failure:

1. Sunny- day failure of the dam under normal reservoir operation.
2. Failure of the dam at maximum reservoir water level from the PMF.
3. Sunny- day failure of the dike under normal reservoir operation.
4. Failure of the dike at maximum reservoir water level from the PMF.

The results of the above scenario indicate that the sunny day failure and PMF produce basically the same discharge. Therefore, two inundation maps are included in this EAP. These maps indicate the areas that would be inundated from a piping failure of the dam or dike with the PMF event.

C. WARNING SYSTEM

No audible warning system is installed at the dam. Warning of failure or notification of impending failure would be telephoned or radioed to the San Benito County Sheriff's Office which will implement Civil Defense procedures to warn downstream populations at risk.

D. EQUIPMENT, MATERIALS, LABOR, ENGINEERING, AND UNDERWATER EXAMINERS

Heavy equipment is not available at the damsite. The San Benito County Water District, located 10 miles from the dam, has equipment available through local contractors and the Bureau of Reclamation.

1. Equipment

SAN BENITO IRRIGATION DISTRICT HEADQUARTERS

Wacker Compactor (1)
John Deere Backhoe (1) - 2WD
Wellcraft Boat (1)
Boat Trailer (1)
Evinrude Outboard, 7HP (1)
Pacer 3 in. Trash Pump (10)
Portable Generator, 2,000 KW (1)
Winch (1)
Air Blower (2)

Truck, Sterling, 6-Wheel Dump (8 cu yd) (1)
Lowboy, Walton, 32,000 lb.
Case Tractor with Attachments

SOUTH CENTRAL CALIFORNIA AREA OFFICE (SCCAO) O&M

Air Compressor (2) - 125 cfm
Backhoe - Case 780 (1-1/2 cu yd loader bucket)
Bulldozer - Caterpillar D6
Bulldozer - TD 20E International (comparable to a D8 Caterpillar Dozer)
Loader - John Deere 544-A (1-1/4 cu yd bucket)
Loader - Furukawa FL320A (3-1/2 cu yd bucket)
Tractor - Ford 420 (front end bucket with rake)
Tractor - Ford (front end bucket with grass cutter)
Roller - Huber
Crane - P&H 325 25 ton
Crane - P&H 325 25 ton
Crane - Stinger II TC-60 5 ton (38 ft hydraulic boom)
Truck (2) - GMC 10-Wheel Dump (8 cu yd)
Truck - International 10-Wheel Dump (10 cu yd)
Truck - Auto car 10-Wheel Dump (10 cu yd)
Truck - GMC Flatbed
Truck - Dodge Water Tank (2600 gallons)
Tractor - GMC 44,500 GWM 80,000 GCW
Tractor - International 24,000 GVWR
Tractor - Ford C-7000 24,000 GVWR
Lowboy - Hyster 24,000 GVW 22,000 GAWR
Semi Trailer - 35 ton level deck
Semi Trailer - lowbed level deck, fixed gooseneck 40 ft 20 tons
Semi Trailer - Cargo 12 tons 28 ft long
Tilt Trailer - 15 ton gooseneck

TRACY OFFICE FISH SCREEN

Fork Lift (6000 lbs.)
Portable Air Compressor (90 cfm)
Potable Light Plant
2 - Portable Water Pumps (3-inch)

2. **Materials (cobbles, aggregate, riprap)**

AVAILABLE MATERIALS - SAN BENITO COUNTY
tons Riprap - Downstream of San Justo Dam

See **Section D.3-"Local Contractors."**

AVAILABLE MATERIALS - SCCAO

Riprap -Basalt Hill near San Luis Dam

3. **Local Contractors**
Nichleson
Don Chapin Construction (Equipment and Materials - sand, rock, and gravel)
Lindsay and Company
Teichert

4. **Oil or Hazardous Spill Clean-up Materials**

AVAILABLE MATERIALS - SAN BENITO COUNTY
None available

5. **Local Cleanup and/or Disposal Contractors**

H&H Environmental Services
220 China Basin
San Francisco CA 94107
(415) 543-4835

O.H. Materials Co.
1425 North Market Blvd., Suite 9
Sacramento CA 95834
(916) 928-1819

Ramos Environmental Services
1515 South River Road, PO Box 401
West Sacramento CA 95961
(916) 371-9312

Romic Environmental Technologies
(415) 324-1638

6. **Labor**

O&M personnel are available at SCCAO and SBCWD.

7. **Engineering**

Civil, Mechanical, and Electrical engineers are available at SBCWD, SCCAO, Regional Office and Denver Technical Service Center.

8. **Underwater Examiners**

There is no longer a Mid-Pacific Region Dive Team; however, questions regarding the acquisition of a Contract Dive Team or another Region's Dive Team may be directed to the Facilities Engineering Branch, MP-430 at (916) 978-5220.

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SAN JUSTO DAM EMERGENCY ACTION PLAN - HAZARD SPECIFIC PLAN
SOUTH CENTRAL CALIFORNIA AREA OFFICE - TRACY OFFICE

TABLE OF CONTENTS

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I. INITIATING CONDITIONS FOR EMERGENCY EVENTS

Emergency events are defined as any event that is extraordinary and must be enacted upon in a short time frame. Initiating conditions are events that can lead to emergency situations. Initiating conditions related to San Justo Dam are discussed in the Performance Parameters Technical Memorandums issued by the Technical Services Center.

Following is a listing of emergency events and corresponding initiating conditions for each of the three response levels.

II. EXPECTED ACTIONS FOR EMERGENCY EVENTS

The emergency events that immediately follow are not intended to reflect upon the integrity of San Justo Dam. Potential situations are not limited to these examples. For emergency events other than earthquakes or oil/hazardous substance spills, use the **Emergency Event/Unusual Occurrence Report** (**Figure 1**) when recording and reporting the event. For earthquakes and oil/hazardous substance spills, use the **Earthquake Damage Report** (**Figure 2**) and the **Oil and Hazardous Spill Report** (**Figure 3**), respectively.

To help determine which Response Level, if any, to initiate, see section "I. Emergency Events and Initiating Conditions" starting on page HAZ-1. This section contains a listing of various emergency events and the initiating conditions for each Response Level of that event.

If an emergency situation not listed should occur, use and document the procedure which is judged to be most appropriate and revise the Emergency Action Plan as necessary.

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San Justo Dam Emergency Notification List
for
Hydrologic Events

SBCWD Operations and Maintenance Supervisor will notify:

San Benito County Water District Dispatch ..... (831) 637-8218 (Office)
~~(831) 638-8568 (Pager)~~

Incident Commander will notify:

San Benito County Office of Emergency Services ..... (831) 636-4100

Santa Cruz County Office of Emergency Services ..... (831) 471-1190

Monterey County Office of Emergency Services ..... (831) 755-5010

California State Office of Emergency Services ..... (916) 262-1621

National Weather Service ..... (831) 656-1717

Bureau of Reclamation, Tracy Office Emergency Official ..... (209) 836-6201 (primary)
(209) 833-2617 (secondary)

INITIATING CONDITIONS FOR HYDROLOGIC EVENTS

HIGH RESERVOIR LEVELS

Internal Alert	Response Level I	Response Level II	Response Level III
The reservoir elevation is above 503.28 feet.	The reservoir elevation is above 504.26 feet, which is the sill elevation of the spillway.	The reservoir elevation is at 505.25 feet, which is the elevation of the top of zone 1 material. Potentially significant flow through the dam and dike above the top of the Zone 1 material (through the pervious shell material) may be occurring.	The flows through the dam and dike above the top of the Zone 1 material are such that failure of the dam or dike is occurring.

Even during the Probable Maximum Flood (PMF), overtopping of the dam or dike is not anticipated. However, the water level in the reservoir could rise to within 2 feet of the crest of the embankments, which could result in failure due to:

- ✔ wave setup, run up, and splash over leading to erosion and eventual breaching.
- ✔ large flow through the embankment, passing over the top of the Zone 1 core, leading to erosion and eventual breaching.

A. **Hydrologic Events**

Events falling into this category of hydrologic events could be high reservoir levels (Reservoir Elevation ≥ 503.28 feet) or large discharges. Large discharges include controlled releases approaching or greater than -- cfs and for any uncontrolled discharges.

1. SBCWD Operators will notify the **SBCWD Operations and Maintenance Supervisor (O&M)** of the high reservoir conditions, pending large discharges, or any uncontrolled discharge. The Operations and Maintenance Supervisor will do the following:

   a. If the event is high reservoir conditions, then instruct the Inspections Team Leader to commence inspections of the dam and report back with the findings.

   b. Evaluate the situation and declare the appropriate Response Level based on the initiating conditions found in the Emergency Events and Initiating Conditions section starting on Page HAZ-1 and any findings of the Inspection Team Leader.

   c. Implement the Incident Command System (ICS) and appoint the Incident Commander (IC), if necessary.

   d. Notify SBCWD Dispatch.

   e. Complete the incident report.

Note: The SBCWD Operations and Maintenance Supervisor will perform the duties of Incident Commander until such time as the role of Incident Commander is assumed by other SBCWD or Reclamation Personnel.

2. **Incident Commander (IC)**

   a. Monitor the situation and update Response Levels as needed based on the initiating conditions found in the Emergency Events and Initiating Conditions section starting on Page HAZ-1.

   b. Notify the SBCWD Operations and Maintenance Supervisor of any changes in the Response Level.

   c. Notify the San Benito County OES of the Response Level declared as a result of the hydrologic event.

   d. Notify the California State OES of the Response Level declared as a result of the hydrologic event.

   e. Notify the National Weather Service of the Response Level declared as a result of the hydrologic event.

   f. Notify SCCAO Emergency Official of the Response Level declared and of any changes in Response Level.

   g. Appoint the following personnel and assign tasks as needed:

      1) Planning/Intelligence Officer

      2) Operations Officer

      3) Safety Officer

4) Public Information Officer

5) Logistics Officer

6) Finance Officer

h. Activate the Emergency Operations Center, if necessary.

i. Continue to monitor the situation and update the Response Level as needed.

j. Declare incident over when appropriate.

3. **Planning/Intelligence Officer** will do the following:

a. Develop an Incident Action Plan covering the next 8-24 hours, being sure to address the monitoring of the situation, reporting frequencies, collection of data, evaluation of data, equipment needs, staffing needs, etc.

b. Coordinate with the Inspections Team Leader.

c. Maintain contact with the Incident Commander.

4. **Operations Officer** will do the following:

a. Appoint the Maintenance Crews Team Leader and assign tasks as necessary.

b. Appoint the Facility Operations Team Leader and assign tasks as necessary.

c. Maintain contact with the Incident Commander.

5. **Inspections Team Leader**

a. Evaluate the situation and begin inspections of the dam as per the inspection checklists included in the Emergency Event Checklists for the Inspection Team Leader and other appurtenant structures.

b. Report back to the SBCWD Operations and Maintenance Supervisor or the Planning/Intelligence Officer if the Incident Command System has been implemented with findings.

6. **Public Information Officer** will do the following:

a. Identify Public Information Officer Activities

1) Contact the jurisdictional responsible agency to determine what other external public information activities are being performed for this incident.

2) Take actions required to establish coordination of information acquisition and dissemination activities.

3) Compile the information obtained and maintain records.

b. Establish Incident Information Center as Required

1) Establish information center adjacent to the Emergency Operations Center (EOC) where it will not interfere with EOC activities.

2) Contact Logistics Officer for any support required to set up information center.

c. Report to the Joint Information Center as Required

1) Report to the Joint Information Center in the impacted county.

2) Coordinate activities with County Public Information Officer.

d. Prepare Press Briefing

1) Identify from the Incident Commander (IC) any constraints on the release of information.

2) Select information to be releases (e.g., size of incident, agencies involved, etc.)

3) Obtain IC's approval for release. (The IC may give blanket release authority.)

4) Release information for distribution to the media.

5) Release information to press representatives at the Incident Information Center.

6) Post a copy of all information summaries on the EOC's message center and other appropriate incident locations.

e. Collect and Assemble Incident Information

1) Obtain the latest situation status information from appropriate team leaders.

2) Observe incident operations.

3) Hold discussions with incident personnel.

4) Identify special event information, e.g., evacuations, injuries, etc.).

5) Contact external agencies for additional information.

f. Provide Liaison Between Media and Incident Personnel

1) Receive requests from the media to meet with incident personnel and vice versa.

2) Identify parties involved in the request, e.g., Incident Commander for TV interviews, etc.

3) Determine if policies have been established to handle requests and, if so, proceed accordingly.

4) Obtain any required permission to satisfy request, e.g., Incident Commander.

5) Fulfill the request or advise the requesting party of inability to do so, as the case may be.

g. Respond to Special Requests for Information

1) Receive request for information.

2) Determine if the requested information is currently available and, if so, provide it to

the requesting party.

3) If information is not currently available, determine if it can be reasonable obtained by contacting incident personnel.

4) Assemble desired and available information and provide it to the requesting party.

h. Maintain and Complete an Incident Report

1) Record Public Information Officer actions in the Incident Report.

2) Collect and transmit information summaries and Incident Report to Incident Commander at the end of the operation.

San Justo Dam Emergency Notification List
for
Seismic Events

USBR Regional Office, MP-433 Earthquake Personnel will notify:

Operations and Maintenance Supervisor - ..... (831) 637-8218

On-Call Pager - (831) 638-8566

SBCWD Operations and Maintenance Supervisor will notify:

Bureau of Reclamation, Tracy Office Emergency Official ..... (209) 836-6201 (primary)
(209) 833-2617 (secondary)

Incident Commander will notify:

San Benito County Office of Emergency Services ..... (831) 636-4100

California State Office of Emergency Services ..... (916) 262-1621

National Weather Service ..... (831) 656-1717

John Cook 916-978-5230

Liz Partridge 209-836-6278

INITIATING CONDITIONS FOR EARTHQUAKES
(Based on Inspection Team Findings)

B. **Earthquake**

In the event an earthquake is felt by San Benito County Water District personnel, San Justo Dam should be inspected for any visual damage. When documenting an earthquake, use the **Earthquake Damage Report (Figure 2)**.

1. **During normal business hours, the Regional Office, MP-430,** will typically be the ones to receive notification of an earthquake. Once they receive an earthquake notification, they will follow the procedures as outlined in the "Notification Procedures for On call Earthquake Personnel Manual," which includes the following:

   a. Run the QUAKE program and evaluate the earthquake.

   b. If the earthquake is greater than 3.7 in magnitude and the QUAKE program indicates that San Justo Dam is within a 0.05 g radius of the epicenter, then notify the San Benito County Water District Earthquake Contact that appears on the computer generated printout and have them inspect the facilities for any visible signs of damage.

   c. If the San Benito District Earthquake Contact reports back with any indication of damage as a result of the earthquake, contact the Bureau of Reclamation, Tracy Office Emergency Official and relay the information.

2. **After normal business hours, Central Valley Control Center (CVCC)** will typically be the ones to receive notification of an earthquake. Once they receive an earthquake notification, they will do the following:

   a. Run the QUAKE program and evaluate the earthquake.

   b. If the earthquake is greater than 3.7 in magnitude and the QUAKE program indicates that San Justo Dam is within a 0.05 g radius of the epicenter, notify the Mid-Pacific Regional Office (MPRO) On call Earthquake Contact to have them notify the San Benito County Water District Earthquake Contact that appears on the computer generated printout.

3. The **San Benito County Water District Earthquake Contact** (will most likely be the Operations and Maintenance Supervisor or the Assistant Operations and Maintenance Supervisor) will do the following upon being notified of an earthquake:

   a. Commence inspections of the dam and appurtenant structures, being sure to inspect the following:

      1) Both faces of the dam for cracks, settlement, or seepage;

      2) Abutments for possible displacement;

      3) Drains and seeps;

      4) Outlet works control house and gate chamber;

      5) Power supply and standby power unit;

      6) Visible reservoir and downstream areas for landslides;

      7) Other appurtenant structures.

   b. If any damage is noticed, notify the **SBCWD Operations and Maintenance Supervisor (O&M)** who will do the following (or who will ensure the following is done):

1) Evaluate the situation and declare the appropriate Response Level.

2) Implement the Incident Command System (ICS) and appoint the Incident Commander (IC).

3) Report back immediately to the MPRO On call Earthquake Contact or to the Regional Office, MP-430, to notify them of the damage.

4) Contact SCCAO Emergency Official of the Response Level declared and of any changes in Response Level.

5) Complete the incident report.

c. If the report from the Inspection Team Leader indicates no damage, then notify the Regional Office, MP-430, the next business day and give a "no damage" report.

4. The **Inspection Team Leader** will do the following:

a. Evaluate the situation and begin inspections of the dam as per the inspection checklists included in the Emergency Event Checklists for the Inspection Team Leader and other appurtenant structures.

b. Report back to the SBCWD Operations and Maintenance Supervisor with findings.

c. Perform a follow-up inspection of the dam two weeks after the seismic event.

5. If the Incident Command System (ICS) is implemented, the **Incident Commander (IC)** will do the following:

a. Monitor the situation and update Response Levels as needed.

b. Notify the SBCWD Operations and Maintenance Supervisor of any changes in the Response Level.

c. Notify the San Benito County OES of the Response Level declared as a result of the earthquake.

d. Notify the California State OES of the Response Level declared as a result of the earthquake.

e. Notify the National Weather Service of the Response Level declared as a result of the earthquake.

f. Notify SCCAO Emergency Official of the Response Level declared and of any changes in Response Level.

g. Appoint the following personnel and assign tasks as needed:

1) Planning/Intelligence Officer

2) Operations Officer

3) Safety Officer

4) Public Information Officer

5) Logistics Officer

6) Finance Officer

h. Activate the Emergency Operations Center, if necessary.

i. Continue to monitor the situation and update the Response Level as needed.

j. Declare incident over when appropriate.

6. **Planning/Intelligence Officer** will do the following:

a. Develop an Incident Action Plan covering the next 8-24 hours, being sure to address the monitoring of the situation, reporting frequencies, collection of data, evaluation of data, equipment needs, staffing needs, etc.

b. Coordinate with the Inspections Team Leader.

c. Maintain contact with the Incident Commander.

7. **Operations Officer** will do the following:

a. Appoint the Maintenance Crews Team Leader and assign tasks as necessary.

b. Appoint the Facility Operations Team Leader and assign tasks as necessary.

c. Maintain contact with the Incident Commander.

8. **Public Information Officer** will do the following:

a. Identify Public Information Officer Activities

1) Contact the jurisdictional responsible agency to determine what other external public information activities are being performed for this incident.

2) Take actions required to establish coordination of information acquisition and dissemination activities.

3) Compile the information obtained and maintain records.

b. Establish Incident Information Center as Required

1) Establish information center adjacent to the Emergency Operations Center (EOC) where it will not interfere with EOC activities.

2) Contact Logistics Officer for any support required to set up information center.

c. Report to the Joint Information Center as Required

1) Report to the Joint Information Center in the impacted county.

2) Coordinate activities with County Public Information Officer.

d. Prepare Press Briefing

1) Identify from the Incident Commander (IC) any constraints on the release of information.

2) Select information to be releases (e.g., size of incident, agencies involved, etc.)

3) Obtain IC's approval for release. (The IC may give blanket release authority.)

4) Release information for distribution to the media.

5) Release information to press representatives at the Incident Information Center.

6) Post a copy of all information summaries on the EOC's message center and other appropriate incident locations.

e. Collect and Assemble Incident Information

1) Obtain the latest situation status information from appropriate team leaders.

2) Observe incident operations.

3) Hold discussions with incident personnel.

4) Identify special event information, e.g., evacuations, injuries, etc.).

5) Contact external agencies for additional information.

f. Provide Liaison Between Media and Incident Personnel

1) Receive requests from the media to meet with incident personnel and vice versa.

2) Identify parties involved in the request, e.g., Incident Commander for TV interviews, etc.

3) Determine if policies have been established to handle requests and, if so, proceed accordingly.

4) Obtain any required permission to satisfy request, e.g., Incident Commander.

5) Fulfill the request or advise the requesting party of inability to do so, as the case may be.

g. Respond to Special Requests for Information

1) Receive request for information.

2) Determine if the requested information is currently available and, if so, provide it to the requesting party.

3) If information is not currently available, determine if it can be reasonable obtained by contacting incident personnel.

4) Assemble desired and available information and provide it to the requesting party.

h. Maintain and Complete an Incident Report

1) Record Public Information Officer actions in the Incident Report.

2) Collect and transmit information summaries and Incident Report to Incident Commander at the end of the operation.

Note: If damage results in uncontrolled discharges or the need for large controlled releases, then proceed to Section "II.A. Hydrologic Events" of this Hazard Specific Plan.

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San Justo Dam Emergency Notification List
for
Oil & Hazardous Substance Spills

SBCWD Operations and Maintenance Supervisor will notify:

National Response Center/Environmental Protection Agency	(800) 424-8802
California Department of Fish and Game (spills on water)	(800) 852-7550
California Highway Patrol (spills on land)	911
San Benito County Office of Emergency Services	(813) 636-4100
California State Office of Emergency Services	(916) 262-1621
California Department of Health Services - Daryl Noel	(916) 229-3148 (916) 933-7848 (home)
SBCWD Manager	(831) 637-8983

Incident Commander will notify:

San Benito County Office of Emergency Services	(831) 636-4100
California State Office of Emergency Services	(916) 262-1621
National Weather Service	(831) 656-1717
Tracy Office Emergency Official	(209) 836-6201 (primary) (209) 833-2617 (secondary)

INITIATING CONDITIONS FOR OIL & HAZARDOUS SUBSTANCE SPILLS

Internal Alert	Response Level I	Response Level II	Response Level III
An oil or hazardous substance spill has been reported on Reclamation property.	The oil or hazardous substance spill may potentially affect the populations at risk.	The oil or hazardous substance spill will affect the populations at risk.	Evacuations are necessary as a result of the oil or hazardous substance spill.

CAUTION: If identity and potential hazard in handling is unknown, wait for properly trained personnel and **do not attempt to handle**.

C. **Oil and Hazardous Substance Spills**

The following is a summary of how to respond to an oil or hazardous substance spill.

Always use the **Oil and Hazardous Spill Report** (**Figure 3**) when documenting a spill.

Caution: If identity and potential hazard in handling is unknown, call 9-1-1, wait for properly trained personnel, and do NOT attempt to handle.

1. As soon as a spill occurs, or is discovered, the SBCWD employee will notify their supervisor who will notify the **SBCWD Operations and Maintenance Supervisor**, or the SBCWD employee will notify the SBCWD Operations and Maintenance Supervisor directly. The SBCWD Operations and Maintenance Supervisor will do the following:

   a. Record spill data on the appropriate Oil and Hazardous Spill Report form.

      1) Pinpoint the source of spill, if possible.

      2) If the origin of the spill was not SBCWD and can be determined, contact the responsible entity and determine action to take.

      3) Determine nature (including but not limited to petroleum, fuel oil, sludge, oil refuse, or oil mixed with wastes; industrial chemicals, herbicides, or pesticides) and quantity (minor = less than 1,000 gallons, medium = 1,000 to 10,000 gallons, major = more than 10,000 gallons).

   b. Make initial determination regarding the extent of effort and equipment required to contain the spill.

   c. Determine if and to what extent resources in the area may be affected by the discharge and assess the threat posed to the public health and make appropriate notifications.

      1) Based on the initiating conditions for oil and hazardous substance spills starting on Page HAZ-2, declare the appropriate response level and implement the Incident Command System, if necessary.

   d. Notify the following entities:

      1) National Response Center/U.S. Environmental Protection Agency.

      2) California Department of Fish and Game for spills on water.

      3) California Highway Patrol for spills on land.

      4) San Benito County Office of Emergency Services.

      5) California Office of Emergency Services.

      6) California Department of Health Services.

      7) SBCWD Water Quality

      8) SBCWD Superintendent of Water Operations

If SBCWD personnel cannot handle the spill with their own resources, then coordinate the clean-up with SCCAO.

Note: The National Response Center (NRC)/U.S. Environmental Protection Agency (EPA) MUST be notified of the spill **within 2 hours from time spill is discovered.**

2. If the Incident Command System (ICS) is implemented, the **Incident Commander (IC)** will do the following:

   a. Monitor the situation and update Response Levels as needed based on the initiating conditions found in the Emergency Events and Initiating Conditions section starting on Page HAZ-1.

   b. Notify the SBCWD Operations and Maintenance Supervisor of any changes in the Response Level.

   c. Notify the San Benito County OES of the Response Level declared as a result of the oil or hazardous substance spill.

   d. Notify the California State OES of the Response Level declared as a result of the oil or hazardous substance spill.

   e. Notify the National Weather Service of the Response Level declared as a result of the oil or hazardous substance spill.

   f. Notify the SCCAO Emergency Official.

   g. Appoint the following personnel and assign tasks as needed:

      1) Planning/Intelligence Officer

      2) Operations Officer

      3) Safety Officer

      4) Public Information Officer

      5) Logistics Officer

      6) Finance Officer

   h. Activate the Emergency Operations Center, if necessary.

   i. Continue to monitor the situation and update the Response Level as needed.

   j. Declare incident over when appropriate.

3. **Planning/Intelligence Officer** will do the following:

   a. Develop an Incident Action Plan covering the next 8-24 hours, being sure to address the monitoring of the situation, reporting frequencies, collection of data, evaluation of data, equipment needs, staffing needs, etc.

   b. Maintain contact with the Incident Commander.

4. **Operations Officer** will do the following:

   a. Appoint the Maintenance Crews Team Leader and assign tasks as necessary.

   b. Appoint the Facility Operations Team Leader and assign tasks as necessary.

c. Maintain contact with the Incident Commander.

5. **Public Information Officer** will do the following:

a. Identify Public Information Officer Activities

1) Contact the jurisdictional responsible agency to determine what other external public information activities are being performed for this incident.

2) Take actions required to establish coordination of information acquisition and dissemination activities.

3) Compile the information obtained and maintain records.

b. Establish Incident Information Center as Required

1) Establish information center adjacent to the Emergency Operations Center (EOC) where it will not interfere with EOC activities.

2) Contact Logistics Officer for any support required to set up information center.

c. Report to the Joint Information Center as Required

1) Report to the Joint Information Center in the impacted county.

2) Coordinate activities with County Public Information Officer.

d. Prepare Press Briefing

1) Identify from the Incident Commander (IC) any constraints on the release of information.

2) Select information to be releases (e.g., size of incident, agencies involved, etc.)

3) Obtain IC's approval for release. (The IC may give blanket release authority.)

4) Release information for distribution to the media.

5) Release information to press representatives at the Incident Information Center.

6) Post a copy of all information summaries on the EOC's message center and other appropriate incident locations.

e. Collect and Assemble Incident Information

1) Obtain the latest situation status information from appropriate team leaders.

2) Observe incident operations.

3) Hold discussions with incident personnel.

4) Identify special event information, e.g., evacuations, injuries, etc.).

5) Contact external agencies for additional information.

f. Provide Liaison Between Media and Incident Personnel

1) Receive requests from the media to meet with incident personnel and vice versa.

2) Identify parties involved in the request, e.g., Incident Commander for TV interviews, etc.

3) Determine if policies have been established to handle requests and, if so, proceed accordingly.

4) Obtain any required permission to satisfy request, e.g., Incident Commander.

5) Fulfill the request or advise the requesting party of inability to do so, as the case may be.

g. Respond to Special Requests for Information

1) Receive request for information.

2) Determine if the requested information is currently available and, if so, provide it to the requesting party.

3) If information is not currently available, determine if it can be reasonable obtained by contacting incident personnel.

4) Assemble desired and available information and provide it to the requesting party.

h. Maintain and Complete an Incident Report

1) Record Public Information Officer actions in the Incident Report.

2) Collect and transmit information summaries and Incident Report to Incident Commander at the end of the operation.

III. EXPECTED ACTIONS FOR POTENTIAL HAZARDS/UNUSUAL OCCURRENCES

The unusual occurrences that immediately follow are not intended to reflect upon the integrity of San Justo Dam. Potential situations are not limited to these examples. For unusual events other than bomb threats, use the **Emergency Event/Unusual Occurrence Report (Figure 1)** when recording and reporting the event. For bomb threats, use the **Bomb Threat Report (Figure 4)**.

To help determine which Response Level, if any, to initiate, see section "I. Emergency Events and Initiating Conditions" starting on page HAZ-1. This section contains a listing of various emergency events and the initiating conditions for each Response Level of that event.

If an unusual occurrence not listed should occur, use and document the procedure which is judged to be most appropriate and revise the Emergency Action Plan as necessary.

A. This section applies to the following types of unusual occurrences:

Abnormal seepage (New or increased springs, boggy areas, or boils)
Abnormal instrumentation readings
Slumping or cracking of the dams, dikes, or abutments

If any of the aforementioned unusual occurrences are reported, the employee on-duty will notify his or her supervisor of the situation who will in turn contact the SBCWD Operations and Maintenance Supervisor. If the employee's supervisor cannot be contacted, then the employee will notify the SBCWD Operations and Maintenance Supervisor directly. The employee on-duty will gather as much information as possible and document his or her findings on the **Emergency Event/Unusual Occurrence Report**. When completed, this report is to be given to the SBCWD Operations and Maintenance Supervisor.

The **SBCWD Operations and Maintenance Supervisor** will do the following:

1. Contact the SBCWD Operators to have them inspect, analyze, and report back.
2. Notify SBCWD Dispatch.
3. Contact the SCCAO Emergency Official.
4. Based on the report of findings of the inspection, implement the Incident Command System, if necessary, and declare the appropriate Response Level based on the following initiating conditions.

Note: If downstream releases are possible, imminent, or have occurred as a result of the unusual occurrence, then proceed to Section "II.A. Hydrologic Events" of this Hazard Specific Plan.

a. **Initiating Conditions for Seepage**

Internal Alert	Response Level I	Response Level II	Response Level III
New seepage or wet areas are observed, or changed conditions associated with existing seepage flows or wet areas are noted. The new or changed conditions involve minor, or no flow increases. There is no evidence of materials being transported by seepage flows.	Seepage flows are observed to be muddy or cloudy, or sediment deposits are noted in association with seepage flows. The flow that is apparently transporting the material is not noticeably increasing with time. New seepage or wet areas are observed, or changed conditions associated with existing seepage flows or wet areas are noted. There is no evidence of materials being transported by seepage flows.	Seepage flows are observed to be muddy or cloudy, or sediment deposits are noted in association with seepage flows. The flow that is apparently transporting the material appears to increasing with time. New seepage or wet areas are observed, or changed conditions associated with existing seepage flows, or wet areas are noted. There is evidence of materials being transported by seepage flows	A seepage flow is observed that is large, obviously transporting significant quantities of embankment material and is rapidly increasing with time. Failure of the dam or dike appears to be imminent.

b. **Initiating Conditions for Abnormal Instrumentation Readings**

Internal Alert	Response Level I	Response Level II	Response Level III
Unusual changes in hydraulic piezometer readings are noted that are not explainable by changes in reservoir elevation or time of year.	There are confirmed abnormal instrumentation readings that are outside of the limits set forth in the Performance Parameter Technical Memorandums for San Justo Dam.	Upon further monitoring of the instrumentation, it appears the structural integrity of the dam or dike may be in jeopardy.	The instrumentation readings indicate that the structural integrity of the dam or dike is in jeopardy and that it is likely it will fail.

c. **Initiating Conditions for Slumping, Cracking, or Settlement**

Internal Alert	Response Level I	Response Level II	Response Level III
Depressions, sloughs, or other unusual settlements or deformations develop at or in the vicinity of the dam or dike (upstream or downstream).	New minor cracks (lateral cracking with an offset or transverse cracking that extends beyond the high water line of the reservoir), slumps or sloughs that may affect the structural integrity are observed on the dam, dike, and/or appurtenant structures. Following a seismic event, new slumps, scarps, longitudinal cracks, or transverse cracks are observed on the dam or dike embankment, or a gap is noted at the spillway/dam embankment interface, but there is no apparent evidence of changes in the seepage performance of the dam or dike. One or more sinkholes are observed on the downstream face of the dam or dike, or in areas downstream of the dam or dike. There is no evidence of materials being transported by seepage flows.	New minor cracks, slumps, or sloughs have gotten larger and could pose a threat to the dam or dike. Severe cracking of the crest or spillway of the dam is visually observed after a seismic event. Slope movement from offsets in the surface cracking, bulging on the slope, displaced riprap and rockfill material, or separation of the spillway wall from the embankment is observed after a seismic event. Whirlpools or other signs that water is entering cracks in or near the embankment, abutment, or spillway/embankment contact is observed near the reservoir rim. One or more sinkholes are observed on the upstream face of the dam or dike. There is no evidence of materials being transported by seepage flows.	Cracks, slumps, or sloughs have become a threat to the structural integrity of the dam or dike and it is likely that it will fail. Ground settlement has become a threat to the structural integrity of the dam or dike and it is likely that it will fail. The erosion of embankment material caused by seepage flow has already caused major sinkholes or depressions in the embankment upstream of the seepage exit location to a degree that dam or dike failure appears to be imminent.

B. **Failure of Operating Equipment or Appurtenances**

In addition to the items on the Emergency Event/Unusual Occurrence Report Form, also determine and record possible temporary repair, methods to disconnect, bypass or seal off faulty equipment, and whether or not to isolate area.

The **employee on-duty** will alert the **SBCWD Operators**, who will assess the situation, making any operational changes that are required and placing safety tags as necessary. If this is not an emergency situation, the control operators will write a work order to repair or replace any damages and the event will be concluded. If this is an emergency situation, the SBCWD Operators will do the following:

1. Call 911 if warranted.
2. Notify SBCWD Dispatch.
3. Notify the SCCAO Emergency Official of the situation.
4. Disconnect, bypass, seal off, isolate area or other operation to reduce the danger.
5. Notify the **SBCWD Operations and Maintenance Supervisor**, who will:

    a. If necessary, implement the Incident Command System and declare the appropriate Response Level based on the following initiating conditions:

Initiating Conditions for Failure of Operating Equipment or Appurtenances

Internal Alert	Response Level I	Response Level II	Response Level III
An operational accident has occurred with the operating equipment or appurtenances and it is undetermined what affect this could have on deliveries or the population at risk.	An operational accident has occurred with the operating equipment or appurtenances that could lead to loss of deliveries or cause potential threat to the downstream population at risk.	A major operational accident has occurred with the operating equipment or appurtenances, the result of which might pose a threat to the structural integrity of San Justo Dam.	The operational accident affecting the operating equipment or appurtenances is a threat to the structural integrity of San Justo Dam and it is likely they will fail.

Note: If downstream releases are possible, imminent, or have occurred as a result of the unusual occurrence, then proceed to Section "II.A Hydrologic Events" of this Hazard Specific Plan.

    b. Notify the San Benito County OES.
    c. Notify the California State OES.
    d. Contact repair crews, if necessary.

C. **Flow / Equipment Alarms**

The **employee on-duty** who first notices the flow / equipment alarm will immediately alert the **SBCWD Operators** who will verify the alarm. If the flow / equipment alarm is valid, then do the following:

1. Notify SBCWD Dispatch.
2. Notify the **SBCWD Operations and Maintenance Supervisor**, who will:

    a. Notify the Bureau of Reclamation, Tracy Office Emergency Official.
    b. If necessary, implement the Incident Command System and declare the appropriate Response Level based on the following initiating conditions.

Initiating Conditions for Flow / Equipment Alarms

Internal Alert	Response Level I	Response Level II	Response Level III
A high rate of flow alarm, valve malfunction alarm, or hydraulic fail alarm is communicated by Verbatim.	The operator verifies the alarms are valid.	The operator is not able to correct the problem, or a mechanic or electrician is required to correct the problem.	Flows are uncontrolled and the valves cannot stop the discharge, or the problem is a threat to the structural integrity of San Justo Dam and failure is imminent.

Note: **If downstream releases are possible, imminent, or have occurred as a result of the unusual occurrence**, then proceed to Section "II.A Hydrologic Events" of this Hazard Specific Plan.

c. Notify the San Benito County OES.

d. Notify the California State OES.

e. Notify the National Weather Service

D. **Demonstrations, Sabotage, Vandalism or Bomb Threat**

1. **Demonstrations**

If there is a demonstration at the dam, **employees** should:

a. Show restraint.

b. Lock all gates and doors.

c. Notify **SBCWD Operations and Maintenance Supervisor**, either via his or her supervisor or directly, who will:

1) Notify San Benito County Sheriff and FBI at the following numbers:

San Benito County Sheriff	911
FBI	(916) 481-9110

2) Notify SBCWD Dispatch.

3) Provide any further instructions to employees involved.

2. **Sabotage or Vandalism**

If there is potential for downstream releases caused by an act of sabotage or vandalism on the dams, dikes, or associated facilities, use the following as a guide:

Employee on-duty will notify the **SBCWD Operations and Maintenance Supervisor**, either via his or her supervisor or directly, who will ensure the following tasks are completed:

a. Immediately conduct a general overall visual inspection of the dam to determine location and extent of damage.

b. Check area for further sabotage potential and any evidence that might aid in apprehending the saboteur.

c. Check to see if the saboteur has left the area.

d. Notify San Benito County Sheriff and FBI at the following numbers:

San Benito County Sheriff	911
FBI	(916) 481-9110

e. Notify SBCWD Dispatch.

f. If necessary, implement the Incident Command System and declare the appropriate Response Level based on the following initiating conditions:

Initiating Conditions for Sabotage or Vandalism

Internal Alert	Response Level I	Response Level II	Response Level III
A criminal action, such as sabotage or vandalism, has occurred and it is undetermined what affect this could have on the operation of the dam.	A criminal action, such as sabotage or vandalism, has occurred which affects the operation of the dam.	A criminal action, such as sabotage or vandalism, has occurred and poses a threat to the structural integrity of San Justo Dam.	A criminal action, such as sabotage or vandalism, has occurred, threatening the structural integrity of San Justo Dam, and it is likely that the dam will fail.

Note: If downstream releases are possible, imminent, or have occurred as a result of the unusual occurrence, then proceed to Section "II.A Hydrologic Events" of this Hazard Specific Plan.

3. **Bomb Threat**

If a bomb threat call is received, use the following checklist during and after the incident and use the **Bomb Threat Report** form (**Figure 4**):

a. Keep the caller on the line as long as possible. Ask the caller to repeat the message and record every word.

b. If the caller does not indicate the location of the bomb nor the time of detonation, the person receiving the call should ask the caller to provide this information.

c. It may be advisable to inform the caller that the building is occupied and the detonation of a bomb would result in death or serious injury to many innocent people.

d. Pay particular attention for any strange or peculiar background noises such as: motors running, background music (type), and any other noises that might give a remote clue as to the caller's location.

e. Listen closely to the voice (male or female), voice quality, accent, or speech impediment.

f. Immediately after the caller hangs up, contact the **SBCWD Operations and Maintenance Supervisor**, who will:
   1) Determine the action to be taken.
   2) Call 9-1-1 if deemed necessary.
   3) Notify SBCWD Dispatch.

4) Decide when to give an "all clear" for normal duty to resume.

g. If a suspicious package is found, **Do not touch**. It should be left for trained personnel to remove or disarm.

h. If a search is conducted for a bomb, do not use radios or cellular phones to transmit. The radio waves and/or cellular signals could cause detonation of an electric initiator such as a blasting cap.

E. **Landslides**

Any landslide that could move into the outlet works or spillway area or into the reservoir rapidly displacing large volumes of water would be especially dangerous to the dam. Landslides or potential landslides into the downstream channel which may impound water should also be reported. All landslides should be reported through the SCCAO Emergency Official to the Regional Geologist (MP-221) for the "Landslide Register" and a copy sent to the Regional Facilities Engineering Branch (MP-430).

1. For landslides occurring in the area, do the following:

a. Determine the:

1) Size.

2) Possible Cause.

3) Degree of effect on operation.

4) Probability of additional movement of disturbed area or of other slide areas.

5) Development of new slides.

6) Any other facts believed to be pertinent.

b. Report findings to **SBCWD Operations and Maintenance Supervisor**, who will notify SBCWD Dispatch and the SCCAO Emergency Official.

2. For landslides occurring in the downstream channel, do the following:

a. Determine the:

1) Size (including percent across river channel).

2) Capability of immediately closing outlet works.

3) Other inflows.

4) Location in relationship to the toe of the dam and other appurtenant structures.

5) Availability or need for heavy equipment.

b. Report findings to SBCWD Operations and Maintenance Supervisor, who will notify SBCWD Dispatch and the SCCAO Emergency Official.

F. **Fires**

For all types of fires, the employee who discovers the fire shall:

1. **Dial 9-1-1** and report location, extent and type of fire.
2. Report information to **SBCWD Operations and Maintenance Supervisor**, who will:
   a. Have an SBCWD employee meet the Fire Department and lead them to the fire.
   b. Notify SBCWD Dispatch.
   c. Contact the SCCAO Emergency Official.
3. Remain at the site to assist the Fire Department if needed.

G. **Fish and Wildlife Losses**

SCCAO employees who notice abnormal fish or wildlife losses should relay any pertinent information to the **SBCWD Operations and Maintenance Supervisor**, who will:

1. Notify the California Department of Fish and Game.
2. Notify SBCWD Dispatch.
3. Notify SCCAO Emergency Official.

H. **Injury and Property Damage**

SBCWD Employees who witness a serious incident requiring medical attention or assistance from law enforcement agencies will **immediately contact 9-1-1**. Employees will then inform their supervisor of the incident.

The supervisor will notify the **SBCWD Operations and Maintenance Supervisor** who will:

1. Notify SBCWD Dispatch.
2. Notify SCCAO Emergency Official.

I. **Criminal Actions**

SBCWD employees who come across a serious criminal action in progress should **immediately contact 9-1-1**. All criminal actions should be reported to your **supervisor** who will notify the **SBCWD Operations and Maintenance Supervisor** who will:

1. Notify SBCWD Dispatch.
2. Notify SCCAO Emergency Official.

EMERGENCY ACTION PLAN - EMERGENCY CHECKLISTS FOR SAN JUSTO DAM

TABLE OF CONTENTS

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I. EMERGENCY EVENT CHECKLISTS

The following pages contain checklists that are to be used in the following emergency situations:

A. Hydrologic Events

B. Seismic Events

C. Oil and Hazardous Substance Spills

D. Other Hazards

1. Abnormal Seepage
2. Abnormal Instrumentation Readings
3. Slumping, Cracking, or Settlement
4. Failure of Operating Equipment or Appurtenances
5. Flow/Equipment Alarms
6. Criminal Acts, Sabotage, Vandalism

These checklists have been generated for the various positions within the Incident Command System and should be kept up-to-date and revised as necessary.

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San Justo Dam
EMERGENCY EVENT CHECKLIST

MID-PACIFIC REGIONAL OFFICE (MPRO)

SEISMIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the Hydrologic Events Section of the Emergency Action Plan.

	1.	Follow the procedures outlined in the "Notification Procedures for Oncall Earthquake Personnel Manual."
	2.	Run the QUAKE program and evaluate the earthquake.
	3.	If the earthquake is greater than 3.7 in magnitude and the QUAKE program indicates that San Justo Dam and Dike are within a 0.05g radius of the epicenter, then notify the San Benito County Water District Earthquake Contact (will be the Operations and Maintenance Supervisor or the Oncall Supervisor - pager number (831) 638-8566) that appears on the computer generated printout and have them inspect the facilities for any visible signs of damage. Record Earthquake Contact's name and phone number(s): _____

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San Justo Dam
EMERGENCY EVENT CHECKLIST

CENTRAL VALLEY CONTROL CENTER (CVCC)

SEISMIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the Seismic Events Section of the Emergency Action Plan.

	1.	Follow the procedures outlined in the "Notification Procedures for Oncall Earthquake Personnel Manual."
	2.	Run the QUAKE program and evaluate the earthquake.
	3.	If the earthquake is greater than 3.7 in magnitude and the QUAKE program indicates that San Justo Dam and Dike are within a 0.05g radius of the epicenter, notify the Mid-Pacific Regional Office (MPRO) On call Earthquake Contact to have them notify the San Benito County Water District Earthquake Contact (will be the Operations and Maintenance Supervisor or the Oncall Supervisor - pager number (831) 638-8566) that appears on the computer generated printout. Record Earthquake Contact's name and phone number(s): _____

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San Justo Dam
EMERGENCY EVENT CHECKLIST

SBCWD OPERATIONS AND MAINTENANCE SUPERVISOR

HYDROLOGIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the Hydrologic Events Section of the Emergency Action Plan.

	1.	For HIGH RESERVOIR CONDITIONS, instruct Inspections Team Leader to commence inspections of the dam. Record Inspection Team Leader's name and phone number(s): _____
	2.	Evaluate the situation and declare the appropriate Response Level based on the initiating conditions (p. HAZ-1) and the findings from the Inspections Team Leader.
	3.	Implement the Incident Command System (ICS) and appoint the Incident Commander (IC), if necessary. Record IC's name, office code, and phone number: _____
	4.	Notify Data Processing Supervisor at (831) 638-8510, pager) or, after normal operating hours by calling (831) 637-0107.
	5.	Complete the incident report.

Note: The SBCWD Operations and Maintenance Supervisor will perform the duties of Incident Commander until such time as the role of Incident Commander is assumed by other Reclamation personnel.

EMERGENCY EVENT/UNUSUAL OCCURRENCE REPORT

For use when reporting emergencies or unusual occurrences **other than** earthquakes, oil and hazardous substance spills, and bomb threats. For any of the three aforementioned emergencies, use the appropriate report form. Because this is a general form, there will be sections that do not pertain to the emergency. Only fill out those sections that are applicable to the emergency.

Date: _____ Time: _____

Location: _____

Brief Description of Event: **(Include caller's name and phone number)** _____

_____

_____

_____

_____

Pertinent Data

Size of Affected Area: _____

Extent of Damage: _____

Affect on Operations: _____

Possible Cause: _____

Rate of Discharge: _____

Appearance of Discharge: _____

Forebay Elevation: _____

Appearance of Forebay: _____

Forebay Rise Rate: _____ Tailbay Rise Rate: _____

Weather Conditions: _____

Injuries/Loss of Life: _____

Witnesses: _____

Other: _____

_____

_____

_____

San Justo Dam
EMERGENCY EVENT CHECKLIST

SBCWD OPERATIONS AND MAINTENANCE SUPERVISOR

SEISMIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the Seismic Events Section of the Emergency Action Plan.

	1. Notify the Inspection Team Leader that ground acceleration of 0.05g or greater has been detected at SAN JUSTO Dam and Dike due to an earthquake and to commence inspections of the dam and dike. Record Inspection Team Leader's name and phone number(s): _____
	2. If the report from the Inspection Team Leader indicates **any damage**, do the following: _____ a. Evaluate the situation and declare the appropriate Response Level based on the initiating conditions (p. HAZ-1). _____ b. Implement the Incident Command System and appoint the Incident Commander (IC). Record Incident Commander's name and phone number(s): _____ _____ c. Report back immediately to the Mid-Pacific Regional Office (MPRO) Oncall Earthquake Contact or to the Regional Office . . . . . (916) 978-5220 _____ d. Complete the incident report using the **Earthquake Damage Report** (on back side of this checklist).
	3. If the report from the Inspection Team Leader indicates **no damage**, then notify the Regional Office, MP-430 the next business day and give a "no damage" report . . . . . (916) 978-5220

EARTHQUAKE DAMAGE REPORT

This form will be used by the examiner of the facility and by the Chief, Water O&M Branch, MP-430, when receiving a report of earthquake damage. To make a "no damage" earthquake report call (916) 979-2423. If damage has occurred or an emergency exists, call (916) 988-8114.

Date: _____ Time: _____
Person Reporting Information: _____
Representing: _____
Feature Affected: _____

Description of Earthquake Effects
On Structural Conditions

Type of Damage (slides, subsidence, etc.): _____
_____
Location: _____
Severity: _____
Movement (direction, magnitude): _____
Deflection or Settlement Readings: _____
Effect on Adjoining Structures: _____
Other: _____

On Hydraulic Conditions

Type of Effect (leakage or stoppage): _____
_____
Location: _____
Size of Affected Areas: _____
Estimated Flow or Change in Flow: _____
Nature of Discharge (incl. sediment): _____
Wave Action Damage: _____
Other: _____

Site Conditions

Water Surface Elevation: _____ Freeboard: _____
Tailwater Elevation: _____
Weather: _____
Other: _____

Action

Changes in Operation: _____
Emergency Repairs: _____
Surveillance: _____
Regional Assistance Needed (examination): _____
Public Information Provided: _____

Note: To facilitate analysis of conditions, a map should be prepared showing the location and extent of all damaged areas such as subsidence areas, seeped areas, springs, and any other pertinent data, including the dates of readings and site conditions at the time of observation. This map should be revised periodically to show changing conditions until they are stabilized.

San Justo Dam
EMERGENCY EVENT CHECKLIST

SBCWD Operations and Maintenance Supervisor

OIL & HAZARDOUS SUBSTANCE SPILLS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the Oil/HAZMAT Events Section of the Emergency Action Plan.

	1.	Record spill data on the **Oil and Hazardous Spill Report** (on back side of this checklist).
	2.	Based on the initiating conditions for Spills (p. HAZ-2), declare the appropriate response level and implement the Incident Command System. Record Incident Commander's name and phone number(s): _____
	3.	Make the following notifications: _____ a. NRC/EPA ..... (800) 424-8802 _____ b. California Dept. of Fish and Game (spills on water) ..... (800) 852-7550 _____ c. California Highway Patrol (spills on land) ..... 911 _____ d. San Benito County OES(..... 831) 636-4100 _____ e. California State OES ..... (916) 262-1621 _____ f. California Dept. of Health Services - Daryl Noel ..... (916) 229-3148 (916) 933-7848 (home) _____ g. SBCWD Operations and Maintenance Supervisor ..... (831) 637-8218 _____ h. USBR-Tracy Office Emergency Official ..... (209) 836-6201 (primary) (209) 833-2617 (secondary)
	4.	If the clean-up of the spill can not be handled by SBCWD personnel, contact the Bureau of Reclamation, Tracy Office Emergency Official and request assistance.

ROUTE TO MP-152

OIL AND HAZARDOUS SPILL REPORT

For use when reporting or receiving reports of discharge of a hazardous substance that could enter into inland waters. Upon occurrence or discovery of a spill, all available information should be reported to the following:

Date: _____ Time: _____

1. Person reporting spill: _____
   (Office) (Phone Number)
2. Date and time the spill: ( ) was discovered ( ) occurred: _____
3. Location of spill: _____
   (Facility) (County)
4. Type of spill material and severity: _____
5. Estimated volume: _____
6. Source of spill: _____
7. Cause of the spill: _____
8. Material released to: ( ) air ( ) ground ( ) water ( ) subsurface
9. Weather conditions: _____
10. Responsible polluter: _____
11. Address and telephone number: _____
12. Carrier identification: _____
13. Cleanup actions being taken: _____
    _____
14. Possible resources affected by spill: _____
15. Number and type of injuries or fatalities: _____
16. Have evacuations occurred? _____
17. Other agencies notified: _____
    _____
    _____
18. Additional information and comments: _____
    _____
    _____
    _____
19. Person receiving report: _____
    (Phone Number)

State Case No.:_____ Issued by: _____
NRC Case No.: _____ Issued by: _____

San Justo Dam
EMERGENCY EVENT CHECKLIST

INCIDENT COMMANDER (IC)

ALL EMERGENCY EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1.	Monitor the situation and update Response Levels as needed based on the initiating conditions (p. HAZ-1 to HAZ-5).
	2.	Notify by telephone and FAX the following of Response Level declaration and of any changes in Response Level: _____ a. Operations & Maintenance Supervisor ..... (831) 637-8218 _____ b. San Benito County OES ..... (831) 636-4100 _____ c. San Benito County OES FAX (Figure 5) ..... (831) 636-4104 _____ d. Santa Cruz County OES ..... (831) 471-1190 _____ e. Santa Cruz County OES FAX (Figure 5) ..... (831) 454-2710 _____ f. Monterey County OES ..... (831) 755-5010 _____ g. Monterey County OES FAX (Figure 5) ..... (831) 755-5004 _____ h. California State OES ..... (916) 262-1621 _____ i. National Weather Service ..... (831) 656-1717 _____ j. Tracy Office Emergency Official USBR ..... (209) 836-6201 or, (209) 833-2617 _____ k. Tracy Office FAX ..... (209) 836-6264
	3.	Appoint the following positions, as needed from San Benito County Water District or the Tracy Office USBR, and record names, office codes, and phone numbers of appointed personnel: a. Planning/Intelligence Officer _____ b. Operations Officer _____ c. Safety Officer _____ d. Public Information Officer _____ e. Logistics Officer _____ f. Finance Officer _____
	4.	Activate the Emergency Operations Center, if necessary.
	5.	Continue to monitor the situation and update the Response Level as needed.
	6.	Declare incident over when appropriate.

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San Justo Dam
EMERGENCY EVENT CHECKLIST

PLANNING / INTELLIGENCE OFFICER

ALL EMERGENCY EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1.	Develop an Incident Action Plan covering the next 8 - 24 hours, being sure to address the monitoring of the situation , reporting frequencies, collection of data, evaluation of data, equipment needs, staffing needs, etc.
	2.	Appoint the Inspections Team Leader and commence inspections of the dam, dike, and appurtenant structures, as necessary. Or, for a seismic event, coordinate with the Inspections Team Leader. Record Inspection Team Leader's name and phone number(s): _____
	3.	Maintain contact with the Incident Commander. Record Incident Commander's name and phone number(s): _____

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San Justo Dam
EMERGENCY EVENT CHECKLIST

OPERATIONS OFFICER

ALL EMERGENCY EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1. Appoint the Maintenance Crews Team Leader and assign tasks as necessary. Record Maintenance Crews Team Leader's name and phone number(s): _____
	2. Appoint the Facility Operations Team Leader and assign tasks as necessary. Record Facility Operations Team Leader's name and phone number(s): _____
	3. Maintain contact with the Incident Commander. Record Incident Commander's name and phone number(s): _____

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San Justo Dam
EMERGENCY EVENT CHECKLIST

INSPECTIONS TEAM LEADER

NON-FLOOD RELATED HYDROLOGIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1.	Evaluate the situation and begin inspections of the embankment dam and dike as per the following inspection checklists.
	2.	Report back to the Planning/Intelligence Officer with findings. Record Planning/Intelligence Officer's name and phone number(s): _____

SEISMIC EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1.	Evaluate the situation and begin inspections of the embankment dam, dike, and other appurtenant structures as per the following inspection checklists.
	2.	Report back to the Tracy Office Emergency Official (EO) with findings . . . (209) 836-6201 (primary) (209) 833-2617 (secondary)
	3.	Perform a follow-up inspection of the embankment dam and dike two weeks after the seismic event.

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INSPECTION CHECKLIST

SAN JUSTO Dam

Date: _____ Time: _____ Res. El: _____ Inspector: _____

CREST
Surface Cracking _____
Surface Settlement _____
Sloughing _____
Alignment _____

RESERVOIR
Whirlpools _____
Air Bubbles _____

UPSTREAM FACE
Displacement of Riprap _____
Sink holes _____
Slumping _____
Cracking _____
Arc-Shaped Cracks (Scarp) _____
Bulging _____

ABUTMENTS
Sink holes _____
Slumping _____
Cracking _____
Arc-Shaped Cracks (Scarp) _____
Bulging _____

ABUTMENT CONTACTS _____

DOWNSTREAM FACE _____

Special Concerns: _____

Notes: _____

INSPECTION CHECKLIST

Dike

Date: _____ Time: _____ Res. El: _____ Inspector: _____

CREST
Surface Cracking _____
Surface Settlement _____
Sloughing _____
Alignment _____

RESERVOIR
Whirlpools _____
Air Bubbles _____

UPSTREAM FACE
Displacement of Riprap _____
Sink holes _____
Slumping _____
Cracking _____
Arc-Shaped Cracks (Scarp) _____
Bulging _____

ABUTMENTS
Sink holes _____
Slumping _____
Cracking _____
Arc-Shaped Cracks (Scarp) _____
Bulging _____

ABUTMENT CONTACTS _____

DOWNSTREAM FACE _____

Special Concerns: _____

Notes: _____

San Justo Dam
EMERGENCY EVENT CHECKLIST

PUBLIC INFORMATION OFFICER (PIO)

ALL EMERGENCY EVENTS

✔ Please check off tasks as they are completed. More detailed information about these tasks is located in the specific Emergency Events Section of the Emergency Action Plan.

	1.	Identify Public Information Officer activities.
	2.	Establish Incident Information Center as required.
	3.	Report to the Joint Information Center as required.
	4.	Prepare Press Briefing
	5.	Collect and assemble incident information.
	6.	Provide liaison between media and incident personnel.
	7.	Respond to special requests for information.
	8.	Maintain and complete an incident report on the **Emergency Event/Unusual Occurrence Report** (on back side of this checklist).

EMERGENCY EVENT/UNUSUAL OCCURRENCE REPORT

For use when reporting emergencies or unusual occurrences **other than** earthquakes, oil and hazardous substance spills, and bomb threats. For any of the three aforementioned emergencies, use the appropriate report form. Because this is a general form, there will be sections that do not pertain to the emergency. Only fill out those sections that are applicable to the emergency.

Date: _____ Time: _____

Location: _____

Brief Description of Event: **(Include caller's name and phone number)** _____

_____

_____

_____

_____

Pertinent Data

Size of Affected Area: _____

Extent of Damage: _____

Affect on Operations: _____

Possible Cause: _____

Rate of Discharge: _____

Appearance of Discharge: _____

Forebay Elevation: _____

Appearance of Forebay: _____

Forebay Rise Rate: _____ Tailbay Rise Rate: _____

Weather Conditions: _____

Injuries/Loss of Life: _____

Witnesses: _____

Other: _____

_____

_____

_____

SAN JUSTO DAM EMERGENCY ACTION PLAN - COMMUNICATIONS DIRECTORY
SOUTH CENTRAL CALIFORNIA AREA OFFICE

TABLE OF CONTENTS

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SAN JUSTO DAM PERSONNEL

San Benito County Water District (Area code 831 unless otherwise noted)

Title	Name	Cell	Home Phone
District Manager/Engineer	Jeff Cattaneo	831-630-3972	831-634-1570
Deputy District Engineer	Dale Rosskamp	831-902-7303	831-635-0519
Operations and Maintenance Supervisor	Dave Meraz	831-524-3337	661-810-2217
Information/Systems Controls Supervisor	Jeff Ray	831-902-7300	831-637-0107
Electronic Technician	David Dungan	831-902-7306	831-636-3633
Manager of Administration & Finance	Sara Singleton		831-637-8567
Accountant	Natalie Sullivan		831-636-5388
Water Office Supervisor	Barbara Mirrione		
Water Programmer II	Anne Stull		
Office Specialist II	Kathy Hill		
Office Specialist II	Barbara Mauro		
Office Specialist II - Accounting	Monica Sanders		
Water Conservation Program Specialist	Shawn Novack		
Maintenance I	Leo Vasquez		
Engineer Technician	Ernesto Jimenez		
Human Resources/Administrative Analyst	Robin Call		
Water Distribution Maintenance II	Bill Caporgno	831-902-7293	831-524-6675
Water Resources Technician I	Michael Craig	831-902-7304	831-637-6682
Water Distribution Maintenance II	Greig Bryan		
Water Distribution Maintenance II	Bazilio Hernandez	831-902-7288	831-637-6319
Water Distribution Maintenance II	Mike Razo	831-902-0488	831-638-1771
Water Programmer I	Diane Wilks		
On-Call Supervisor		831-902-7583	
On-Call Personnel		831-902-7584	

San Benito County	Office
Sheriff's Department	9-1-1
Office of Emergency Services	9-1-1
Fire Department	9-1-1
Environmental Health	831-636-4035
Health Department	831-637-5367

State of California	Office
CA Department of Forestry - Hollister	831-637-4475
CA Department of Forestry - Dispatch	831-647-6223
Central Coast Water Quality Control Board	805-549-3147
Department of Health	831-655-6939
Department of Fish & Game	831-649-2870
Department of Fish & Game-24 hour number	831-649-2801
CA Highway Patrol - Gilroy Office	408-848-2324

Federal	Office
Federal Bureau of Investigation-San Francisco	415-553-7400
Environmental Protection Agency	916-445-3846
National Weather Service - 24 hour number	831-656-1717
U.S. Fish & Wildlife Service - Ventura	805-644-1766
Bureau of Land Management - Hollister	831-630-5000

SAN JUSTO DAM

Central Valley Project, California

38° 43' - 120° 34'

A. **OPERATING AGENCY**

San Benito County Water District

Normal Communications:

Phone: SBCWD Office	831-637-8218	

Emergency Backup Communications:

Dale Rosskamp	831-902-7303	831-635-0519

Information/Systems Control Supervisor

Jeff Ray	831-902-7300	831-637-0107

District Manager/ Engineer

Jeff Cattaneo	831-630-3972	831-634-1570

On-call Personnel	831-902-7584
Radio: WNAF 417	156.120 MHZ

B. **DAM OPERATOR**

Normal Communications

Phone: SBCWD Office	831-637-8218

Emergency Backup Communications

On-call Suervisor	831-902-7583

C. **Route to Damsite**

From Hollister, California, proceed 3.4 miles West on State Highway 156, turn left on Union Road and proceed approximately 1.6 miles to the Dam Access Road. Turn right approximately 0.5 miles to the dam.

D. **Nearest Reclamation Supervisory Office Having Jurisdiction**

Normal Reclamation Communications

Tracy Office

Robert Edwards, Chief, Engineering O & M Division

16650 Kelso Road

Byron, CA 94514-1909 phone:209-836-6201 f: 209-836-6264

Emergency Communications

Elizabeth Partridge	home: 209-526-1471
Warren Feng	home: 510-651-5210
Joseph Pennino	home: 925-432-4433
Robert Edwards	home: 916-683-3005
Central Valley Control Center	916-979-3004

E. **Nearest Law Enforcement Office**

San Benito County Sheriff 9-1-1

SAN JUSTO DAM PERSONNEL

San Benito County Water District (Area code 831 unless otherwise noted)

Title	Name	Cell	Home Phone
District Manager/Engineer	Jeff Cattaneo	831-630-3972	831-634-1570
Deputy District Engineer	Dale Rosskamp	831-902-7303	831-635-0519
Operations and Maintenance Supervisor	Dave Meraz	831-524-3337	661-810-2217
Information/Systems Controls Supervisor	Jeff Ray	831-902-7300	831-637-0107
Electronic Technician	David Dungan	831-902-7306	831-636-3633
Manager of Administration & Finance	Sara Singleton		831-637-8567
Accountant	Natalie Sullivan		831-636-5388
Water Office Supervisor	Barbara Mirrione		
Water Programmer II	Anne Stull		
Office Specialist II	Kathy Hill		
Office Specialist II	Barbara Mauro		
Office Specialist II - Accounting	Monica Sanders		
Water Conservation Program Specialist	Shawn Novack		
Maintenance I	Leo Vasquez		
Engineer Technician	Ernesto Jimenez		
Human Resources/Administrative Analyst	Robin Call		
Water Distribution Maintenance II	Bill Caporgno	831-902-7293	831-524-6675
Water Resources Technician I	Michael Craig	831-902-7304	831-637-6682
Water Distribution Maintenance II	Greig Bryan		
Water Distribution Maintenance II	Bazilio Hernandez	831-902-7288	831-637-6319
Water Distribution Maintenance II	Mike Razo	831-902-0488	831-638-1771
Water Programmer I	Diane Wilks		
On-Call Supervisor		831-902-7583	
On-Call Personnel		831-902-7584	

San Benito County	Office
Sheriff's Department	9-1-1
Office of Emergency Services	9-1-1
Fire Department	9-1-1
Environmental Health	831-636-4035
Health Department	831-637-5367

State of California	Office
CA Department of Forestry - Hollister	831-637-4475
CA Department of Forestry - Dispatch	831-647-6223
Central Coast Water Quality Control Board	805-549-3147
Department of Health	831-655-6939
Department of Fish & Game	831-649-2870
Department of Fish & Game-24 hour number	831-649-2801
CA Highway Patrol - Gilroy Office	408-848-2324

Federal	Office
Federal Bureau of Investigation-San Francisco	415-553-7400
Environmental Protection Agency	916-445-3846
National Weather Service - 24 hour number	831-656-1717
U.S. Fish & Wildlife Service - Ventura	805-644-1766
Bureau of Land Management - Hollister	831-630-5000

SAN JUSTO DAM
Central Valley Project, California
38° 43' - 120° 34'

A. **OPERATING AGENCY**
San Benito County Water District

O+M Manager Dave Meraz
Cell - 661-810-2217

Normal Communications:
Phone: SBCWD Office (831) 637-8218

Emergency Backup Communications:
Deputy District Engineer
~~Vacant~~ Dale Rasmussen Pager/Cell No.: 831-524-5309 Home Phone: (831) ~~634-157~~0 635-0519
Information/Control Systems Supervisor
Jeff Ray Pager/Cell No.: (831) 638-8510 Home Phone: (831) 637-0107

District Manager/Engineer
~~John S. Gregg~~ Jeff Cattaneo Pager/Cell No.: (831) ~~638-5454~~ 630-3972 Home Phone: (831) ~~637-8983~~ 634-1570
On-call Personnel Pager/Cell No.: (831) 638-8566

Radio: WNAF 417 156.120 MHZ

B. **DAM OPERATOR**

Normal Communications:
Phone: SBCWD Office (831) 637-8218

Emergency Backup Communications:

On-Call Supervisor, ~~Pager~~ No.: (831) ~~638-8511~~

C. **ROUTE TO DAMSITE**
From Hollister, California, proceed 3.4 miles west on State Highway 156, turn left on Union Road and proceed approximately 1.6 miles to the Dam Access Road. Turn right approximately 0.5 miles to the dam.

D. **NEAREST RECLAMATION SUPERVISORY OFFICE HAVING JURISDICTION**

Normal Reclamation Communications

Tracy Office
Robert Edwards, Chief, Engineering O&M Division
16650 Kelso Road
Byron, CA 94514-1909
Phone: Office (209) 836-6201 Ext. 0
FAX (209) 836-6264

Emergency Communications

Elizabeth Partridge	(209) 526-1471 (Home)
Warren Feng	(510) 651-5210 (Home)
Joseph Pennino	(925) 432-4433 (Home)
Robert Edwards	(916) 683-3005 (Home)
Central Valley Control Center	(916) 979-3004

E. **NEAREST LAW ENFORCEMENT OFFICE**
SAN BENITO COUNTY Sheriff
Phone: - (use 911 for emergencies)

SAN JUSTO DAM
Central Valley Project, California
38° 43' - 120° 34'

A. **OPERATING AGENCY**
San Benito County Water District

Normal Communications:
Phone: SBCWD Office (831) 637-8218

Emergency Backup Communications:
Deputy District Engineer
Vacant Pager/Cell No.: Home Phone: (831) 634-1570

Information/Control Systems Supervisor
Jeff Ray Pager/Cell No.: (831) 638-8510 Home Phone: (831) 637-0107

District Manager/Engineer
John S. Gregg Pager/Cell No.: (831) 638-5454 Home Phone: (831) 637-8983

On-call Personnel Pager/Cell No.: (831) 638-8566

Radio: WNAF 417 156.120 MHZ

B. **DAM OPERATOR**

Normal Communications:
Phone: SBCWD Office (831) 637-8218

Emergency Backup Communications:

On-Call Supervisor, Pager No.: (831) 638-8511

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16650 Kelso Road
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Phone: Office (209) 836-6201 Ext. 0
FAX (209) 836-6264

Emergency Communications

Elizabeth Partridge	(209) 526-1471 (Home)
Warren Feng	(510) 651-5210 (Home)
Joseph Pennino	(925) 432-4433 (Home)
Robert Edwards	(916) 683-3005 (Home)
Central Valley Control Center	(916) 979-3004

E. **NEAREST LAW ENFORCEMENT OFFICE**
SAN BENITO COUNTY Sheriff
Phone: - (use 911 for emergencies)

SAN JUSTO DAM PERSONNEL

SAN BENITO COUNTY WATER DISTRICT (Area code 831 unless otherwise noted)

Title	Name	Home Nb	Cell Nb	Pager Nb
District Manager/Engineer	John S. Gregg	637-8983	831-801-4244	
Deputy District Engineer	Vacant			
Operation and Maintenance Supervisor	Dave Meraz		661-810-2217	
Information/Controls Systems Supervisor	Jeff Ray	637-0107	831-801-8783	
Electrical Technician	David Dungan	636-3633		
Administrative Services Officer	Shelley Giancola	636-8560	831-902-7709	
Accountant	Natalie Sulivan	636-5388		
Office Specialist II	Kathy Hill			
Office Specialist II	Barbara Mauro			
Office Specialist I	Monica Sanders			
Water Conservation Specialist	Shawn Novack			
Water Conservation Assistant	Leo Vasquez			
Irrigation Engineer	Mica Nitschke			
Water Resources Technician	Casey Meusel			
Groundwater Technician	Vacant			
Water Distribution/Maintenance III	Bill Caporgno	637-3803		
Water Distribution/Maintenance I	Micheal Craig	637-6682		
Maintenance III	Greig Bryan	389-4549		
Maintenance II	Bazilio Hernandez	637-6319		
Maintenance I	Mike Razo		831-801-6771	
Water Office Supervisor	Barbara Mirrione			
Water Programmer II	Anne Stull			
ON-CALL SUPERVISOR				831-638-8511
-CALL PERSONNEL				831-638-8566

SAN BENITO COUNTY

SAN BENITO COUNTY Sheriff's Department	911
Office of Emergency Services	911
Fire Department	911
Environmental Health	636-4035
Health Department	637-5367

STATE OF CALIFORNIA

California Department of Forestry - Hollister	637-4475
California Department of Forestry - Dispatch	647-6223
Central Coast Water Quality Control Board	805-549-3147
Department of Health	655-6939
Department of Fish and Game	649-2870
Department of Fish and Game – 24-hour number	649-2801
California Highway Patrol – Gilroy Office	408-848-2324

FEDERAL

Federal Bureau of Investigation – San Francisco	415-553-7400
Environmental Protection Agency	916-445-3846
National Weather Service – 24 hour number	656-1717
U.S. Fish and Wildlife Service - Ventura	805-644-1766
Bureau of Land Management – Hollister	630-5000

SOUTH CENTRAL CALIFORNIA AREA OFFICE
Tracy Office

A. **NORMAL COMMUNICATIONS**

Tracy Office
Robert Edwards, Chief, Engineering O&M Division
16650 Kelso Road
Byron, CA 94514-1909
Phone: Office (209) 836-6201
FAX (209) 836-6264

B. **EMERGENCY COMMUNICATIONS**

Elizabeth Partridge	209-526-1471 (Home)
Warren Feng	510-651-5210 (Home)
Joseph Pennino	925-432-4433 (Home)
Robert Edwards	916-683-3005 (Home)
Central Valley Control Center (24 hours)	916- 979-3004

MID-PACIFIC REGIONAL OFFICE
2800 Cottage Way
Sacramento, CA 95825
(all numbers are within the 916 area code, unless otherwise noted)

Individual	Title	Work Phone	Home Phone
Kirk Rodgers	Regional Director	978-5000	624-2874
John Davis	Deputy Regional Director	978-5013	786-7155
Frank Michny	Assistant Regional Director, Technical Services	978-5012	633-4538
Katherine Thompson	Assistant Regional Director, Support Services	978-5011	933-3181
Ron Milligan	Operations Manager	979-2180	663-2912
Richard J. Woodley	Regional Resources Manager	978-5201	685-9558
Richard Kristof	Chief, Facilities Engineering Branch	978-5220	422-7183
Monte Bowman	Regional Safety Officer	978-5576	225-5307
Roger Pitts	Regional Security Officer	978-5577	543-3167
Anna Sandoval-Ryan	Regional Law Enforcement Officer	978-5600	489-4427

Central Valley Control Center (CVCC)	(24-hours) (916) 979-3004
REO Cellular Phone "A"	996-6575
REO Cellular Phone "B"	996-4144

Note: The Central Valley Control Center will contact the Regional Emergency Official (REO) on-duty who will coordinate response to the emergency and contact appropriate officials at the Denver Office and in the Commissioner's Office via the TSC Duty Officer.

IF the CVCC Controllers cannot be reached, Contact the REOs using the cellular phone numbers listed above.

MID-PACIFIC REGIONAL OFFICE
2800 Cottage Way
Sacramento, CA 95825
(all numbers are within the 916 area code, unless otherwise noted)

Individual	Title	Work Phone	Home Phone
Kirk Rodgers	Regional Director	978-5000	624-2874
John Davis	Deputy Regional Director	978-5013	786-7155
Frank Michny	Assistant Regional Director, Technical Services	978-5012	633-4538
Katherine Thompson	Assistant Regional Director, Support Services	978-5011	933-3181
Ron Milligan	Operations Manager	979-2180	663-2912
Richard J. Woodley	Regional Resources Manager	978-5201	685-9558
Richard Kristof	Chief, Facilities Engineering Branch	978-5220	422-7183
Monte Bowman	Regional Safety Officer	978-5576	225-5307
Roger Pitts	Regional Security Officer	978-5577	543-3167
Anna Sandoval-Ryan	Regional Law Enforcement Officer	978-5600	489-4427

Central Valley Control Center (CVCC)	(24-hours) (916) 979-3004
REO Cellular Phone "A"	996-6575
REO Cellular Phone "B"	996-4144

Note: The Central Valley Control Center will contact the Regional Emergency Official (REO) on-duty who will coordinate response to the emergency and contact appropriate officials at the Denver Office and in the Commissioner's Office via the TSC Duty Officer.

IF the CVCC Controllers cannot be reached, Contact the REOs using the cellular phone numbers listed above.

CENTRAL VALLEY CONTROL CENTER (CVCC)

3310 El Camino Avenue
Sacramento, CA 95825
(all numbers are within the 916 area code, unless otherwise noted)

Authorized Supervisors

Mike McKay	Team Leader, Hydro System Controller
Tom Ashley	Hydro System Controller
Paul Beitz	Hydro System Controller
Jack Bell	Hydro System Controller
Carl Blackburn	Hydro System Controller
Danny Corn	Hydro System Controller
Corey Danson	Hydro System Controller
Betty Ingram	Relief, Hydro System Controller
Richard Surber	Hydro System Controller
Ken Wakelee	Hydro System Controller
Terry Wilks	Hydro System Controller
Bruce Wright	Relief, Hydro System Controller

Control Center	979-3002, 979-3003, 979-3004, 979-3007
Controller Supervisor	979-3005
Fax Machine	979-3080

Note: The System Controller in CVCC will contact the Regional Emergency Official (REO) on-duty who will coordinate responses to the emergency and contact the appropriate officials.

CENTRAL VALLEY OPERATIONS OFFICE (CVO)

CVO-400: Water Operations Division
3310 El Camino Avenue
Sacramento, CA 95825

A team member of the Central Valley Operations Office, Water Operations Division is oncall 24 hours a day, 7 days a week. To reach this party, contact the Central Valley Control Center at: **(916) 979-3004**.

RECLAMATION'S DUTY OFFICER

clamation's Duty Officer may be contacted by following this procedure:

1. Call the **Primary Duty Officer** at the following cellular phone number: **(303) 748-7220.** Be prepared to provide the following information:

   a. Name and title of person making the report.

   b. Time and date of incident.

   c. Type of incident and brief description of what happened.

   d. Location of incident, including project name, if appropriate.

   e. Current status of incident and what agencies/organizations have been notified/involved.

   f. Person and means of contact for additional information/status reports.

2. If the Duty Officer does not answer immediately, leave a detailed message by following the instructions provided by the phone's message system. Include a name and phone number where you can be reached.

3. If the Duty Officer does not return the call, or if a response is required in less than 15 minutes, call the **backup Duty Officer** at **(303) 748-7221.**

4. If the backup Duty Officer does not answer, leave another message. The Duty Officer and/or the backup may not be in a position to respond immediately, but one of them should return the call within 15 minutes.

5. If repeated efforts to contact the Primary and Backup Duty Officers are unsuccessful, notify both of the following, in order:

   a. Commissioner's Office:
   Jack Brynda (202) 513-0677 (Work)
   (202) 264-9090 (Home)
   (202) 302-7608 (Cell)

   * If Jack Brynda is unable to be reached, contact either Larry Todd at (202) 210-7588 or Jack Garner at (303) 517-9107 directly.

   b. DOI Watch Office: (202) 208-4108 or toll free (877) 246-1373 (24/7)

SAN JUSTO DAM
EMERGENCY ACTION PLAN

FIGURES

EMERGENCY EVENT/UNUSUAL OCCURRENCE REPORT

For use when reporting emergencies or unusual occurrences **other than** earthquakes, oil and hazardous substance spills, and bomb threats. For any of the three aforementioned emergencies, use the appropriate report form. Because this is a general form, there will be sections that do not pertain to the emergency. Only fill out those sections that are applicable to the emergency.

Date: _____ Time: _____

Location: _____

Brief Description of Event: **(Include caller's name and phone number)** _____

_____

_____

_____

_____

Pertinent Data

Size of Affected Area: _____

Extent of Damage: _____

Affect on Operations: _____

Possible Cause: _____

Rate of Discharge: _____

Appearance of Discharge: _____

Forebay Elevation: _____

Appearance of Forebay: _____

Forebay Rise Rate: _____ Tailbay Rise Rate: _____

Weather Conditions: _____

Injuries/Loss of Life: _____

Witnesses: _____

Other: _____

_____

_____

_____

FIGURE 1

EARTHQUAKE DAMAGE REPORT

This form will be used by the examiner of the facility and by the Chief, Water O&M Branch, MP-430, when receiving a report of earthquake damage. To make a "no damage" earthquake report call (916) 979-2423. If damage has occurred or an emergency exists, call (916) 988-8114.

Date: _____ Time: _____

Person Reporting Information: _____

Representing: _____

Feature Affected: _____

Description of Earthquake Effects*

On Structural Conditions

Type of Damage (slides, subsidence, etc.): _____

_____

Location: _____

Severity: _____

Movement (direction, magnitude): _____

Deflection or Settlement Readings: _____

Effect on Adjoining Structures: _____

Other: _____

On Hydraulic Conditions

Type of Effect (leakage or stoppage): _____

_____

Location: _____

Size of Affected Areas: _____

Estimated Flow or Change in Flow: _____

Nature of Discharge (incl. sediment): _____

FIGURE 2

ROUTE TO MP-152

OIL AND HAZARDOUS SPILL REPORT

For use when reporting or receiving reports of discharge of a hazardous substance that could enter into inland waters. Upon occurrence or discovery of a spill, all available information should be reported to the following:

California Office of Emergency Services, Nevada Division of Emergency Management, or Oregon Department of Environmental Quality
California Department of Fish and Game (for spills on water)
California (or Nevada) Highway Patrol (for spills on land)
Mid-Pacific Regional Office
County Office of Emergency Services or Local Fire Department
National Response Center (NRC)/U.S. Environmental Protection Agency (EPA)

Date: _____ Time: _____

1. Person reporting spill: _____
(Office) (Phone Number)

2. Date and time the spill: ( ) was discovered ( ) occurred: _____

3. Location of spill: _____
(Facility) (County)

4. Type of spill material and severity: _____

5. Estimated volume: _____

6. Source of spill: _____

7. Cause of the spill: _____

8. Material released to: ( ) air ( ) ground ( ) water ( ) subsurface

9. Weather conditions: _____

10. Responsible polluter: _____

11. Address and telephone number: _____

12. Carrier identification: _____

13. Cleanup actions being taken: _____
_____

BOMB THREAT

Place this card under your telephone

QUESTIONS TO ASK:

1. When is bomb going to explode? _____
   _____
2. Where is it right now? _____
   _____
3. What does it look like? _____
   _____
4. What kind of bomb is it? _____
   _____
5. What will cause it to explode? _____
   _____
6. Did you place the bomb? _____
   _____
7. Why? _____
   _____
8. What is your address? _____
   _____
9. What is your name? _____
   _____

EXACT WORDING OF THE THREAT:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Sex of Caller: M or F Race: _____

Age: ____ Length of call: _____

Number at which call is received:

_____

Time: _____ Date: ____/____/____

CALLER'S VOICE:

_____ Calm	_____ Nasal
_____ Angry	_____ Stutter
_____ Excited	_____ Lisp
_____ Slow	_____ Raspy
_____ Rapid	_____ Deep
_____ Soft	_____ Ragged
_____ Loud	_____ Clearing throat
_____ Laughter	_____ Deep breathing
_____ Crying	_____ Cracking voice
_____ Normal	_____ Disguised
_____ Distinct	_____ Accent
_____ Slurred	_____ Familiar

If voice is familiar, who did it sound like?

_____
_____

BACKGROUND SOUNDS:

_____ Street noises	_____ Factory machinery
_____ Motor	_____ Animal noises
_____ Crockery	_____ Clear
_____ Voices	_____ Static
_____ PA System	_____ Local
_____ Music	_____ Long distance
_____ House noises	Other _____
_____ Cellular	_____
_____ Office Machinery	_____

THREAT LANGUAGE:

_____ Well spoken (educated)	_____ Incoherent
_____ Foul	_____ Taped
_____ Irrational	_____ Message read by threat maker

REMARKS: _____
_____
_____
_____

Report call immediately to:

_____

Phone number _____

Date: __/__/__
Name: _____
Position: _____
Phone number: _____

FIGURE 5

EMERGENCY EVENT REPORT

FAX to: **San Benito County Office of Emergency Services 831-636-4104**
Santa Cruz County Office of Emergency Services 831-454-2710
Monterey County Office of Emergency Services 831-755-5004
Tracy Office - USBR 209-836-6264
immediately following phone call notification.

Date: _____ Time: _____

Location: ☐ San Justo Dam ☐ San Justo Dike ☐ Hollister Conduit ☐ Other

Caller's Name and Title: _____ Phone Number: _____

Brief Description of Event: _____

_____

_____

_____

_____

_____

_____

_____

Location of Affected Area: _____

Extent of Damage: _____

Affect on Operations: _____

Rate of Discharge: _____

Weather Conditions: _____

Injuries/Loss of Life: _____

Witnesses: _____

DECLARATION OF RESPONSE LEVEL

☐ **Response Level I** - Response Level I does not pose a risk at the dam, or to downstream populations at risk at the time of the observation.

☐ **Response Level II** - Response Level II means that the dam is currently stable, but may become unstable, or a hazardous event has progressed to a point that the populations at risk may be affected.

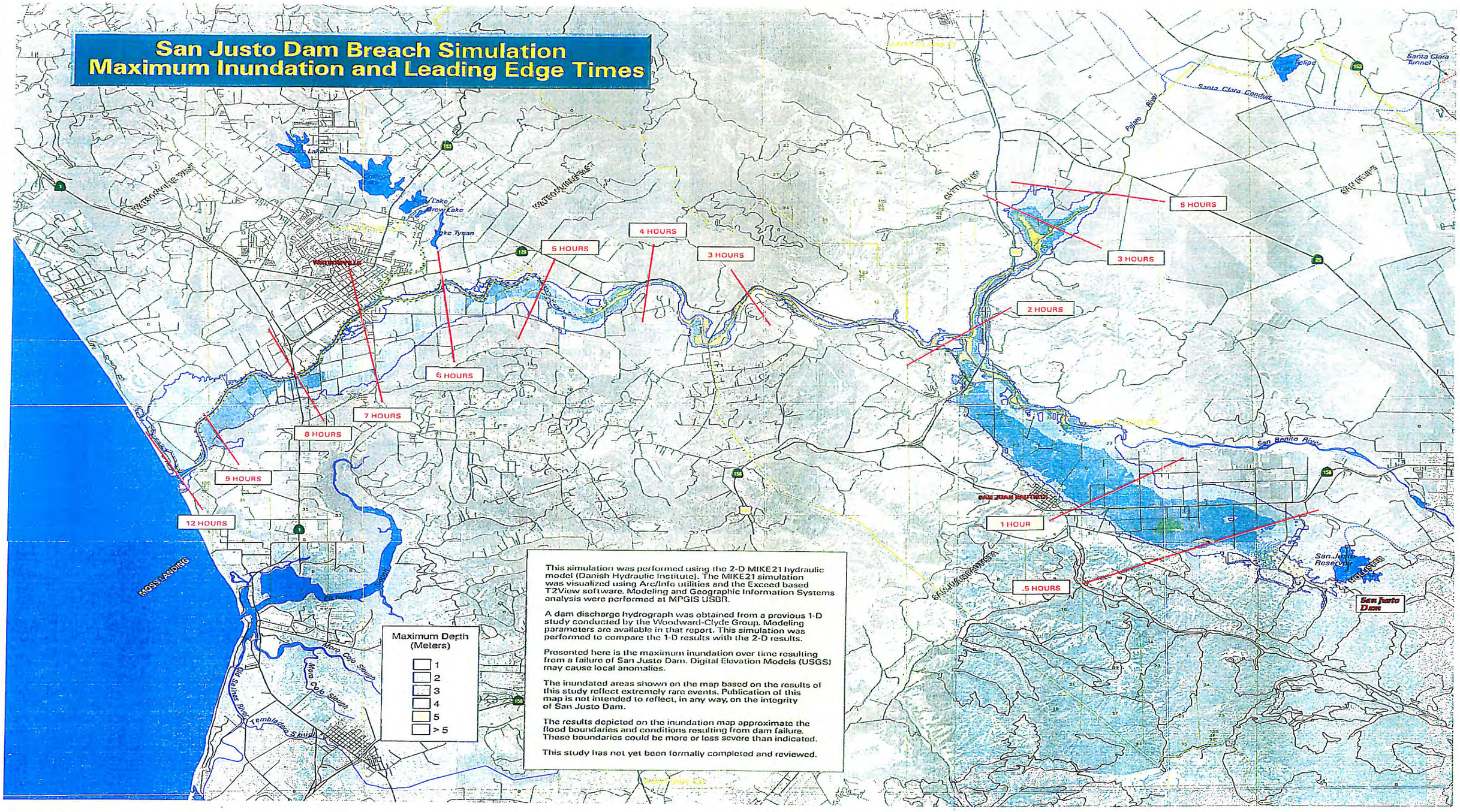
☐ **Response Level III** - Response Level III means that failure of the dam is imminent, or has failed, or a hazardous event will affect populations at risk.

FIGURE 5

FIGURE 6 - SAN JUSTO Dam Inundation Maps

FIGURE 6 - SAN JUSTO Dam Inundation Maps

San Justo Dam Breach Simulation
Maximum Inundation and Leading Edge Times



This simulation was performed using the 2-D MIKE21 hydraulic model (Danish Hydraulic Institute). The MIKE21 simulation was visualized using Arc/Info utilities and the Exceed based T2View software. Modeling and Geographic Information Systems analysis were performed at MPGIS USBR.

A dam discharge hydrograph was obtained from a previous 1-D study conducted by the Woodward-Clyde Group. Modeling parameters are available in that report. This simulation was performed to compare the 1-D results with the 2-D results.

Presented here is the maximum inundation over time resulting from a failure of San Justo Dam. Digital Elevation Models (USGS) may cause local anomalies.

The inundated areas shown on the map based on the results of this study reflect extremely rare events. Publication of this map is not intended to reflect, in any way, on the integrity of San Justo Dam.

The results depicted on the inundation map approximate the flood boundaries and conditions resulting from dam failure. These boundaries could be more or less severe than indicated.

This study has not yet been formally completed and reviewed.

Maximum Depth (Meters)

- 1
- 2
- 3
- 4
- 5
- > 5

- Highways
- 7.5 Min. Quads
- Roads
- Base Hydrography
- County Boundaries
- Levees

Time — Time to Leading Edge

Projection UTM-Zone 10
May,1999

BUREAU OF RECLAMATION

This map was generated by the Mid Pacific Region Geographic Information Systems Service Center

U.S. Bureau of Reclamation

Appendix I

SBCWD Ordinance No. 2015-04

RESOLUTION NO. 2015-04

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BENITO COUNTY WATER DISTRICT DECLARING A WATER SHORTAGE EMERGENCY AND IMPLEMENTING THE DISTRICT'S WATER SHORTAGE CONTINGENCY PLANS

The San Benito County Water District Board of Directors does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Board of Directors has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS,
The District is a water purveyor to the City of Hollister and the Sunnyslope County Water District for municipal purposes and to agricultural customers in San Benito County for irrigation purposes; and

WHEREAS,
Much of California experienced record dry conditions in January 2014 through January 2015, registering historic lows on the Northern Sierra, Upper Sacramento River and San Joaquin precipitation indices; and

WHEREAS,
The Governor of the State of California, in accordance with the authority vested in him by the state Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code proclaimed a State of Emergency to exist in the State of California due to current drought conditions; and

WHEREAS,
The District receives water from the Central Valley Project (CVP) as a federal contractor and it has been projected by the Bureau of Reclamation that south of the Delta contractors will receive a zero allocation for agricultural water users and Municipal and Industrial (M&I) customers will only receive 25% of historical allocations this year;

WHEREAS,
The demand for water service is not expected to lessen;

WHEREAS,
As stated in the Hollister Urban Area Water Management Plan 2010, when the combined total amount of water supply available to the District from all sources falls at or below the Stage II triggering levels, the District will declare a water

shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers without depleting the District's water supply to the extent that there may be insufficient water for human consumption, sanitation, fire protection, and environmental requirements. These conditions are likely to exist until precipitation and inflow dramatically increases.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED by the Board of Directors of the San Benito County Water District that a water shortage emergency condition exists that threatens the adequacy of the water supply, until the water supply is deemed adequate. The Board of Directors hereby implements the following interim Water Shortage Contingency Plan.

1. Interim Overuse Policies Applicable to Agricultural and M&I San Felipe Customers (Contract and Small Parcel): Overuse of water will result in a reduction of water available to other users who are entitled to their allocation and will require that the District locate and purchase water on the open market to compensate for the overused water. If an Agricultural or M&I customer overuses their applicable water allocation, the District shall discontinue water service by closing the customer's valve. The customer will be billed their applicable water rate and power rate for usage in addition to a minimum regulatory conservation charge up to $2,000/Acre-Foot). This charge is not imposed upon a parcel as an incident of property ownership but is a regulatory charge on water users who choose to overuse water allocations. The charge is intended to recover the District's costs for locating and purchasing water in the open market to back-fill the District's supplies so that other District customers' allocations will not be impacted.

2. Changing Account Service Type**:** Customers will not be allowed to change account service type. However, the District has the discretion to authorize changing of account service type when such is deemed justified under the circumstances.

3. Transfer of Water from Agricultural Contract Customers to Agricultural Small Parcel Customers: Agricultural Contract customers will be allowed to transfer 2014-2015 rescheduled water and 2015-2016 water to small parcel customers. Transfers will only be allowed to agricultural small parcel customers with permanent crops (e.g. trees and vines) who meet either of the following criteria: 1) parcels are designated "high boron", 2) customer has no access to well water.

4. Voluntary Conservation: While the conditions at present warrant a Stage II action, the District is initially implementing a Stage I voluntary conservation action with a Demand Reduction Goal of 20 percent. As the District continues to

monitor the water supply and conditions, the Board may choose to modify the action level.

5. Miscellaneous**:** Any and all provisions of the Water User's Handbook that are in conflict with the provisions of this Resolution are hereby suspended during the term of this interim Resolution. This Resolution shall be reviewed periodically but not later than the first meeting in March, 2016, to determine whether a water shortage condition and emergency exists and whether the policies set forth herein should continue in effect. In the event a court of law determines that any provision of this Resolution is invalid, such determination shall not invalidate the remaining provisions of this Resolution.

BE IT FURTHER RESOLVED that the Board of Directors shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

BE IT FURTHER RESOLVED that the President of the Board is authorized to sign this Resolution on behalf of this Board and District.

PASSED AND ADOPTED by the Board of Directors of the San Benito County Water District this 1st day of April, 2015, by the following vote:

AYES: DIRECTORS: Tonascia, Flores, Tobias, Bettencourt & Huenemann

NOES: DIRECTORS: None

ABSENT: DIRECTORS: None

ABSTAIN: DIRECTORS: None

/s/Joseph A. Tonascia
Joseph A. Tonascia
President

ATTEST: */s/Sara Singleton*
Sara Singleton
Assistant Manager

Appendix J
Water Conservation Plan

FILE: WATER CONSERVATION PLAN

ORDINANCE NO. 755

AN ORDINANCE OF THE CITY OF HOLLISTER PROHIBITING WATER WASTE AND REPEALING ORDINANCE NO. 752 OF THE CITY OF HOLLISTER

The City Council of the City of Hollister does ordain as follows:

Section 1: Definitions.

"Non-essential water use" is the indiscriminate or excessive dissipation of potable water which is unproductive or does not reasonably sustain economic benefits or life forms.

"Water waste" is the indiscriminate, unreasonable or excessive running or dissipation of potable water.

Section 2: Regulations. All water users shall immediately cease and desist from non-essential and wasteful use of water within the City. Non-essential and wasteful use of water includes, but is not limited to, the following:

(a) Indiscriminate or excessive water use which allows excess water to run to waste.

(b) Individual washing of cars, buildings or exterior surfaces without the use of a quick acting, positive shut-off nozzle.

(c) Use of potable water to irrigate turf, lawns, gardens or ornamental landscaping between 9:00 o'clock A.M. and 5:00 o'clock P.M. by means of other than drip irrigation or hand watering without quick acting, positive shut off nozzle.

(d) Use of potable water to wash sidewalks or roadways when sweeping provides a reasonable alternative.

(e) Water waste caused by easily correctable leaks, breaks or malfunctions after a reasonable time. Exceptions may be made by the Director of Public Services of the City of Hollister for corrections which are not feasible or practical.

(f) Use of potable water for construction purposes, such as consolidation of backfill, unless no other source of water or method can be used.

(g) Restaurant water service unless upon request.

(h) Hydrant flushing except when required for public health and safety.

The regulations contained in this Section shall not apply to City water allocated to the Sunnyslope County Water District.

Section 3: Administration. The Director of Public Services of the City of Hollister shall be responsible for the implementation of this Ordinance. The Director shall report to the City Council all factors which affect the implementation of this Ordinance and shall maintain a separate file of any requests for variances from the regulations set forth in this Ordinance.

Section 4: Variances. The regulations set forth in this Ordinance may be modified in writing by the Director of Public Services on written request therefore without formal application or hearing when the modification is consistent with the City's water conservation goals and where the strict application of the regulations of this Ordinance would cause health or safety problems or extreme hardship. In the event an application for modification is denied, the applicant may seek review by the City Council by filing a request for modification with the Clerk of the City of Hollister within ten (10) days of the date of written denial by the Director of Public Services.

Section 5: Violations. The Director of Public Services shall provide any water user who fails or refuses to comply with the provisions of this Ordinance with written notice of violation and an opportunity to correct such noncompliance. The notice of violation shall:

(a) Be posted at the site of the noncompliance or delivered to the water user.

(b) State the time, date and place of violation.

(c) State the general description of the violation.

(d) State the means to correct the violation.

(e) State the date by which correction is required.

(f) A copy of the notice shall be mailed to the address of the user.

In the event any water user shall fail or refuse to correct a violation within the time specified in the Notice, such refusal shall be referred to an appropriate law enforcement agency for investigation and prosecution.

Any water user violating any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not more than Five Hundred and 00/100 Dollars ($500.00) or by imprisonment for a term not exceeding six (6) months or by both such fine and imprisonment. A water user shall be deemed to be guilty of a separate offense for each and every day during any portion of which any violation of this Ordinance is committed, continued or permitted.

Section 6: Severability. If any provision of this Ordinance, or the application thereof to any person or circumstance, is held invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any other provision or application, and to this end, the provisions of this Ordinance are declared to be severable. The City Council of the City of Hollister hereby declares that they would have adopted this Ordinance and each section, sub-section, sentence, clause, phrase, part or portions thereof, irrespective of the fact that any one or more sections, sub-sections, sentences, clauses, phrases, parts or portions thereof, be declared invalid or unconstitutional.

Section 7: Ordinance No. 752 of the City of Hollister is hereby repealed.

Section 8: This Ordinance shall take effect thirty (30) days from and after its final passage. Prior to the expiration of fifteen (15) days from the final passage hereof, the Clerk of the City of Hollister shall cause this Ordinance to be published once in the Free Lance, a newspaper of general circulation in the City of Hollister.

This Ordinance was read and introduced on the 16th day of July, 1990, and passed and adopted by the City Council of the City of Hollister on the 6th day of August, 1990, by the following vote:

AYES: Councilmembers Gonzalez, Hallberg, Escover, Kuckenbaker, and Mayor Light.

NOES: Councilmembers None.

ABSENT Councilmembers None.

ABSTAINING: Councilmembers None.

Mayor of the City of Hollister

ATTEST:

Clerk of the City of Hollister

SUNNYSLOPE COUNTY WATER DISTRICT
3416 AIRLINE HIGHWAY
HOLLISTER, CA 95023-9702

ORDINANCE NO. 45

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE SUNNYSLOPE COUNTY WATER DISTRICT DECLARING A WATER SUPPLY EMERGENCY PROHIBITING WATER WASTE AND ESTABLISHING WATER RATIONING RULES

NOW THEREFORE, BE IT ORDAINED by the Board of Directors of the Sunnyslope County Water District as follows:

SECTION I
PURPOSE, FINDINGS, AND AUTHORITY

A. Statement of Purpose and Findings: The Sunnyslope County Water District enacts this ordinance to restrict water waste and unnecessary use of water by reason of a present urgency situation caused by drought and threatened water supply shortage. The overall objective is to reduce water usage by 20% district wide.

B. Authority: This ordinance is enacted pursuant to the provisions of Section 31026, et seq. of the California Water Code, which authorizes county water districts to restrict the use of water during any emergency caused by drought or other threatened or existing water shortages and to prohibit the wastage of district water or the use of district water during such periods.

C. Findings:

(1) The lack of rain for the previous three years together with an abnormally low water table has created a water shortage in the Sunnyslope County Water District. A water table study has been performed by the district and is available at the district office.

(2) Greater per capita water consumption increases the entire district's vulnerability to a severe drought.

(3) Water hook-ups and water consumption has steadily increased over the previous three drought years and continues to increase into the present potential drought year. Water district records indicate that from July, 1985 to June, 1989, water connections have increased by 34%.

(4) Water conservation has proven to be a successful mechanism to reduce water consumption. Conservation efforts will provide an interim water supply, reduce drought vulnerability, reduce sewer flows, and ease the impact of the previous drought years, all of which is required to meet the health, safety, and welfare of the residents of the Sunnyslope County Water District.

SECTION II
DEFINITIONS

A. Definition of Water Waste: "Water waste" is deemed to be the indiscriminate, unreasonable, or excessive running or dissipation of potable water. Water waste is prohibited by the terms of this ordinance.

B. Definition of Non-essential Water Use: "Non-essential water use" is the indiscriminate or excessive dissipation of potable water which is unproductive or does not reasonably sustain economic benefits or life forms given the present shortage of potable water. Non-essential water use is prohibited by the terms of this ordinance.

SECTION III
RESTRICTIONS ON WATER WASTE

A. Prohibition: All residential and non-residential customers including individuals, commercial enterprises, and governmental entities receiving water from the Sunnyslope County Water District shall cease and desist from wasteful and non-essential uses of water within the district boundaries. The district shall impose and enforce mandatory prohibitions

against water waste. Water waste and non-essential uses shall include those uses defined in Section II-A and B above and shall further include the following:

(1) Indiscriminate or excessive water use which allows excess to run to waste.

(2) Individual washing of cars, buildings, or exterior surfaces without use of quick acting, positive shut-off nozzles.

(3) 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 without quick acting, positive shut-off nozzles.

(4) Use of potable water to wash sidewalks or roadways where airblowers or sweeping provides a reasonable alternative.

(5) Water waste caused by easily correctable leaks, breaks, or malfunctions after a reasonable time within which to correct. Exceptions may be made by the Sunnyslope County Water District Manager for corrections which are not feasible or practical.

(6) Operation of decorative fountains even if they use a re-circulating system.

(7) Use of water for construction purposes, such as consolidation of backfill unless no other source of water or method can be used.

(8) Restaurant water service unless upon request.

(9) Hydrant flushing except where required for public health and safety.

(10) Refilling existing private pools except to maintain water levels.

B. The prohibitions contained herein shall not apply to the district water allocated to the City of Hollister.

SECTION IV
ADMINISTRATION

A. Implementation: The district's manager shall be charged with implementation of this ordinance. The manager shall report to the board all factors which affect the implementation of this ordinance and shall maintain a separate file of any requests for variances from the prohibition set forth in this ordinance.

B. Alternative If Purpose of Ordinance is Not Met: In the event that the rationing measures set forth in this ordinance are not sufficient to meet the district's overall intent of reducing water usage by 20%, the district shall consider the adoption of a mandatory water rationing ordinance. Such ordinance which shall impose a use/penalty fee upon the water user, calculated at the rate of ($.30 per gallon), and shall apply to all water users who use water in excess of the maximum ration set forth in said succeeding ordinance.

SECTION V
VIOLATIONS

A. Notice of Violation: Should any individual or entity fail or refuse to comply with the provisions of this ordinance, the district's manager or his agent shall provide that person or entity with written notice of the violation and an opportunity to correct the noncompliance. This notice shall be in writing and shall:

(1) Be posted at the site of the noncompliance.
(2) State the time, date, and place of violation.
(3) State a general description of the violation.
(4) State the means to correct the violation.

(5) State a date by which correction is required.
(6) A copy of the written notice shall further be mailed to the site of the violation.

B. Should an individual or entity fail or refuse to correct the violation within the time specified in the written notice, said refusal shall be referred to the appropriate law enforcement agency for prosecution as a misdemeanor, which shall be punished by being imprisoned in the county jail for not more than 30 days or by a fine of not more than $600.00 or by both such fine and imprisonment. The district shall be entitled to pursue any other remedy available at law or equity to abate the nuisance.

SECTION VI
RATIONING VARIANCE

The prohibition set forth in this ordinance may be modified in writing by the district manager upon written request without formal application or hearing when the modification is consistent with the district rationing and water conservation goals and where the strict application of the requirements of this ordinance would cause health or safety problems or cause extreme hardship. In the event that a variance applicant is not satisfied with the decision of the district manager, the applicant may seek further relief before the district board of directors by filing a request for a variance within ten days from the date of receiving the decision from the district's general manager.

SECTION VII
TERMINATION OF WATER USE RESTRICTIONS

The provisions of this ordinance declaring a water supply emergency and imposing present water use restrictions shall have no force and effect on or after February 14, 1991, except, however, that this date may be extended from time to time by resolution of the board of directors upon findings that the present water supply emergency has not ended.

SECTION VIII
INVALIDITY

Should any provision of this ordinance be found by a court of law to be unconstitutional, unlawful, or invalid, such court decision shall not affect the validity of the remaining provisions of this ordinance.

SECTION IX
PUBLICATION

This ordinance shall be published once in full in a newspaper of general circulation printed in the district within ten days after adoption.

SECTION X
URGENCY EFFECT

The provisions of this ordinance shall have urgency effect and shall become effective on 12:01 a.m. Feb. 14, 1990.

On motion of director Anderson, and seconded by director Hailstone, the foregoing ordinance is adopted this 13 day of February, 1990, by the following vote.

AYES: DIRECTORS: Nelson, Hailstone, Williams & Anderson

NOES: DIRECTORS:

ABSENT: DIRECTORS: Churchill

President

I, BRYAN YAMAOKA, Secretary to the Board of Directors of the Sunnyslope County Water District, hereby certify the foregoing is a full, true, and correct copy of an ordinance duly adopted this 13 day of February, 1990.

Witness my hand and seal of the Board of Directors this 13 day of February, 1990.

Bryan Yamaoka
BRYAN YAMAOKA, Secretary

(SEAL)

Attest:

Secretary

San Benito County Resolution 92-82. Water Conservation Plan

- Provides guidelines to deal with water shortage conditions, including droughts.
- Prohibits certain water uses categorized as wasteful and establishes mandatory conservation measures for wastewater usage.
- Requires the use of water-saving plumbing fixtures for all new construction and for existing structures, where replacements, additions or relocations of plumbing fixtures are proposed.
- Encourages the installation of dual distribution systems for irrigation and the use of reclaimed water to the maximum extent feasible.
- Recommends water-conserving measures applicable to agriculture, including irrigation audits, prescribed irrigation schedules etc.
- Provides a detailed, water-efficient landscape plan applicable to all new and rehabilitated landscaping for public projects and private development, including golf courses. Developer-installed landscaping in residential projects is also subject to these provisions.

FINAL

WATER CONSERVATION PLAN

Adopted by Board of Supervisors - July 7, 1992
Resolution 92-82

SAN BENITO COUNTY
PLANNING DEPARTMENT

BEFORE THE BOARD OF SUPERVISORS, COUNTY OF SAN BENITO

A RESOLUTION ADOPTING THE)
FINAL SAN BENITO COUNTY)
WATER CONSERVATION PLAN)
_____)

RESOLUTION NO. 92-82

WHEREAS, On February 26, 1991, the Board passed and adopted Ordinance Number 594, "*An Urgency Ordinance Requiring the Development of a Water Conservation Plan and Requiring the Issuance of Building Permit to Conform to the Water Conservation Principles*";

WHEREAS, Section 3 of the ordinance provides for the preparation and adoption of a Preliminary Water Conservation Plan. The "*San Benito County Preliminary Water Conservation Plan*" was adopted by the Board on June 4, 1991;

WHEREAS, Section 5 of the ordinance states: "Upon the completion of the county-wide hydrologic study, the board shall hold a public hearing to consider all relevant evidence on creating a Final Water Conservation Plan";

WHEREAS, The San Benito County Ground-Water Investigation was completed by the consultant Luhdorff and Scalanini in October, 1991;

WHEREAS, California Government Code (Chapter 3 of Division 1 of Title 7 of Article 10.8) requires that a copy of the adopted Final Plan be sent to the State by January 31, 1993;

WHEREAS, on July 7 _____, 1992, at a duly notice public hearing and considering the evidence presented at the hearing, the Board considered the content of the Final Water Conservation Plan.

NOW, THEREFORE BE IT RESOLVED by the Board of Supervisors of the County of San Benito hereby adopts the Final San Benito County Water Conservation Plan.

PASSED AND ADOPTED by the Board of Supervisors of the County of San Benito, State of California at the meeting of said board on the 7th day of July, 1992, by the following vote.

AYES: **SUPERVISORS:** M.Graves,Kesler,C.Graves,Bowling,Scagliotti
NOES: **SUPERVISORS:** None
ABSENT: **SUPERVISORS:** None

By: _____ 7/7/92
Chair
San Benito County Board of Supervisors

ATTEST

John R. Hodges
_____
JOHN R. HODGES, Clerk of the Board

By: Denise R. Thome
Denise R. Thome, Deputy Clerk

APPROVED AS TO LEGAL FORM
San Benito County Counsel

By: _____ 6/30/92
Date

TABLE OF CONTENTS

San Benito County
Final Water Conservation Plan

SECTION 1

PURPOSE AND SCOPE

This plan provides guidelines to deal with water shortage conditions which often exist within parts of California including the County of San Benito. This plan was adopted by the Board of Supervisors on July 7, 1992 (Resolution 82-82). This plan was adopted pursuant to Ordinance #594.

SECTION 2

FINDINGS

The Board of Supervisors finds, determines and declares as follows:

(a) San Benito County faces and has faced in recent years the tremendous pressure of residential growth.

(b) The demand for water service by water district and property owners is not expected to lessen.

(c) San Benito County relies extensively on groundwater for its water supply for all uses. Also, San Benito County received water from the federal water project known as the San Felipe Project. The San Felipe Project primarily supplies agriculture at the present time. It is the Board's intent that all runoff be used to the maximum extent feasible to recharge groundwater resources.

(d) The supply of water in California, particularly in the County of San Benito, is in jeopardy due to the present drought. The drought has not only affected the replenishment of the ground water but affects the supplies available to the San Felipe project as evidenced by recent cutbacks in the proposed supply.

(e) The County of San Benito is geographically in an area that is historically subject to periodic droughts of lengthy duration. Currently, we are in the fifth year of a devastating drought.

(f) For the foregoing reasons, the amount of water supply available to the County to serve the citizens is not and will not be adequate to meet the ordinary demands and requirements of water consumers without depleting the water supply of the County to the extent that there would be insufficient water for human consumption,

sanitation, fire protection and all other beneficial uses, and that these conditions are likely to continue to exist.

SECTION 3

DEFINITION OF PERSON

The following term is defined for the purpose of the plan:

(a) "Person" shall mean any individual person and any firm, partnership, corporation, business entity, district, agency, city, county and any other entity or organization.

SECTION 4

PROHIBITION OF CERTAIN USES

(a) No person shall waste water as used herein. The term "waste" means:

1. Use of potable water to irrigate grass, lawns, ground cover, shrubbery, crops, vegetation and trees between the hours of 10:00 a.m. and 6:00 p.m. in such a manner as to result in runoff for more than five (5) minutes.

2. Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas by direct application where sweeping will accomplish the same results.

3. Allowing potable water to escape from breaks within the persons' plumbing system for an unreasonable period of time after the break is discovered and reported.

4. Use of potable water for sewer system maintenance or fire protection training except as necessary.

5. Use of potable water for any purpose in excess of the amounts allocated below for each class of service.

SECTION 5

LIMITS ON CERTAIN USES

The following classes or uses are hereby created:

(a) "Single family residential" which consists of water service to land improved with structures designed to serve as a residence for a single family.

(b) "Multiple family residential" which consists of water service to land improved with structures designed to serve as or residence for more than a single family.

(C) "Non-residential" which consists of water service to land improved with structures designed to serve for other than residential uses. Commercial, recreational, charitable, agricultural and cultural uses are included within this class.

SECTION 6

WATER SAVING DEVICES

Any plumbing fixture in any existing structure which is replaced, added or moved must conform with the following criteria (all new construction shall adhere to these guidelines as well):

(a) Toilets must be ultra low flow toilets and use no more that 1.5 gallons of water per flush.

(b) Shower heads must use no more than 2.5 gallons of water per minute (ultra low flow shower heads).

(c) Kitchen and lavatory faucets must use no more than 2.0 gallons of water per minute.

(d) Flushometer type toilets and urinals shall be of a design that does not exceed 2.0 gallons per flush.

(e) All faucets in residential sinks and lavatories shall be equipped with faucet aerators and shall be of a design that limits the maximum flow to two gallons per minute. Water faucets for uses other than residential shall have aerators and limit the flow to a maximum of four gallons per minute and shall be equipped with automatic shut-off valves or be operated by front button or pedal valves.

(f) Fountains: No persons shall use water to operate or maintain levels in decorative fountains, unless such water is recycled in the fountain.

SECTION 7

MANDATORY CONSERVATION MEASURES ON WATER WASTE

(a) Repair of plumbing, sprinkler and irrigation systems. Any person who is the owner, manager, or person responsible for the day-to-day operation of any premises shall take action to initiate steps to repair any leaking, broken or defective water pipes, faucets, plumbing fixtures, other water service appliances, sprinklers, watering or irrigation systems, or distribution systems within a reasonable time after such person first learns of such leaks, breaks, or defects, and shall thereafter diligently and promptly pursue such repair work to completion.

(b) Washing of vehicles. No person shall use a water hose to wash any car, truck, boat, trailer, bus, recreational vehicle, camper, aircraft, tractor, or any other vehicle, or any portion thereof, unless the hose is equipped with an automatic shutoff nozzle.

(c) Cleaning of Structures. No person shall use potable water through a hose to clean the exterior of any building or structure unless such hose is equipped with a shutoff nozzle.

(d) Cleaning of Surfaces. No person shall use potable water through a hose to clean any sidewalk, driveway, roadway, parking lot, or any other outdoor paved or hard surfaced area, except where necessary to protect public health or safety. The use of a bucket is not prohibited at any time for cleaning food, grease, oil, or other stains or spillage from surfaces.

(e) Water Spillage. No person shall cause, suffer, or permit water to spill into streets, curbs, or gutters. No person shall use any water in any manner which results in runoff beyond the immediate area of use.

(f) Swimming Pools and Spas. No person shall empty and refill a swimming pool except to prevent or repair structural damage or to comply with public health regulations.

SECTION 8

RECLAIMED WATER

As appropriate, the installation of reclaimed water irrigation systems (dual distribution systems) may be required to allow for the current and future use of reclaimed water.

Irrigation systems shall make use of reclaimed water unless a written exception has been granted by the local water agency, stating that the reclaimed water meeting standards is not available and will not be available in the future. The reclaimed water irrigation systems shall be designed in accordance with the requirements of local and state regulatory agencies.

California Administrative Code Title 22, Division 4 provides the statutory requirements for wastewater reclamation and the California Department of Health Services has developed "Guidelines for Use of Reclaimed Water." This water conservation plan hereby encourages the use of reclaimed water to the maximum extent feasible.

Reclaimed water means water which, as a result of treatment of domestic wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. Beneficial use of reclaimed water in San Benito County include, but are not limited to the following:

- Spray irrigation of crops, landscaping, and golf courses.
- Surface irrigation of crops.
- Recreational impoundment.
- Landscape impoundment.
- Groundwater recharge.
- Construction purposes such as soil compaction and dust control.
- Mining purposes such as dust control and mineral processing.

SECTION 9

AGRICULTURAL

In regards to a water conservation plan, we would look to the farm bureau and Agricultural Commissioner and the agricultural community to offer recommendations for this section.

Agricultural water use is an important element of water conservation planning. The following should be considered by the agricultural community:

1. Irrigation audits can be designed to take into account a variety of crop evapotranspiration needs.
2. Crop tolerances to mineral and chemical concentrations in the soil and soil texture and quality must be taken into account when designing a water conservation program for agriculture.
3. Current irrigation water losses to deep percolation, runoff, and spray evaporation can be minimized with prescribed irrigation schedules.

SECTION 10

WATER EFFICIENT LANDSCAPE PLAN

I. INTRODUCTION

Landscapes are essential to the quality of life in California. They provide areas-for recreation and can enhance the environment. In addition, landscapes offer people respite and psychological benefits as well as cultural and social framework and character. With careful planning and maintenance, our landscapes can be safe. attractive, useful, and environmentally sound.

It is the intent of this Plan to promote the values and benefits of our landscapes while recognizing the need to invest water, an increasingly limited resource, and our other resources as efficiently as possible.

This Water Efficient Landscape Plan has been prepared in response to the Water Conservation in Landscaping Act, Assembly Bill 325, Statutes of 1990, Chapter 1145.

The purpose of this Plan is to establish a structure for designing, installing, and maintaining water efficient landscapes in new projects. Provisions for water management practices and water waste preventions for established landscapes are also included.

Some of the features included in the Plan are:

* Calculation of a water budget and estimated water use.
* Appropriate plant selection and grouping in hydrozones.
* The use of reclaimed water.
* Landscape meters, automatic controllers, and rain switches.
* Design plans for landscape, irrigation, and grading including a water conservation concept statement.
* Monthly irrigation schedules.
* Schedules for ongoing maintenance.
* Water management practices and waste water prevention for existing landscapes.
* Soil tests.
* Education about water efficient landscapes provided.

II. APPLICABILITY

This Plan applies to all new and rehabilitated landscaping for public projects and private development projects including golf courses. Developer-installed landscaping in single-family residence, duplex, and triplex projects is subject to the Plan.

Homeowner-provided landscaping at single family residence, duplex. and triplex lots is excluded.

III. PROVISIONS FOR NEW OR REHABILITATED LANDSCAPES

All new and rehabilitated landscaping for projects listed above shall be subject to the following provisions.

A. Maximum Allowable Water Budget

For design purposes, a maximum allowable water budget is the upper limit of annual water use for the established landscaped area. It is based upon the area's average year climate and the size of the landscaped area. While this figure represents the maximum amount of water to be used on the landscaped area, designing a project to use less water is encouraged whenever possible.

The basic formula for calculating a project's maximum allowable water budget is:

MAWB = (ETo) (0.8) (LA) (0.62)

MAWB	=	Maximum Allowable Water Budget (gallons per year).
Eto	=	Reference Evapotranspiration (inches per year).
0.8	=	Allowable Percentage.
LA	=	Landscaped Area (square feet).
0.62	=	conversion factor (to gallons per square feet).

THE VARIABLES

Reference Evapotranspiration (Eto)
Evapotranspiration (ET) is the amount of water that evaporates from the soil and transpires from the plants. Reference evapotranspiration (Eto) is a standard measurement of a large field of four- to seven-inch tall, cool season grass that is well watered. The historical average (normal) Eto of Hollister can be found in Appendix F

0-8: The Allowable Percentage (AP)
The allowable percentage for this calculation is 0.8. it is a factor based on an average plant mix and an average irrigation efficiency. The allowable percentage adjusts the standard measurement of Reference Evapotranspiration to produce the maximum amount of water budgeted annually for the landscape. For more information about the derivation of the allowable percentage, see Appendix E.

Landscaped Area (LA)
The landscaped area is the entire parcel less the building pad, driveways, non-irrigated portions of parking lots, hardscapes- such as decks and patios, and other non-porous areas.

Conversion Factor (0.62)
To calculate the maximum allowable water budget in gallons per year, the conversion factor is 0.62.

To convert gallons per year to 100-cubic-feet per year, another common billing unit for water, divide gallons per year by 748. (748 gallons = 100 cubic feet.)

EXAMPLE CALCULATIONS OF A MAXIMUM ALLOWABLE WATER BUDGET

SITE: Landscaped area of 50,000 square feet in Oakland, California.

MAWB = (ETo) (0.8) (LA) (0.62)
MAWB = (41 inches) (0-8) (50,000 square feet) (0.62)
Maximum Allowable Water Budget = 1,016,800 gallons per year

Portions of landscaped areas in public and private sites such as parks, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes may require additional water. A statement to that effect shall be included with the landscape design plan, designating areas to be used for such purposes and the amount of water required.

B. Estimated Water Use

The estimated water use of a project is the amount of water for the year to be used for the established landscape based upon the area's average year climate, the size of the landscaped area, the mix of plants selected, and the efficiency of the irrigation system.

The estimated water use for a landscaped area is composed of the sum of the estimated water use of all hydrozones in that landscaped area. A hydrozone is a subarea of the landscaped area having similar water use that is served by one valve or set of valves with the same settings. Here is a formula that can be used to estimate water use of a project:

EWU	=	(ETo) (KI/IE) (LA) (.62)
EWU	=	Estimated Water Use (gallons per year)
ETo	=	Reference Evapotranspiration (inches per year)
KI	=	Landscape coefficient
IE	=	Irrigation Efficiency
LA	=	Landscaped Area (square feet)
0.62	=	conversion factor

THE VARIABLES

The Landscape Coefficient (KI)

A landscape coefficient or aggregate plant factor is a factor used to modify ETo, based upon the estimated water use of a plant or group of plants. For purposes of this Plan, the landscape coefficient of low water using plants is 0.3, for average water using plants Is 0.5, and for high water using plants is 0.8. The landscape coefficient for cool season turf grass such as Kentucky bluegrass is 0.8. For warm season grasses such as bermuda, the landscape coefficient is 0.6.

Irrigation Efficiency (IE)

Irrigation efficiency is derived from estimates of equipment and design efficiency and management efficiency using the following formula:

IE = design efficiency x management efficiency

The minimum irrigation efficiency for purposes of this Plan is 0.65. Greater irrigation efficiency can be expected for large, flat, simply designed irrigation systems such as athletic fields.

The other variables, ETo, LA, and 0.62 are the same as in the Maximum Allowable Water Budget calculation.

The formula for the estimated water use of the project is the same as the maximum allowable water budget formula, except the allowable percentage of 0.8 is replaced by the landscape coefficient and irrigation efficiency factors. Thus, the maximum allowable water budget represents the upper limit of annual water use for the landscaped area based on average plant mix and average irrigation efficiency. The estimated water use represents an estimate of how much water that landscaped area will need for the year based upon the specific mix of plants and the estimated efficiency of irrigation system used for that project.

C. Plant Selection and Grouping

Plants shall be selected appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the site.

Plants having similar water use shall be grouped together in distinct hydrozones.

As long as the above criteria are met, any plants can be used in the landscape, providing the estimated water use of the project does not exceed the maximum allowable water budget.

D. Fire Resistive Plants

The selection of fire resistive plants (low fuel volume plants) is especially important in fire prone areas of California. These are plants with less flammable parts: more leaf than wood and less woody undergrowth.

For more information, contact your local fire department or the nearest California Department of Forestry office listed in your telephone directory under State of California.

E. Soils

Soils shall be amended for improving water holding properties as noted in the soils report. An organic mulch at least three inches deep shall be applied to all planting areas, except in turf or groundcover plantings.

F. Reclaimed Water

As appropriate, the installation of reclaimed water irrigation systems (dual distribution systems) shall be required to allow for the current and future use of reclaimed water.

Irrigation systems shall make use of reclaimed water unless a written exemption has been granted by the local water agency, stating that reclaimed water meeting all health standards is not available and will not be available in the foreseeable future. The reclaimed water irrigation systems shall be designed in accordance with the requirements of local and state regulatory agencies.

G. Irrigation Systems

When creating the irrigation design, the following criteria shall be followed:

1) Runoff and Overspray. Soil types and infiltration rate shall be considered when designing irrigation systems on slopes and level terrains. All irrigation systems shall be designed to avoid runoff, seepage, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, shall be used to closely match application rates to infiltration rates therefore minimizing runoff.

   Special attention shall be given to avoid runoff on slopes greater than 10 percent and to avoid overspray in planting areas with a width less than ten feet, or in median strips.

   No overhead spray irrigation systems that are subject to wind drift shall be installed in median strips less than ten feet wide.

2) Water Coverage and Uniformity. For the purpose of determining the maximum allowable water budget, irrigation efficiency shall be assumed to be 0.65. Some projects will exceed this level of efficiency. When calculating the estimated water use of the project, irrigation efficiency shall be at least 0.65.

3) Equipment.

Meters. Separate landscape meters shall be installed for the irrigation system, except for single family homes.

Controllers. Automatic control systems are required for all projects and must be able to accommodate all aspects of the design.

Valves. Plants which require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low-spot drainage, runoff, and subsequent erosion from low elevation sprinkler heads.

Sprinkler heads. Heads and emitters shall have consistent precipitation rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, precipitation rate, operating pressure, adjustment capability, and ease of maintenance.

Miscellaneous Devices. All systems shall conform to local backflow and cross connection codes. Rain sensing override devices are required on all irrigation systems. Moisture sensing devices are encouraged where appropriate.

H. Water Features

Recirculating or reclaimed water shall be used for decorative water features. Functional water features (such as swimming pools) and decorative water features shall be shall be included in the landscaped area calculation and considered as a high water using hydrozone. Pool and spa covers are encouraged when appropriate.

I. Maintenance

Landscapes shall be carefully and competently maintained to ensure water efficiency and high quality appearance. A regular maintenance schedule shall include but not be limited to checking, adjusting, and repairing the irrigation equipment; resetting the automatic controller; aerating and dethatching turf areas: replenishing mulch; fertilizing; pruning, weeding, and removing litter in all landscaped areas.

J. Water Management

Water management practices at a minimum shall be in accordance with the State of California Landscape Water Management Program (Landscape Irrigation Audits.) Whenever possible, irrigation scheduling shall incorporate evapotranspiration data such as that from the California Irrigation Management Information System (CIMIS) weather stations to apply the appropriate levels of water for different climates. Landscape irrigation audits shall be conducted by certified landscape irrigation auditors at least once every five years.

Whenever possible, landscape irrigation shall be scheduled between 8:00 pm and 8:00 am to avoid irrigating during times of high wind or high temperature.

K. Public Education

1) Publications. Information shall be provided to all new, single family residential home owners regarding the design and installation of water efficient landscapes. Information about the efficient use of water shall be provided to water users throughout the community.

2) Model Homes. At least one model home in each project subject to this Plan shall be used as a demonstration of the principles of water efficient landscapes described in this Plan. Signs shall be used to identify the model as an example of a water efficient landscape and featuring elements such as plant zones, irrigation equipment and others which contribute to the overall water efficient theme.

IV. PROVISIONS FOR EXISTING LANDSCAPES

These provisions apply to unincorporated San Benito County area water purveyors.

A. Water Management

All existing large, landscaped areas (one acre or more), including golf courses, green belts, common areas, multi-family housing, schools, businesses, parks, cemeteries, parks, and publicly owned landscapes shall be audited at least every five years. If the project's water bills indicate that they are using less than or equal to the maximum allowable water budget for that project site, an audit shall not be not required.

B. Water Waste Prevention

Wasteful runoff, seepage, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures shall be prohibited.

V. PROJECT SUBMITTAL/DOCUMENTATION PROCEDURES

Each project submittal requires the following elements:

A. Water conservation concept statement.
B. Maximum allowable water budget calculation.
C. Landscape design plan, Including estimated water use calculation.
D. Irrigation design plan.
E. Irrigation schedules.
F. Maintenance schedules.
G. Landscape irrigation audit schedule.
H. Grading design plan.
I. Soil test

A. Water Conservation Concept Statement

A Water Conservation Concept Statement is a one-paged checklist and narrative summary of the entire project submittal package. See Appendix B for a suggested format for a water conservation concept statement. A copy of the Water Conservation Concept Statement shall be sent to the local water agency along with the Certificate of Substantial Completion.

B. Maximum Allowable Water Budget

For design purposes, the maximum allowable water budget is the upper limit of annual water use for the established landscaped area. See Provisions Section IIIA for more information.

C. Landscape Design Plan

The landscape design plan shall be drawn on project base sheets at a scale that shall accurately and clearly identify:

* Landscape materials, trees, shrubs, groundcover, turf, etc. Planting symbols shall be clearly drawn and plants labeled by botanical name, common name, container size, spacing, and quantities of each group of plants indicated.
* Property lines and street names.
* Streets, driveways, walkways, and other paved areas.
* Pools, ponds, water features, fences, and retaining walls.
* Existing and proposed buildings and structures including elevation if applicable.
* Natural features including rock outcroppings, existing trees, shrubs, etc. that will remain.
* Tree staking, soil preparation details, and any other applicable planting and installation details.

* A calculation of the total landscaped area: including the entire parcel less the building pad, driveways, the non-irrigated portions of parking lots, hardscapes-such as decks and patios, and other non-porous areas.
* Designation of hydrozones: a subarea of the landscaped area having similar water use that is served by one valve or set of valves with the same settings. A hydrozone may be non-irrigated, for example a naturalized area.
* A calculation of the estimated water use of the landscaped area. The estimated water use shall not exceed the maximum allowable water budget. See Provisions Section IIIB for more information.

D. Irrigation Design Plan

The Irrigation design plan shall be drawn on project base Sheets. It should be separate from, but use the same format as, the landscape design plan.

1) The scale shall be the same as that used for the landscape design plan.
2) The irrigation design plan shall accurately and clearly identify:
   Location of separate landscape meters.
   * Location, type, and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, and backflow prevention devices.
   * Static water pressure at the point of connection.
   * Flow rate (gallons per minute), precipitation rates (inches per hour), and design operating pressure (psi) for each station.
   * Reclaimed water irrigation systems as described in the Provisions Section IIIF.
3) Irrigation systems shall be designed to be consistent with hydrozones.

E. Irrigation Schedules

An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape, and for any temporarily irrigated areas.

The irrigation schedule shall include run time (in minutes per cycle) and frequency of irrigation for each station. The irrigation schedule shall provide the amount of irrigation water (in hundred cubic feet, gallons, or in whatever billing units the local water supplier uses) recommended on a monthly basis. The total amount of irrigation water recommended in the irrigation schedule for the established landscape shall not exceed the project's maximum allowable water budget.

F. Maintenance Schedule

A schedule for ongoing maintenance shall be prepared, reflecting maintenance tasks including those listed in Provisions Section III 1.

G. Landscape Irrigation Audit Schedules

Landscape irrigation audits, described in Provisions Section III J, shall be scheduled and conducted at least every five years.

H. Grading Design Plan

The grading design plan shall be drawn on project base sheets. It should be separate from but use the same format as the landscape design plan. The grading design plan shall indicate finished configurations and elevations of the landscaped area, including the height of graded slopes, pad elevations, and finish grade.

I. Soil Test

A soils report shall be prepared and submitted with the plans. As a minimum, the following shall be included:

1) Determine soil texture, indicating the percentage of organic matter.
2) Approximate soil infiltration rate (either measured or derived from soil texture/infiltration rate tables.) A range of infiltration rates should be noted where appropriate.
3) Measure of Ph, and total soluble salts.
4) Recommendations for improving soil conditions to maximize water use efficiency.

A copy of the entire project submittal package shall be delivered to the owners site manager along with the record drawings and any other information normally forwarded to the owner/site manager. A copy of the water conservation concept statement shall be sent to the local water district.

VI. CERTIFICATION

Upon completion of the installation of the landscaping and the irrigation system, an irrigation audit shall be conducted prior to the final field observation. A licensed landscape architect, designer, or contractor shall conduct a final field observation and shall provide a certificate of substantial completion which shall specifically include reference to the landscaping, automatic irrigation system and the irrigation audit, along with a punch list of any observed deficiencies to the Owner of Record. Certification shall be accomplished by completing the Certificate of Substantial Completion form in Appendix E and delivering it to the county and to the local water supplier.

SECTION 11

MANDATORY ENFORCEMENT

(a) The provisions of this plan shall be enforced by the Planning Director and Building Official or his or her designee. Building permits shall only be issued in compliance with this plan.

APPENDIX A: DEFINITIONS

"allowable percentage": The allowable percentage for determining the maximum allowable water budget is 0.8. This represents a factor including consideration of an average landscape coefficient and irrigation efficiency. See page 10 for a more complete discussion.

"amendment": Additions to the soil, such as compost, leaf mold, peat moss, ground bark, which improve aeration and drainage of clay soils and help hold water in sandy soils.

"anti-drain valve": A valve located under a sprinkler head to hold water in the system so it does' not drain out of the lower elevation sprinkler heads.

"application rate": The depth of water applied to a given area in one hour, usually measured in inches per hour.

"automatic controller": A mechanical or solid state timer, capable of operating valve stations to set the days and length of time of a water application.

"backflow prevention device": A safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"distribution uniformity": A measure of how evenly water is applied over an area. (scientific: The ratio of the average low quarter depth of irrigation water infiltrated to the average depth of irrigation water infiltrated, expressed as a percent.)

"emitter": Fittings that deliver water slowly through small openings from the lateral line to the plant.

"established landscape": The point at which plants in the landscape have established themselves into the adjacent soil.

"establishment period": For purposes of this Plan, the first year after installing the plant in the landscape. The actual establishment period varies depending upon the plant species, the development of the plant's root system, soil conditions, and other environmental factors.

"estimated water use": The amount of water the designer estimates that the project will need on an annual basis. The estimated water use cannot exceed the maximum allowable water budget. See Provisions Section III B for a suggested formula and more information.

"evapotranspiration": The quantity of water evaporated from adjacent soil surfaces, transpired by plants, and retained in plant tissue during a specific time.

"flow rate": The rate at which water flows through pipe fittings and valves.

"fire resistive plants (low volume fuel plants)": Those with less flammable parts: more leaf than wood and less woody undergrowth.

"hydrozone": A portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same setting. A hydrozone may be non-irrigated, for example, a naturalized area.

"infiltration rate": The rate of water entry into the soil expressed as a depth of water per unit of time in inches per hour. The infiltration rate changes with time during an irrigation.

"irrigation efficiency": The measurement of the amount of water beneficially used divided by the amount of water applied.

"landscape coefficient": The functional equivalent of a crop coefficient in agriculture. When multiplied lames Eto, it estimates the amount of water required to maintain landscape plants in good condition.

"landscape irrigation audit": A process to perform site inspections, evaluate irrigation systems. and develop efficient irrigation schedules.

"landscaped area": The entire parcel less the building pad, driveways, non-irrigated portions of parking lots, hardscapes such as decks and patios, and other non-porous areas.

"lateral line": The water delivery pipeline that supplies water to the emitters or sprinklers from the main line.

"main line": The pipeline that delivers water from the water source to the lateral lines.

"mature landscape": See "established landscape".

"maximum allowable water budget": For design purposes, the upper limit of annual water use for the established landscaped area. It is based upon the area's average year climate and the size of the landscaped area.

"moisture sensing device": A device that measures the moisture condition of the soil in a variety of ways.

"mulch": Any material such as leaves, bark, or straw left loose and applied to the soil surface to prevent evaporation.

"operating pressure": The pressure at which a system of sprinklers operates. (Static pressure minus pressure losses.) This is usually indicated at the base or nozzle of a sprinkler.

"overspray": When sprinklers deliver water beyond the landscaped area, wetting pavements, walks, structures, or other non-landscaped areas.

"percolation": The movement of water through the soil.

"potable water": Water which is meant for human consumption.

"precipitation rate": The rate at which water is applied, usually expressed in inches per hour.

"pressure compensating bubbler": A sprinkler head useful for watering trees and shrubs with water basins: produces a reduced flow of water that bubbles on the soil.

"quick coupling system": A sprinkler system which uses permanently installed valves and sprinklers that can be moved from valve to valve.

"rain switch or rain shut off valve": Measures rainfall and automatically shuts off the irrigation system when water reaches a certain level.

"reclaimed water": Treated or recycled water of a quality suitable for non-potable uses such as landscape irrigation; not intended for drinking.

"record drawing": A set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

"reference evapotranspiration (Eto)": A standard measurement of evapotranspiration for a large field of 4- to 7 inch tall, cool season grass that is well watered.

"run off": Water which is not absorbed by the soil or landscape to which it is applied. Run Off occurs when water is applied at too great a rate or when there is a severe slope.

"soil texture": The classification of soil based on the percentage of sand, silt, and clay in the soil.

"sprinkler head": A device which discharges water through a nozzle.

"static water pressure": The pipeline or municipal water supply pressure when water Is not flowing.

"station": An area served by one valve or set of valves that operate simultaneously.

"turf": A surface layer of earth containing grass with its roots.

"valve": A device used to control the flow of water in the irrigation system.

"water conservation concept statement": A one-paged checklist and narrative summary of the project. See Appendix D for a sample statement.

APPENDIX B: SAMPLE WATER CONSERVATION CONCEPT STATEMENT

Project Site:
Project Number:
Project Location:

Landscape Architect/Designer/Contractor:

Included in this project submittal package are:
(Check indicating completion)

A. A Maximum Allowable Water Budget
   Reference ET (inches per year)
   Landscaped Area (square feet)
   Water Budget (gallons or cubic feet per year)
B. A Landscape Design Plan
   Estimated Water Use (gallons or cubic feet per year)
C. An Irrigation Design Plan
D. Irrigation Schedules
E. A Maintenance Schedule
F. A Landscape Irrigation Audit Schedule
G. A Grading Design Plan
H. A Soil Test

Description of Project:

APPENDIX C: SAMPLE CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Site: Project Number:

Project Location:

Preliminary Project Documentation Submitted: (check indicating submittal)

A. Maximum Allowable Water Budget
   reference ET (inches per year)
   landscaped area (square feet)
   water budget (gallons or cubic feet per year)
B. Landscape Design Plan estimated water use (gallons or cubic feet per year)
C. Irrigation Design Plan
D. Irrigation Schedules
E. Maintenance Schedule
F. Landscape Irrigation Audit Schedule
G. Grading Design Plan
H. Soil Test

Post-installation Inspection: (Check indicating substantial compliance)

A. Plants installed as specified
B. Soils amended as noted in soils report
C. Irrigation system installed as designed
   dual distribution system for reclaimed water
   minimal run off or overspray

Project submittal package and a copy of this certification has been provided to owner/manager and local water agency

I/we certify that work has been installed in accordance with the contract documents.

Contractor Signature Date State License Number

I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the Water Efficient Landscape Plan and that the landscape planting and irrigation installation conform with the approved plans and specifications.

Landscape Architect Signature Date State License Number

(Certificate of Substantial Completion, continued)
I/we certify that I/we have received all of the contract documents and that it is our responsibility to see that the project is maintained in accordance with the contract documents.

_____

Owner Signature Date

APPENDIX D: EXAMPLE CALCULATIONS FOR MAXIMUM ALLOWABLE WATER BUDGET AND ESTIMATED WATER USE

These two examples are for the same project in Fresno, California. While the total amount oil water will vary from one place in the state to another, the proportions of high, average, and low water using plants, will remain the same. These examples demonstrate that the following plant combinations are allowed within the water budget.

20% high water using plants; 40% average; 40% low

30% high water using plants; 20% average; 50% low
MAWB=(Eto) (0.8) (LA) (0.62)
EWU=(Eto) (KI/IE) (LA) (0.62)

MAWB=Maximum Allowable Water Budget (gallons per year)
Eto= Reference Evapotranspiration (inches per year)
0.8= Allowable Percentage
LA= Landscaped Area (square feet)
0.62=Conversion Factor (to gallons per square feet)

EWU=Estimated Water Use (gallons per year)
KI=Landscape Coefficient
IE=Irrigation Efficiency

PROJECT SITE ONE: Landscaped area of 50,000 square feet in Fresno California

MAWB = (Eto) (.8) (LA) (.62)
= (51 inches) (.8) (50,000 square feet) (.62)
Maximum Allowable Water Budget=1,264,800 gallons per year

EWU = (Eto) (KI/IE) (LA) (.62)

Hydrozone 1 (H1) is 20% of LA with KI .8(high water using plants)
Hydrozone 2 (H2) is 40% of LA with KI .5(average water using plants)
Hydrozone 3 (H3) is 50% of LA with KI .3(low water using plants)

(H1) = (51 inches) (.8/.65) (10,000 square feet) (.62) = 389,169 gal.
(H2) = (51 inches) (.5/.65) (20,000 square feet) (.62) = 486,461 gal.
(H3) = (51 inches) (.3/.65) (20,000 square feet) (.62) = 291,876 gal.

Estimated Water Use = (H1)+(H2)+(H3) =1,167,506 gallons per year

EWU of 1,167,506 is less than MAWB of 1,264,800

PROJECT SITE TWO: Landscaped area of 50,000 square feet in Fresno, California

MAWB = (ETo) (.08) (LA) (.62)
= (51 inches) (.8) (50,000 square feet) (.62)

Maximum Allowable Water Budget = 1,264,800 gallons per year

EWU = (ETo) (KI/IE) (LA) (.62)
Hydrozone 1 (H1) is 30% of LA with KI .8(high water using plants)
Hydrozone 2 (H2) is 20% of LA with KI .5(average water using plants)
Hydrozone 3 (H3) is 50% of LA with Ki .3(low water using plants)

(H1)= (51 inches) (.8/.65) (15,000 square feet) (.62) = 583,753 gal.
(H2)= (51 inches) (.5/.65) (10,000 square feet) (.62) = 243,230 gal.
(H3)= (51 inches) (.3/.65) (25,000 square feet) (.62) = 364,846 gal.

Estimated Water Use = (H1)+(H2)+(H3) = 1,191,829 gallons per year

EWU of 1,191,829 is less than MAWB of 1,264,800

APPENDIX E: DERIVATION OF THE ALLOWABLE PERCENTAGE

This allowable percentage is derived from the following formula:

$$AP\ (0.8) = \frac{\text{average KI (0-5)}}{\text{average IE (0-65)}}$$

The average landscape coefficient (average KJ) is a functional equivalent of a crop coefficient for landscapes. When multiplied times Eto, ft estimates the amount of water required to maintain landscape plants in good condition. Since species and site conditions vary at a project location, a range of KI values will occur, representing high (0-8), average (0.5), and low (0.3) water requiring conditions.

When water requirements are averaged across a project, an average landscape coefficient results. For purposes of this formula, the value for the average 10 is 0.5. This represents a balance between high, moderate, and low. water use conditions.

Average Irrigation Efficiency (average IE) is derived from estimates of equipment and design efficiency (0-8 to 0.85) and management efficiency (0.8 to 0.85) using the following formula:

IE = design efficiency x management efficiency

The average irrigation efficiency for purposes of this formula is 0.65.

Therefore, 0.5 (KI)/ 0.65 (IE) = 0.8 (AP)

APPENDIX F: REFERENCE EVAPOTRANSPIRATION

In inches (Historical data extrapolated from 12-month normal year Eto maps and U.C. Publication 21426)

County: **San Benito**
City: **Hollister**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann. Eto
1.5	1.8	3.1	4.3	5.5	5.7	6.4	5.9	5.0	3.5	1.7	1.1	45.1

County: **Monterey**
City: **King City**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann. Eto
1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	6.5	5.2	2.2	1.3	49.6

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FINAL

WATER CONSERVATION PLAN

Adopted by Board of Supervisors - July 7, 1992
Resolution 92-82

SAN BENITO COUNTY
PLANNING DEPARTMENT

BEFORE THE BOARD OF SUPERVISORS, COUNTY OF SAN BENITO

A RESOLUTION ADOPTING THE)
FINAL SAN BENITO COUNTY)
WATER CONSERVATION PLAN)
_____)

RESOLUTION NO. 92-82

WHEREAS, On February 26, 1991, the Board passed and adopted Ordinance Number 594, "*An Urgency Ordinance Requiring the Development of a Water Conservation Plan and Requiring the Issuance of Building Permit to Conform to the Water Conservation Principles*";

WHEREAS, Section 3 of the ordinance provides for the preparation and adoption of a Preliminary Water Conservation Plan. The "*San Benito County Preliminary Water Conservation Plan*" was adopted by the Board on June 4, 1991;

WHEREAS, Section 5 of the ordinance states: "Upon the completion of the county-wide hydrologic study, the board shall hold a public hearing to consider all relevant evidence on creating a Final Water Conservation Plan";

WHEREAS, The San Benito County Ground-Water Investigation was completed by the consultant Luhdorff and Scalanini in October, 1991;

WHEREAS, California Government Code (Chapter 3 of Division 1 of Title 7 of Article 10.8) requires that a copy of the adopted Final Plan be sent to the State by January 31, 1993;

WHEREAS, on July 7 _____, 1992, at a duly notice public hearing and considering the evidence presented at the hearing, the Board considered the content of the Final Water Conservation Plan.

NOW, THEREFORE BE IT RESOLVED by the Board of Supervisors of the County of San Benito hereby adopts the Final San Benito County Water Conservation Plan.

PASSED AND ADOPTED by the Board of Supervisors of the County of San Benito, State of California at the meeting of said board on the 7th day of July, 1992, by the following vote.

AYES: **SUPERVISORS:** M.Graves,Kesler,C.Graves,Bowling,Scagliotti
NOES: **SUPERVISORS:** None
ABSENT: **SUPERVISORS:** None

By: _____ 7/7/92
Chair
San Benito County Board of Supervisors

ATTEST

John R. Hodges
_____
JOHN R. HODGES, Clerk of the Board

By: Denise R. Thome
Denise R. Thome, Deputy Clerk

APPROVED AS TO LEGAL FORM
San Benito County Counsel

By: _____ 6/30/92
Date

TABLE OF CONTENTS

San Benito County
Final Water Conservation Plan

SECTION 1

PURPOSE AND SCOPE

This plan provides guidelines to deal with water shortage conditions which often exist within parts of California including the County of San Benito. This plan was adopted by the Board of Supervisors on July 7, 1992 (Resolution 82-82). This plan was adopted pursuant to Ordinance #594.

SECTION 2

FINDINGS

The Board of Supervisors finds, determines and declares as follows:

(a) San Benito County faces and has faced in recent years the tremendous pressure of residential growth.

(b) The demand for water service by water district and property owners is not expected to lessen.

(c) San Benito County relies extensively on groundwater for its water supply for all uses. Also, San Benito County received water from the federal water project known as the San Felipe Project. The San Felipe Project primarily supplies agriculture at the present time. It is the Board's intent that all runoff be used to the maximum extent feasible to recharge groundwater resources.

(d) The supply of water in California, particularly in the County of San Benito, is in jeopardy due to the present drought. The drought has not only affected the replenishment of the ground water but affects the supplies available to the San Felipe project as evidenced by recent cutbacks in the proposed supply.

(e) The County of San Benito is geographically in an area that is historically subject to periodic droughts of lengthy duration. Currently, we are in the fifth year of a devastating drought.

(f) For the foregoing reasons, the amount of water supply available to the County to serve the citizens is not and will not be adequate to meet the ordinary demands and requirements of water consumers without depleting the water supply of the County to the extent that there would be insufficient water for human consumption,

sanitation, fire protection and all other beneficial uses, and that these conditions are likely to continue to exist.

SECTION 3

DEFINITION OF PERSON

The following term is defined for the purpose of the plan:

(a) "Person" shall mean any individual person and any firm, partnership, corporation, business entity, district, agency, city, county and any other entity or organization.

SECTION 4

PROHIBITION OF CERTAIN USES

(a) No person shall waste water as used herein. The term "waste" means:

1. Use of potable water to irrigate grass, lawns, ground cover, shrubbery, crops, vegetation and trees between the hours of 10:00 a.m. and 6:00 p.m. in such a manner as to result in runoff for more than five (5) minutes.

2. Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas by direct application where sweeping will accomplish the same results.

3. Allowing potable water to escape from breaks within the persons' plumbing system for an unreasonable period of time after the break is discovered and reported.

4. Use of potable water for sewer system maintenance or fire protection training except as necessary.

5. Use of potable water for any purpose in excess of the amounts allocated below for each class of service.

SECTION 5

LIMITS ON CERTAIN USES

The following classes or uses are hereby created:

(a) "Single family residential" which consists of water service to land improved with structures designed to serve as a residence for a single family.

(b) "Multiple family residential" which consists of water service to land improved with structures designed to serve as or residence for more than a single family.

(C) "Non-residential" which consists of water service to land improved with structures designed to serve for other than residential uses. Commercial, recreational, charitable, agricultural and cultural uses are included within this class.

SECTION 6

WATER SAVING DEVICES

Any plumbing fixture in any existing structure which is replaced, added or moved must conform with the following criteria (all new construction shall adhere to these guidelines as well):

(a) Toilets must be ultra low flow toilets and use no more that 1.5 gallons of water per flush.

(b) Shower heads must use no more than 2.5 gallons of water per minute (ultra low flow shower heads).

(c) Kitchen and lavatory faucets must use no more than 2.0 gallons of water per minute.

(d) Flushometer type toilets and urinals shall be of a design that does not exceed 2.0 gallons per flush.

(e) All faucets in residential sinks and lavatories shall be equipped with faucet aerators and shall be of a design that limits the maximum flow to two gallons per minute. Water faucets for uses other than residential shall have aerators and limit the flow to a maximum of four gallons per minute and shall be equipped with automatic shut-off valves or be operated by front button or pedal valves.

(f) Fountains: No persons shall use water to operate or maintain levels in decorative fountains, unless such water is recycled in the fountain.

SECTION 7

MANDATORY CONSERVATION MEASURES ON WATER WASTE

(a) Repair of plumbing, sprinkler and irrigation systems. Any person who is the owner, manager, or person responsible for the day-to-day operation of any premises shall take action to initiate steps to repair any leaking, broken or defective water pipes, faucets, plumbing fixtures, other water service appliances, sprinklers, watering or irrigation systems, or distribution systems within a reasonable time after such person first learns of such leaks, breaks, or defects, and shall thereafter diligently and promptly pursue such repair work to completion.

(b) Washing of vehicles. No person shall use a water hose to wash any car, truck, boat, trailer, bus, recreational vehicle, camper, aircraft, tractor, or any other vehicle, or any portion thereof, unless the hose is equipped with an automatic shutoff nozzle.

(c) Cleaning of Structures. No person shall use potable water through a hose to clean the exterior of any building or structure unless such hose is equipped with a shutoff nozzle.

(d) Cleaning of Surfaces. No person shall use potable water through a hose to clean any sidewalk, driveway, roadway, parking lot, or any other outdoor paved or hard surfaced area, except where necessary to protect public health or safety. The use of a bucket is not prohibited at any time for cleaning food, grease, oil, or other stains or spillage from surfaces.

(e) Water Spillage. No person shall cause, suffer, or permit water to spill into streets, curbs, or gutters. No person shall use any water in any manner which results in runoff beyond the immediate area of use.

(f) Swimming Pools and Spas. No person shall empty and refill a swimming pool except to prevent or repair structural damage or to comply with public health regulations.

SECTION 8

RECLAIMED WATER

As appropriate, the installation of reclaimed water irrigation systems (dual distribution systems) may be required to allow for the current and future use of reclaimed water.

Irrigation systems shall make use of reclaimed water unless a written exception has been granted by the local water agency, stating that the reclaimed water meeting standards is not available and will not be available in the future. The reclaimed water irrigation systems shall be designed in accordance with the requirements of local and state regulatory agencies.

California Administrative Code Title 22, Division 4 provides the statutory requirements for wastewater reclamation and the California Department of Health Services has developed "Guidelines for Use of Reclaimed Water." This water conservation plan hereby encourages the use of reclaimed water to the maximum extent feasible.

Reclaimed water means water which, as a result of treatment of domestic wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. Beneficial use of reclaimed water in San Benito County include, but are not limited to the following:

- Spray irrigation of crops, landscaping, and golf courses.
- Surface irrigation of crops.
- Recreational impoundment.
- Landscape impoundment.
- Groundwater recharge.
- Construction purposes such as soil compaction and dust control.
- Mining purposes such as dust control and mineral processing.

SECTION 9

AGRICULTURAL

In regards to a water conservation plan, we would look to the farm bureau and Agricultural Commissioner and the agricultural community to offer recommendations for this section.

Agricultural water use is an important element of water conservation planning. The following should be considered by the agricultural community:

1. Irrigation audits can be designed to take into account a variety of crop evapotranspiration needs.
2. Crop tolerances to mineral and chemical concentrations in the soil and soil texture and quality must be taken into account when designing a water conservation program for agriculture.
3. Current irrigation water losses to deep percolation, runoff, and spray evaporation can be minimized with prescribed irrigation schedules.

SECTION 10

WATER EFFICIENT LANDSCAPE PLAN

I. INTRODUCTION

Landscapes are essential to the quality of life in California. They provide areas-for recreation and can enhance the environment. In addition, landscapes offer people respite and psychological benefits as well as cultural and social framework and character. With careful planning and maintenance, our landscapes can be safe. attractive, useful, and environmentally sound.

It is the intent of this Plan to promote the values and benefits of our landscapes while recognizing the need to invest water, an increasingly limited resource, and our other resources as efficiently as possible.

This Water Efficient Landscape Plan has been prepared in response to the Water Conservation in Landscaping Act, Assembly Bill 325, Statutes of 1990, Chapter 1145.

The purpose of this Plan is to establish a structure for designing, installing, and maintaining water efficient landscapes in new projects. Provisions for water management practices and water waste preventions for established landscapes are also included.

Some of the features included in the Plan are:

* Calculation of a water budget and estimated water use.
* Appropriate plant selection and grouping in hydrozones.
* The use of reclaimed water.
* Landscape meters, automatic controllers, and rain switches.
* Design plans for landscape, irrigation, and grading including a water conservation concept statement.
* Monthly irrigation schedules.
* Schedules for ongoing maintenance.
* Water management practices and waste water prevention for existing landscapes.
* Soil tests.
* Education about water efficient landscapes provided.

II. APPLICABILITY

This Plan applies to all new and rehabilitated landscaping for public projects and private development projects including golf courses. Developer-installed landscaping in single-family residence, duplex, and triplex projects is subject to the Plan.

Homeowner-provided landscaping at single family residence, duplex. and triplex lots is excluded.

III. PROVISIONS FOR NEW OR REHABILITATED LANDSCAPES

All new and rehabilitated landscaping for projects listed above shall be subject to the following provisions.

A. Maximum Allowable Water Budget

For design purposes, a maximum allowable water budget is the upper limit of annual water use for the established landscaped area. It is based upon the area's average year climate and the size of the landscaped area. While this figure represents the maximum amount of water to be used on the landscaped area, designing a project to use less water is encouraged whenever possible.

The basic formula for calculating a project's maximum allowable water budget is:

MAWB = (ETo) (0.8) (LA) (0.62)

MAWB	=	Maximum Allowable Water Budget (gallons per year).
Eto	=	Reference Evapotranspiration (inches per year).
0.8	=	Allowable Percentage.
LA	=	Landscaped Area (square feet).
0.62	=	conversion factor (to gallons per square feet).

THE VARIABLES

Reference Evapotranspiration (Eto)
Evapotranspiration (ET) is the amount of water that evaporates from the soil and transpires from the plants. Reference evapotranspiration (Eto) is a standard measurement of a large field of four- to seven-inch tall, cool season grass that is well watered. The historical average (normal) Eto of Hollister can be found in Appendix F

0-8: The Allowable Percentage (AP)
The allowable percentage for this calculation is 0.8. it is a factor based on an average plant mix and an average irrigation efficiency. The allowable percentage adjusts the standard measurement of Reference Evapotranspiration to produce the maximum amount of water budgeted annually for the landscape. For more information about the derivation of the allowable percentage, see Appendix E.

Landscaped Area (LA)
The landscaped area is the entire parcel less the building pad, driveways, non-irrigated portions of parking lots, hardscapes- such as decks and patios, and other non-porous areas.

Conversion Factor (0.62)
To calculate the maximum allowable water budget in gallons per year, the conversion factor is 0.62.

To convert gallons per year to 100-cubic-feet per year, another common billing unit for water, divide gallons per year by 748. (748 gallons = 100 cubic feet.)

EXAMPLE CALCULATIONS OF A MAXIMUM ALLOWABLE WATER BUDGET

SITE: Landscaped area of 50,000 square feet in Oakland, California.

MAWB = (ETo) (0.8) (LA) (0.62)
MAWB = (41 inches) (0-8) (50,000 square feet) (0.62)
Maximum Allowable Water Budget = 1,016,800 gallons per year

Portions of landscaped areas in public and private sites such as parks, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes may require additional water. A statement to that effect shall be included with the landscape design plan, designating areas to be used for such purposes and the amount of water required.

B. Estimated Water Use

The estimated water use of a project is the amount of water for the year to be used for the established landscape based upon the area's average year climate, the size of the landscaped area, the mix of plants selected, and the efficiency of the irrigation system.

The estimated water use for a landscaped area is composed of the sum of the estimated water use of all hydrozones in that landscaped area. A hydrozone is a subarea of the landscaped area having similar water use that is served by one valve or set of valves with the same settings. Here is a formula that can be used to estimate water use of a project:

EWU	=	(ETo) (KI/IE) (LA) (.62)
EWU	=	Estimated Water Use (gallons per year)
ETo	=	Reference Evapotranspiration (inches per year)
KI	=	Landscape coefficient
IE	=	Irrigation Efficiency
LA	=	Landscaped Area (square feet)
0.62	=	conversion factor

THE VARIABLES

The Landscape Coefficient (KI)

A landscape coefficient or aggregate plant factor is a factor used to modify ETo, based upon the estimated water use of a plant or group of plants. For purposes of this Plan, the landscape coefficient of low water using plants is 0.3, for average water using plants Is 0.5, and for high water using plants is 0.8. The landscape coefficient for cool season turf grass such as Kentucky bluegrass is 0.8. For warm season grasses such as bermuda, the landscape coefficient is 0.6.

Irrigation Efficiency (IE)

Irrigation efficiency is derived from estimates of equipment and design efficiency and management efficiency using the following formula:

IE = design efficiency x management efficiency

The minimum irrigation efficiency for purposes of this Plan is 0.65. Greater irrigation efficiency can be expected for large, flat, simply designed irrigation systems such as athletic fields.

The other variables, ETo, LA, and 0.62 are the same as in the Maximum Allowable Water Budget calculation.

The formula for the estimated water use of the project is the same as the maximum allowable water budget formula, except the allowable percentage of 0.8 is replaced by the landscape coefficient and irrigation efficiency factors. Thus, the maximum allowable water budget represents the upper limit of annual water use for the landscaped area based on average plant mix and average irrigation efficiency. The estimated water use represents an estimate of how much water that landscaped area will need for the year based upon the specific mix of plants and the estimated efficiency of irrigation system used for that project.

C. Plant Selection and Grouping

Plants shall be selected appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the site.

Plants having similar water use shall be grouped together in distinct hydrozones.

As long as the above criteria are met, any plants can be used in the landscape, providing the estimated water use of the project does not exceed the maximum allowable water budget.

D. Fire Resistive Plants

The selection of fire resistive plants (low fuel volume plants) is especially important in fire prone areas of California. These are plants with less flammable parts: more leaf than wood and less woody undergrowth.

For more information, contact your local fire department or the nearest California Department of Forestry office listed in your telephone directory under State of California.

E. Soils

Soils shall be amended for improving water holding properties as noted in the soils report. An organic mulch at least three inches deep shall be applied to all planting areas, except in turf or groundcover plantings.

F. Reclaimed Water

As appropriate, the installation of reclaimed water irrigation systems (dual distribution systems) shall be required to allow for the current and future use of reclaimed water.

Irrigation systems shall make use of reclaimed water unless a written exemption has been granted by the local water agency, stating that reclaimed water meeting all health standards is not available and will not be available in the foreseeable future. The reclaimed water irrigation systems shall be designed in accordance with the requirements of local and state regulatory agencies.

G. Irrigation Systems

When creating the irrigation design, the following criteria shall be followed:

1) Runoff and Overspray. Soil types and infiltration rate shall be considered when designing irrigation systems on slopes and level terrains. All irrigation systems shall be designed to avoid runoff, seepage, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, shall be used to closely match application rates to infiltration rates therefore minimizing runoff.

   Special attention shall be given to avoid runoff on slopes greater than 10 percent and to avoid overspray in planting areas with a width less than ten feet, or in median strips.

   No overhead spray irrigation systems that are subject to wind drift shall be installed in median strips less than ten feet wide.

2) Water Coverage and Uniformity. For the purpose of determining the maximum allowable water budget, irrigation efficiency shall be assumed to be 0.65. Some projects will exceed this level of efficiency. When calculating the estimated water use of the project, irrigation efficiency shall be at least 0.65.

3) Equipment.

Meters. Separate landscape meters shall be installed for the irrigation system, except for single family homes.

Controllers. Automatic control systems are required for all projects and must be able to accommodate all aspects of the design.

Valves. Plants which require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low-spot drainage, runoff, and subsequent erosion from low elevation sprinkler heads.

Sprinkler heads. Heads and emitters shall have consistent precipitation rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, precipitation rate, operating pressure, adjustment capability, and ease of maintenance.

Miscellaneous Devices. All systems shall conform to local backflow and cross connection codes. Rain sensing override devices are required on all irrigation systems. Moisture sensing devices are encouraged where appropriate.

H. Water Features

Recirculating or reclaimed water shall be used for decorative water features. Functional water features (such as swimming pools) and decorative water features shall be shall be included in the landscaped area calculation and considered as a high water using hydrozone. Pool and spa covers are encouraged when appropriate.

I. Maintenance

Landscapes shall be carefully and competently maintained to ensure water efficiency and high quality appearance. A regular maintenance schedule shall include but not be limited to checking, adjusting, and repairing the irrigation equipment; resetting the automatic controller; aerating and dethatching turf areas: replenishing mulch; fertilizing; pruning, weeding, and removing litter in all landscaped areas.

J. Water Management

Water management practices at a minimum shall be in accordance with the State of California Landscape Water Management Program (Landscape Irrigation Audits.) Whenever possible, irrigation scheduling shall incorporate evapotranspiration data such as that from the California Irrigation Management Information System (CIMIS) weather stations to apply the appropriate levels of water for different climates. Landscape irrigation audits shall be conducted by certified landscape irrigation auditors at least once every five years.

Whenever possible, landscape irrigation shall be scheduled between 8:00 pm and 8:00 am to avoid irrigating during times of high wind or high temperature.

K. Public Education

1) Publications. Information shall be provided to all new, single family residential home owners regarding the design and installation of water efficient landscapes. Information about the efficient use of water shall be provided to water users throughout the community.

2) Model Homes. At least one model home in each project subject to this Plan shall be used as a demonstration of the principles of water efficient landscapes described in this Plan. Signs shall be used to identify the model as an example of a water efficient landscape and featuring elements such as plant zones, irrigation equipment and others which contribute to the overall water efficient theme.

IV. PROVISIONS FOR EXISTING LANDSCAPES

These provisions apply to unincorporated San Benito County area water purveyors.

A. Water Management

All existing large, landscaped areas (one acre or more), including golf courses, green belts, common areas, multi-family housing, schools, businesses, parks, cemeteries, parks, and publicly owned landscapes shall be audited at least every five years. If the project's water bills indicate that they are using less than or equal to the maximum allowable water budget for that project site, an audit shall not be not required.

B. Water Waste Prevention

Wasteful runoff, seepage, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures shall be prohibited.

V. PROJECT SUBMITTAL/DOCUMENTATION PROCEDURES

Each project submittal requires the following elements:

A. Water conservation concept statement.
B. Maximum allowable water budget calculation.
C. Landscape design plan, Including estimated water use calculation.
D. Irrigation design plan.
E. Irrigation schedules.
F. Maintenance schedules.
G. Landscape irrigation audit schedule.
H. Grading design plan.
I. Soil test

A. Water Conservation Concept Statement

A Water Conservation Concept Statement is a one-paged checklist and narrative summary of the entire project submittal package. See Appendix B for a suggested format for a water conservation concept statement. A copy of the Water Conservation Concept Statement shall be sent to the local water agency along with the Certificate of Substantial Completion.

B. Maximum Allowable Water Budget

For design purposes, the maximum allowable water budget is the upper limit of annual water use for the established landscaped area. See Provisions Section IIIA for more information.

C. Landscape Design Plan

The landscape design plan shall be drawn on project base sheets at a scale that shall accurately and clearly identify:

* Landscape materials, trees, shrubs, groundcover, turf, etc. Planting symbols shall be clearly drawn and plants labeled by botanical name, common name, container size, spacing, and quantities of each group of plants indicated.
* Property lines and street names.
* Streets, driveways, walkways, and other paved areas.
* Pools, ponds, water features, fences, and retaining walls.
* Existing and proposed buildings and structures including elevation if applicable.
* Natural features including rock outcroppings, existing trees, shrubs, etc. that will remain.
* Tree staking, soil preparation details, and any other applicable planting and installation details.

* A calculation of the total landscaped area: including the entire parcel less the building pad, driveways, the non-irrigated portions of parking lots, hardscapes-such as decks and patios, and other non-porous areas.
* Designation of hydrozones: a subarea of the landscaped area having similar water use that is served by one valve or set of valves with the same settings. A hydrozone may be non-irrigated, for example a naturalized area.
* A calculation of the estimated water use of the landscaped area. The estimated water use shall not exceed the maximum allowable water budget. See Provisions Section IIIB for more information.

D. Irrigation Design Plan

The Irrigation design plan shall be drawn on project base Sheets. It should be separate from, but use the same format as, the landscape design plan.

1) The scale shall be the same as that used for the landscape design plan.
2) The irrigation design plan shall accurately and clearly identify:
   Location of separate landscape meters.
   * Location, type, and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, and backflow prevention devices.
   * Static water pressure at the point of connection.
   * Flow rate (gallons per minute), precipitation rates (inches per hour), and design operating pressure (psi) for each station.
   * Reclaimed water irrigation systems as described in the Provisions Section IIIF.
3) Irrigation systems shall be designed to be consistent with hydrozones.

E. Irrigation Schedules

An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape, and for any temporarily irrigated areas.

The irrigation schedule shall include run time (in minutes per cycle) and frequency of irrigation for each station. The irrigation schedule shall provide the amount of irrigation water (in hundred cubic feet, gallons, or in whatever billing units the local water supplier uses) recommended on a monthly basis. The total amount of irrigation water recommended in the irrigation schedule for the established landscape shall not exceed the project's maximum allowable water budget.

F. Maintenance Schedule

A schedule for ongoing maintenance shall be prepared, reflecting maintenance tasks including those listed in Provisions Section III 1.

G. Landscape Irrigation Audit Schedules

Landscape irrigation audits, described in Provisions Section III J, shall be scheduled and conducted at least every five years.

H. Grading Design Plan

The grading design plan shall be drawn on project base sheets. It should be separate from but use the same format as the landscape design plan. The grading design plan shall indicate finished configurations and elevations of the landscaped area, including the height of graded slopes, pad elevations, and finish grade.

I. Soil Test

A soils report shall be prepared and submitted with the plans. As a minimum, the following shall be included:

1) Determine soil texture, indicating the percentage of organic matter.
2) Approximate soil infiltration rate (either measured or derived from soil texture/infiltration rate tables.) A range of infiltration rates should be noted where appropriate.
3) Measure of Ph, and total soluble salts.
4) Recommendations for improving soil conditions to maximize water use efficiency.

A copy of the entire project submittal package shall be delivered to the owners site manager along with the record drawings and any other information normally forwarded to the owner/site manager. A copy of the water conservation concept statement shall be sent to the local water district.

VI. CERTIFICATION

Upon completion of the installation of the landscaping and the irrigation system, an irrigation audit shall be conducted prior to the final field observation. A licensed landscape architect, designer, or contractor shall conduct a final field observation and shall provide a certificate of substantial completion which shall specifically include reference to the landscaping, automatic irrigation system and the irrigation audit, along with a punch list of any observed deficiencies to the Owner of Record. Certification shall be accomplished by completing the Certificate of Substantial Completion form in Appendix E and delivering it to the county and to the local water supplier.

SECTION 11

MANDATORY ENFORCEMENT

(a) The provisions of this plan shall be enforced by the Planning Director and Building Official or his or her designee. Building permits shall only be issued in compliance with this plan.

APPENDIX A: DEFINITIONS

"allowable percentage": The allowable percentage for determining the maximum allowable water budget is 0.8. This represents a factor including consideration of an average landscape coefficient and irrigation efficiency. See page 10 for a more complete discussion.

"amendment": Additions to the soil, such as compost, leaf mold, peat moss, ground bark, which improve aeration and drainage of clay soils and help hold water in sandy soils.

"anti-drain valve": A valve located under a sprinkler head to hold water in the system so it does' not drain out of the lower elevation sprinkler heads.

"application rate": The depth of water applied to a given area in one hour, usually measured in inches per hour.

"automatic controller": A mechanical or solid state timer, capable of operating valve stations to set the days and length of time of a water application.

"backflow prevention device": A safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"distribution uniformity": A measure of how evenly water is applied over an area. (scientific: The ratio of the average low quarter depth of irrigation water infiltrated to the average depth of irrigation water infiltrated, expressed as a percent.)

"emitter": Fittings that deliver water slowly through small openings from the lateral line to the plant.

"established landscape": The point at which plants in the landscape have established themselves into the adjacent soil.

"establishment period": For purposes of this Plan, the first year after installing the plant in the landscape. The actual establishment period varies depending upon the plant species, the development of the plant's root system, soil conditions, and other environmental factors.

"estimated water use": The amount of water the designer estimates that the project will need on an annual basis. The estimated water use cannot exceed the maximum allowable water budget. See Provisions Section III B for a suggested formula and more information.

"evapotranspiration": The quantity of water evaporated from adjacent soil surfaces, transpired by plants, and retained in plant tissue during a specific time.

"flow rate": The rate at which water flows through pipe fittings and valves.

"fire resistive plants (low volume fuel plants)": Those with less flammable parts: more leaf than wood and less woody undergrowth.

"hydrozone": A portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same setting. A hydrozone may be non-irrigated, for example, a naturalized area.

"infiltration rate": The rate of water entry into the soil expressed as a depth of water per unit of time in inches per hour. The infiltration rate changes with time during an irrigation.

"irrigation efficiency": The measurement of the amount of water beneficially used divided by the amount of water applied.

"landscape coefficient": The functional equivalent of a crop coefficient in agriculture. When multiplied lames Eto, it estimates the amount of water required to maintain landscape plants in good condition.

"landscape irrigation audit": A process to perform site inspections, evaluate irrigation systems. and develop efficient irrigation schedules.

"landscaped area": The entire parcel less the building pad, driveways, non-irrigated portions of parking lots, hardscapes such as decks and patios, and other non-porous areas.

"lateral line": The water delivery pipeline that supplies water to the emitters or sprinklers from the main line.

"main line": The pipeline that delivers water from the water source to the lateral lines.

"mature landscape": See "established landscape".

"maximum allowable water budget": For design purposes, the upper limit of annual water use for the established landscaped area. It is based upon the area's average year climate and the size of the landscaped area.

"moisture sensing device": A device that measures the moisture condition of the soil in a variety of ways.

"mulch": Any material such as leaves, bark, or straw left loose and applied to the soil surface to prevent evaporation.

"operating pressure": The pressure at which a system of sprinklers operates. (Static pressure minus pressure losses.) This is usually indicated at the base or nozzle of a sprinkler.

"overspray": When sprinklers deliver water beyond the landscaped area, wetting pavements, walks, structures, or other non-landscaped areas.

"percolation": The movement of water through the soil.

"potable water": Water which is meant for human consumption.

"precipitation rate": The rate at which water is applied, usually expressed in inches per hour.

"pressure compensating bubbler": A sprinkler head useful for watering trees and shrubs with water basins: produces a reduced flow of water that bubbles on the soil.

"quick coupling system": A sprinkler system which uses permanently installed valves and sprinklers that can be moved from valve to valve.

"rain switch or rain shut off valve": Measures rainfall and automatically shuts off the irrigation system when water reaches a certain level.

"reclaimed water": Treated or recycled water of a quality suitable for non-potable uses such as landscape irrigation; not intended for drinking.

"record drawing": A set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

"reference evapotranspiration (Eto)": A standard measurement of evapotranspiration for a large field of 4- to 7 inch tall, cool season grass that is well watered.

"run off": Water which is not absorbed by the soil or landscape to which it is applied. Run Off occurs when water is applied at too great a rate or when there is a severe slope.

"soil texture": The classification of soil based on the percentage of sand, silt, and clay in the soil.

"sprinkler head": A device which discharges water through a nozzle.

"static water pressure": The pipeline or municipal water supply pressure when water Is not flowing.

"station": An area served by one valve or set of valves that operate simultaneously.

"turf": A surface layer of earth containing grass with its roots.

"valve": A device used to control the flow of water in the irrigation system.

"water conservation concept statement": A one-paged checklist and narrative summary of the project. See Appendix D for a sample statement.

APPENDIX B: SAMPLE WATER CONSERVATION CONCEPT STATEMENT

Project Site:
Project Number:
Project Location:

Landscape Architect/Designer/Contractor:

Included in this project submittal package are:
(Check indicating completion)

A. A Maximum Allowable Water Budget
   Reference ET (inches per year)
   Landscaped Area (square feet)
   Water Budget (gallons or cubic feet per year)
B. A Landscape Design Plan
   Estimated Water Use (gallons or cubic feet per year)
C. An Irrigation Design Plan
D. Irrigation Schedules
E. A Maintenance Schedule
F. A Landscape Irrigation Audit Schedule
G. A Grading Design Plan
H. A Soil Test

Description of Project:

APPENDIX C: SAMPLE CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Site: Project Number:

Project Location:

Preliminary Project Documentation Submitted: (check indicating submittal)

A. Maximum Allowable Water Budget
   reference ET (inches per year)
   landscaped area (square feet)
   water budget (gallons or cubic feet per year)
B. Landscape Design Plan estimated water use (gallons or cubic feet per year)
C. Irrigation Design Plan
D. Irrigation Schedules
E. Maintenance Schedule
F. Landscape Irrigation Audit Schedule
G. Grading Design Plan
H. Soil Test

Post-installation Inspection: (Check indicating substantial compliance)

A. Plants installed as specified
B. Soils amended as noted in soils report
C. Irrigation system installed as designed
   dual distribution system for reclaimed water
   minimal run off or overspray

Project submittal package and a copy of this certification has been provided to owner/manager and local water agency

I/we certify that work has been installed in accordance with the contract documents.

Contractor Signature Date State License Number

I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the Water Efficient Landscape Plan and that the landscape planting and irrigation installation conform with the approved plans and specifications.

Landscape Architect Signature Date State License Number

(Certificate of Substantial Completion, continued)
I/we certify that I/we have received all of the contract documents and that it is our responsibility to see that the project is maintained in accordance with the contract documents.

_____

Owner Signature Date

APPENDIX D: EXAMPLE CALCULATIONS FOR MAXIMUM ALLOWABLE WATER BUDGET AND ESTIMATED WATER USE

These two examples are for the same project in Fresno, California. While the total amount oil water will vary from one place in the state to another, the proportions of high, average, and low water using plants, will remain the same. These examples demonstrate that the following plant combinations are allowed within the water budget.

20% high water using plants; 40% average; 40% low

30% high water using plants; 20% average; 50% low
MAWB=(Eto) (0.8) (LA) (0.62)
EWU=(Eto) (KI/IE) (LA) (0.62)

MAWB=Maximum Allowable Water Budget (gallons per year)
Eto= Reference Evapotranspiration (inches per year)
0.8= Allowable Percentage
LA= Landscaped Area (square feet)
0.62=Conversion Factor (to gallons per square feet)

EWU=Estimated Water Use (gallons per year)
KI=Landscape Coefficient
IE=Irrigation Efficiency

PROJECT SITE ONE: Landscaped area of 50,000 square feet in Fresno California

MAWB = (Eto) (.8) (LA) (.62)
= (51 inches) (.8) (50,000 square feet) (.62)
Maximum Allowable Water Budget=1,264,800 gallons per year

EWU = (Eto) (KI/IE) (LA) (.62)

Hydrozone 1 (H1) is 20% of LA with KI .8(high water using plants)
Hydrozone 2 (H2) is 40% of LA with KI .5(average water using plants)
Hydrozone 3 (H3) is 50% of LA with KI .3(low water using plants)

(H1) = (51 inches) (.8/.65) (10,000 square feet) (.62) = 389,169 gal.
(H2) = (51 inches) (.5/.65) (20,000 square feet) (.62) = 486,461 gal.
(H3) = (51 inches) (.3/.65) (20,000 square feet) (.62) = 291,876 gal.

Estimated Water Use = (H1)+(H2)+(H3) =1,167,506 gallons per year

EWU of 1,167,506 is less than MAWB of 1,264,800

PROJECT SITE TWO: Landscaped area of 50,000 square feet in Fresno, California

MAWB = (ETo) (.08) (LA) (.62)
= (51 inches) (.8) (50,000 square feet) (.62)

Maximum Allowable Water Budget = 1,264,800 gallons per year

EWU = (ETo) (KI/IE) (LA) (.62)
Hydrozone 1 (H1) is 30% of LA with KI .8(high water using plants)
Hydrozone 2 (H2) is 20% of LA with KI .5(average water using plants)
Hydrozone 3 (H3) is 50% of LA with Ki .3(low water using plants)

(H1)= (51 inches) (.8/.65) (15,000 square feet) (.62) = 583,753 gal.
(H2)= (51 inches) (.5/.65) (10,000 square feet) (.62) = 243,230 gal.
(H3)= (51 inches) (.3/.65) (25,000 square feet) (.62) = 364,846 gal.

Estimated Water Use = (H1)+(H2)+(H3) = 1,191,829 gallons per year

EWU of 1,191,829 is less than MAWB of 1,264,800

APPENDIX E: DERIVATION OF THE ALLOWABLE PERCENTAGE

This allowable percentage is derived from the following formula:

$$AP\ (0.8) = \frac{\text{average KI (0-5)}}{\text{average IE (0-65)}}$$

The average landscape coefficient (average KJ) is a functional equivalent of a crop coefficient for landscapes. When multiplied times Eto, ft estimates the amount of water required to maintain landscape plants in good condition. Since species and site conditions vary at a project location, a range of KI values will occur, representing high (0-8), average (0.5), and low (0.3) water requiring conditions.

When water requirements are averaged across a project, an average landscape coefficient results. For purposes of this formula, the value for the average 10 is 0.5. This represents a balance between high, moderate, and low. water use conditions.

Average Irrigation Efficiency (average IE) is derived from estimates of equipment and design efficiency (0-8 to 0.85) and management efficiency (0.8 to 0.85) using the following formula:

IE = design efficiency x management efficiency

The average irrigation efficiency for purposes of this formula is 0.65.

Therefore, 0.5 (KI)/ 0.65 (IE) = 0.8 (AP)

APPENDIX F: REFERENCE EVAPOTRANSPIRATION

In inches (Historical data extrapolated from 12-month normal year Eto maps and U.C. Publication 21426)

County: **San Benito**
City: **Hollister**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann. Eto
1.5	1.8	3.1	4.3	5.5	5.7	6.4	5.9	5.0	3.5	1.7	1.1	45.1

County: **Monterey**
City: **King City**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann. Eto
1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	6.5	5.2	2.2	1.3	49.6

Index

Appendix K
Retailer Water Rates

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Current Water Rates for City of Hollister

5/8" Meter Base Charges $13.29

¾" Meter Base Charges $13.29

1" Meter Base Charges $28.16

1 ½" Meter Base Charges $52.68

2" Meter Base Charges $78.95

3" Meter Base Charges $155.53

4" Meter Base Charges $232.13

6" Meter Base Charges $461.93

Residential customers are billed in three tiers dependent on usage.

1st Tier: 0 to 900 cubic feet $0.038/ per cubic foot

2nd Tier: 901 to 1500 cubic feet $0.0554/ per cubic foot

3rd Tier: 1501 cubic feet and up $0.0634/ per cubic foot

All other users (landscape, commercial, industrial and construction)

$0.0439/ per cubic foot

Sunnyslope County Water District
Summary of Rates & Fees

Sunnyslope County Water District is committed to providing the best quality service for the least possible cost. The District's rate structure is designed to be sufficient enough to cover the cost of operations, maintenance, administration, and capital improvement projects for the water and wastewater systems.

Water Rates, Effective Beginning December 21, 2018:

The District assesses 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 water rates were approved by the Board of Directors on August 6, 2013 by Ordinance No, 73, and current rates took effect on December 21, 2018.

Customer Class of Service	Monthly 5/8"–3/4"–1" Meter Service Charge *	Monthly Single-Family Consumption Charge (per 100 cu ft)	Monthly Non-Single Family Consumption Charge (per 100 cu ft)
Inside District and SBCWD Zone 3	$ 32.54		
Tier 1: First 1000 cu ft		$ 3.17	
Tier 2: 1100 – 2000 cu ft		$ 4.70	
Tier 3: Over 2100 cu ft		$ 6.97	
All water consumption			$ 4.22
Inside District and Outside SBCWD Zone 3	$ 32.54		
Tier 1: First 1000 cu ft		$ 3.23	
Tier 2: 1100 – 2000 cu ft		$ 4.76	
Tier 3: Over 2100 cu ft		$ 7.03	
All water consumption			$ 4.28

* For the monthly service charge rates on other meter sizes and fire service meters, call the District office at (831) 637-4670.

In 2018, per the District's *2018 Water Quality Report*, the average single-family customer in the District used 1,186 cubic feet (cu. ft.) or 8,872 gallons of water per month. March was the lowest month with an average of 716 cu. ft. or 5,356 gallons and July was the highest month with an average of 1,817 cu. ft. or 13,591 gallons.

Examples of Monthly Water Charges for Various Quantities of Water Used, based on Inside District Rates for a single-family residence with a 5/8", 3/4", or 1" meter as shown above:

Cu. Ft. Used	Amount Billed
1200	$ 73.64
1700	$ 97.14
2000	$ 111.24

Cu. Ft. Used	Amount Billed
2500	$ 146.09
3000	$ 180.94
3500	$ 215.79

Sunnyslope County Water District
Summary of Rates & Fees

Cu. Ft. Used	Amount Billed
4000	$ 250.64
4500	$ 285.49
5000	$ 320.34
5500	$ 355.19
6000	$ 390.04

Cu. Ft. Used	Amount Billed
6500	$ 424.89
7000	$ 459.74
8000	$ 529.44
10000	$ 668.84
12000	$ 808.24

Sewer Rates, Effective Beginning December 21, 2014:

The District currently charges residential sewer customers a monthly service charge plus a monthly volume charge based on the average amount of water consumed** for household purposes. Non-residential sewer customers are assessed a volume charge based on metered water usage. The sewer rates were approved by the Board of Directors on August 6, 2013 by Ordinance No. 74 and current rates took effect on December 21, 2014. The sewer rates were amended to put a cap on average winter water use in drought years by Ordinance No. 71, which took effect May 3, 2012.

Customer Classification	Monthly Sewer Rates
Single-Family Residential Dwelling (SFR)	$ 95.93 plus $ 5.64 per HCF **
Multiple-Family Residential Dwelling (MFR)	$ 72.98 per unit, plus $ 5.64 per HCF **
Cottages, Motels, Trailer Parks, Laundries, etc.	$ 9.20 per HCF of metered water use
Commercial and Industrial	$ 12.14 per HCF of metered water use

HCF – Hundreds of Cubic Feet (based on metered water usage)

** The consumption charge of $5.64 per HCF for single- and multi-family dwellings is charged based on the average winter water usage for February and March, and is updated each April. In drought years, as determined by the Board of Directors, customers whose average winter water usage increased by 4 or more HCF for February and March over the prior year, will have their increase capped at the prior year average plus 4 HCF.

Capacity Charges, Effective Beginning July 1, 2020

The water and sewer capacity charges (connection fees) were approved by the Board of Directors on August 6, 2013, by Ordinance No. 75. The current charges became effective July 1, 2020. The capacity charges can be adjusted by the Board of Directors annually by reference to the Engineering News Record (ENR) index.

Water Capacity Charges ***

Meter Size	Water Meter Capacity Charge	Meter Installation	Total
5/8”–3/4”–1”	$ 11,700.00	$ 405.00	$ 12,105.00
1 1/2”	$ 23,475.00	$ 685.00	$ 24,160.00
2”	$ 37,525.00	$ 880.00	$ 38,405.00

*** To get capacity and meter installation charges on other meter sizes for water and/or fire service, please call the District office at (831) 637-4670.

Sunnyslope County Water District
Summary of Rates & Fees

Sewer Capacity Charges

Customer Classification	Sewer Capacity Charge	Installation Fee	Total
Single-Family Residential	$ 21,125.00	$ 25.00	$ 21,150.00
Multi-Family Residential	$ 15,850.00 per unit	$ 25.00 ea.	
2-Family Unit	$ 31,700.00	$ 50.00	$ 31,750.00
3-Family Unit	$ 47,550.00	$ 75.00	$ 47,625.00
Cottages, Motels, Trailer Parks, Laundries, etc	$ TBD	$ TBD	$ TBD
Commercial and Industrial	$ TBD	$ TBD	$ TBD

TBD –Sewer capacity charges are to be determined by the District Engineer.

Miscellaneous Rates and Fees, Effective Beginning February 18, 2015:

The miscellaneous rates and fees were approved by the Board of Directors in February, 2015, by Resolution No. 536, which took effect on February 18, 2015.

Deposits Required (Refundable after 3 years of good payment history)**:**			
Total Deposit	**Water Deposit**	**Sewer Customer of:**	**Sewer Deposit**
$ 400.00	$ 125.00	Sunnyslope	$ 275.00
$ 300.00	$ 125.00	City of Hollister	$ 175.00
$ 800.00	**Fire Hydrant Deposit**		

Delinquent Account Penalty:	
Late Fee of 10.0% (basic one-time penalty), PLUS 0.5% continuing penalty on unpaid balance	

Miscellaneous Fees:	
$ 175.00	**Call-Out Fee** — Charged when District staff is called out to turn water on or off after normal working hours.
$ 50.00	**Reconnection Fee** — Charged when water service is shut-off for non-payment and must be paid before water service is re-started.
$ 30.00	**Returned Check (or ACH) Fee** — Charged when a payment is returned by the bank as uncollected for any reason.
$ 10.00	**Administrative Collection Fee** — Charged when a shut-off notice or door hanger delivery is processed on a past due account.
$ 50.00	**Property Lien Filing Fee** — Charged when the District files a lien for a balance due on a delinquent account.

Appendix L
Public Outreach

Water Resources Association of San Benito County
Committee Meeting

Thursday, April 1, 2021
4:00 pm

ZOOM MEETING

AGENDA

Assistance for those with disabilities: If you have a disability and need accommodation to participate in the meeting, please call Barbara Mauro, Board Clerk, at (831) 637-8218, 48 hours prior to meeting for assistance so the necessary arrangements can be made.

On March 12, 2020, Governor Newsom issued Executive Order N-25-20, which enhances State and Local Governments' ability to respond to COVID-19 Pandemic based on Guidance for Gatherings issued by the California Department of Public Health. The Executive Order specifically allows local legislative bodies to hold meetings via teleconference and to make meetings accessible electronically, in order to protect public health. There will be NO physical location of the meeting for members of the public. Members of the public may participate telephonically. Members of the public participating are instructed to be on mute during the proceedings and to speak only when public comment is allowed, after requesting and receiving recognition from the Board Chair.

Zoom Meeting Link:

Meeting ID: 991 2325 3779

Passcode: 199774

Dial-in Only

+1 669 900 9128

1. **Call to Order**
2. **Roll Call**: Director Judi Johnson, Council Member Tim Burns, Council Member Leslie Jordan, Director Sonny Flores
3. **Pledge of Allegiance**
4. **Acceptance of Agenda** (Any changes to the Agenda will conform to the Requirements of the Government Code [Brown Act])
5. **Public Comments:** Members of the public are invited to speak on any Water Resources Association of San Benito County policy matter not on this Agenda. Speakers will be limited to 5 minutes to address the Committee. Rebuttal will be limited to 3 minutes
6. **Approval of Minutes: February 4, 2021**
7. **Program Expenses for period February 1st through February 28th**
8. **Presentation on WRASBC Toilet Removal Program 2002-2020**
9. **Confirm WRASBC funding request for Environmental Literacy Program ($2000)**
10. **Program Manager's Report**
    - **Monthly Conservation Program Report (March 2021)**
    - **Water Awareness Month (May)**
    - **Update on UWMP and SGMA**
11. **Reports on Member Agencies from Committee Members**
12. **Next Meeting: Thursday, June 3rd @ 4pm via Zoom**
13. **Adjournment**

The garden highlights drought tolerant plants that were specifically chosen for our local climate and soil conditions. These plants can be found at most local nurseries. The garden also contains permeable pavers, dryscaping techniques, efficient irrigation equipment and different types of landscape cover that help reduce evaporation.

The Demonstration Garden serve as a practical teaching tool for all water users, including municipalities, property management firms, landscape professionals and homeowners

Some of the advantages of a water-wise garden are:

- Lower water consumption
- More water available for other uses and other people
- Less time and work needed for maintenance, making gardening simpler and less stressful
- Little or no lawn mowing (saves energy)
- If water restrictions are ever implemented, drought tolerant plants will tend to survive, while more traditional plants may be unable to adapt.

Ensuring a balance between water supply and water demand in San Benito County is vital to maintaining the economic prosperity for our region. Becoming better stewards in controlling the use of water is a great place to start.

The Water Resources Association is a locally-based agency focused on water resource management in San Benito County, representing the City of Hollister, the City of San Juan Bautista, Sunnyslope County Water District, and San Benito County Water District.

Water Resources Association Of San Benito County

30 Mansfield Road
Hollister, CA 95023
Phone: 831-637-4378
Fax: 831-637-7267
www.wrasbc.org

Water Resources Association of San Benito County

Water Wise Demonstration Garden

Water conservation ideas for your garden

"Promoting The Efficient Use of Water"

Water Resources Association Of San Benito County

Tel: 831-637-4378
www.wrasbc.org

Thank you!

The Water Resources Association of San Benito County would like to thank all the following individuals and companies for their generous contributions to help make this garden a reality:

Rosemary Bridwell, Landscape Designer
(831) 637-1700
*Provided the design plans for the garden

Pacific Interlock Pavingstone, Inc.
(831) 637-9163
*Provided and installed permeable pavers

Brigantino Irrigation, Inc.
(831) 636-1188
*Provided irrigation assistance

Hollister Landscape Supply
(831) 636-8750
*Provided plant and landscape assistance

West Coast Rubber Recycling
(831) 634-2800
*Provided shredded rubber landscape cover

Hope Services
(831) 637-8283
*Assists in maintaining the garden

Permeable Pavers

In the center of the garden are permeable pavers. Advantages and benefits of these paving stones are:

- Reduces water runoff and drainage problems
- Re-hydrates soil beneath a paved surface
- Helps control erosion
- Flow rate exceeds 1" of rain per hour
- Strong...over 8000 psi
- Reduces environmental impact of paved surfaces
- Dozen of uses

Plant List

Stroll through the garden with this brochure. If you have any questions or comments please contact us at: (831) 637-4378. The only plants you are allowed to pick are the tomato plants. Please be respectful and gentle to the garden!

Each plant or tree is numbered or labeled to correspond with the list below:

TREES

KEY:
T-1 Arbustus 'Marina' (Strawberry Tree)
T-2 Cercis Occidental (Western Redbud)
T-3 Lagerstromenia I. 'Centennial Spirit' (Crape Myrtle Multi Trunk)
T-4 Pistachia Chinensis (Chinese Pistache)

SHRUBS

KEY:
S-1 Abelia Grandiflora (Shiny Albelia)
S-2 Ceanothus 'Carmel Creeper' (Carmel Creeper)
S-3 Ceanothus 'Julia Phelps' (Julia Phelps)
S-4 Cistus Purpureus (Rock Rose)
S-5 Cotoneaster Horizontalis (Rock Cotoneaster)
S-6 Moraea Iridioides (Butterfly Iris)
S-7 Nandina Dom. 'Gulf Stream' (Gulf Stream Nandina)

VINE

KEY:
V-1 Lonicera Japonic (Honey Suckle)

PERENNIALS

KEY:
P-1 Artemisia 'Silver Mound' (Artemisia)
P-2 Achillea 'Pastel Mix' (Yarrow 'Pastel Mix')
P-3 Cerastium Tomentosum (Snow-in-Summer)
P-4 Correa Pulchella (Australian Fuchsia)
P-5 Echinaceae Purpurea (Purple Cornflower)
P-6 Erigeron Karvinskianus (Santa Barbara Daisy)
P-7 Gaura Lindheimeri (Gaura)
P-8 Hemerocallis Hybrid Yellow (Day Lily Yellow)
P-9 Lantana Sellowiana Purple (Training Lantana)
P-10 Lavendula Vera (English Lavender)
P-11 Lavatera Bicolor (Mallow)
P-12 Oenothera Berlandieri (Mexican Primrose)
P-13 Penstemon Gloxiniodes (Apple Blossom)
P-14 Salvia Leucantha (Mexican Salvia)
P-15 Salvia Greggii (Autumn Sage)
P-16 Zauschneria Californica (California Fuschia)

GROUND COVER

KEY:
GC-1 Osteopermum Fruticosum (African Daisy)
GC-2 Rosmarinus Officinalis (Trailing Rosemary)

ORNAMENTAL GRASS

KEY:
OR-1 Festuca Ovina Glauca (Sheep Fescue)
OR-2 Stipa Terracissima (Feather Grass)

Irrigation System

KEY:
IS-1—Hunter Smart Valve Controller. The Hunter SVC mounts to a valve solenoid quickly and easily. Without screws, drills, or additional wires and the unit is constructed to handle the harsh environment of a valve box. The SVC operates off a single 9-volt battery. Ideal for isolated sites or power restricted areas. It's also easy to program with an easy to read LCD display. Up to nine start times are available, offering the flexibility to handle a variety of needs.

IS-2—Drip line: Dura-Flo Jr 1/4" Dripper line is a snap to install. It comes with 6" and 12" spacing to fit your garden needs and gives precise watering just where you need it. With its turbulent flow and internal self cleaning features it's remarkably clog resistant! The flow rate can be controlled based on amount of pressure on the line.

IS-3—Micro sprayers: These are available in a full range of patterns and include the popular rotor-type variety. The flow rate of these sprinklers is fully adjustable by hand turning the built-in valve. Control the flow and you control the sprinkling area and the number of gallons used.

IS-4—Bublers: Flood and Stream Bubblers are designed to deliver water to individual plants or planting beds. Since the water "bubbles out" or is emitted in short, coarse streams, it's not subject to the rapid evaporation that affects finer spray heads. Emits 1/2 gallon to 5 gallons per hour.

Pilot Landscape Irrigation Hardware Rebate Program
Eligible Products and Program Requirements

From the Water Resources Association of San Benito County (WRASBC)

Over 50 percent of residential water is used for landscape purposes.
Of this amount, 50 percent is wasted due to overwatering or inefficient equipment.

The WRASBC is offering a 50% rebate (up to $100) for the purchase and installation of the following specific landscape irrigation hardware devices* that assist in conserving water. Labor costs to install these devices and taxes are not eligible to be rebated, only the following materials:

Hose timers: (Only Models Listed) Ideal for use with drip irrigation systems, soaker hoses and hose end sprinklers, a hose timer will shut off your sprinklers after a preset duration to conserve water and prevent overwatering. Just turn your water spigot on and set the timer.

Qualifying models for hose timers:

Claber - Rain Jet 'Video 2' Digital Available at: Ewing Irrigation in Gilroy	Claber - Rain Jet 'Logica' Rotary Knob Available at: Ewing Irrigation in Gilroy	Orbit – Green Thumb Digital or Rotary Knob Available at Ace or True Value Hardware in Hollister	Aquastar Available at: Brigantino Irrigation - Hollister

Rain sensors (Only Models Listed): A rain sensor is an irrigation shutoff device that prevents an automatic irrigation or sprinkler system from turning on during and after a rain storm. These devices override a scheduled irrigation when a water collection cup or sensor on the shutoff device detects water. (Available in wireless or hard wired versions).

Qualifying models for rain sensors:

Clik Hunter wireless Rain Sensor Available at: Ewing Irrigation – Gilroy Brigantino Irrigation - Hollister	Mini-Clik Hunter wired Rain Sensor Available at: Ewing Irrigation – Gilroy Brigantino Irrigation - Hollister	Toro –Wired Rain Sensor Available at True Value Hardware – Hollister Ewing Irrigation - Gilroy	Toro –Wireless Rain Sensor Available at True Value Hardware – Hollister Ewing Irrigation - Gilroy

Rotator nozzles (Hunter Industries Only): This is the perfect sprinkler for situations dealing with odd shaped areas or heavy soil conditions, like our local clay soils, that cause water run-off with normal pop-up sprinklers. MP Rotator sprinklers provide even watering to the lawn or garden area more slowly to allow the water to be absorbed by the soil.

Qualifying models for rotator nozzles and sprinkler body with pressure regulator:

MP1000 MP2000 MP3000 Available at Ewing Irrigation – Gilroy OR at Brigantino Irrigation - Hollister	MP Hunter MPR40 Sprinkler Body The MPR40 Sprinkler Body Built-in regulator set at 40 PSI • Factory-installed drain check valve

***Qualifying Landscape Irrigation Hardware is subject to change without notice**

The WRASBC has negotiated special pricing for their customers with Ewing Irrigation in Gilroy. They are a distributor for Hunter Industries. Their address and phone number is: 7170 Forest Street Gilroy, CA 95020 (408) 848-5515. Directions: From Highway 101: go to the 10th Street Exit. Make a left at the light at the end of the off-ramp. Then go to Chestnut Street and turn right. Take the 1st left onto East 9th Street. Take the 1st right onto Forest Street proceed to 7170 Forest Street. Reference Job Number 99182 to receive your discount.

Steps to Receive Your Rebate

Step 1: Make an appointment for a "**Pre-Qualification Inspection"** site visit with the Water Resources Association of San Benito County (WRASBC), **CALL 637-4378.** The pre-inspection will determine what landscape irrigation hardware can be used for your landscape area. You will be given a rebate application form stating what items you are qualified to purchase from the following landscape irrigation hardware: **MP Rotators, rain sensor or hose timer.**

Step 2: Purchase and install pre-qualified landscape irrigation hardware from a list of specific models that qualify under this program. A list of these products will be provided to you by the WRASBC representative during the Pre-Qualification Inspection. ALL hardware must be installed within **60 days** of the date of the Pre-Qualification Inspection.

Step 3: After installing landscape irrigation hardware call for a final "**Post-Installation Inspection**" appointment within **60 days** of the date of the **Pre-Qualification Inspection, CALL 637-4378.** A Water Resources Association representative will do a site visit to confirm approved landscape hardware is installed and develop an irrigation schedule for you to follow. Sales receipts are required for all rebates. If you have a contractor install landscape irrigation hardware ask for a separate invoice for materials stating: "Labor billed separately."

Step 4: Fill out the Pilot Landscape Hardware Rebate Application Form that was given to you at the time of the Pre-Qualification Inspection. Include the following: receipt for landscape irrigation hardware and a copy of your water bill. A Water Resources Association representative will collect these documents at the time of the **Post-Installation Inspection**. You will receive a 50% rebate on what you purchased up to $100 total (materials only – no labor or tax).

Eligibility Requirements

1. The Applicant applying for the rebate(s) must be a water customer of the City of Hollister, the City of San Juan Bautista or the Sunnyslope County Water District.
2. Only Pre-Qualified residents shall qualify for a rebate.
3. The purchase and installation of the landscape irrigation hardware must be installed within 60 days of the date of the Pre-Qualification Inspection. Only specific landscape irrigation hardware qualifies. A list of these products / models will be provided by the WRASBC representative at the time of the Pre-Qualification Inspection.
4. A rebate form will be given to you at the time of the **"Pre-Qualification Inspection"**. A representative from the WRASBC will pick this rebate form up from you, along with a copy of the sales receipt for the purchase of the irrigation hardware and water bill for your property during the **"Post-Installation Inspection"**.
5. Applicant must attach a legible copy of a valid, dated sales receipt to the rebate application to qualify along with a copy of your water bill.
6. Rebates shall be on a one-time basis per address and not to exceed $100 (materials only).
7. A Water Conservation staff member will conduct a Post-Installation Inspection of the property to verify installation within 60 days of the date of the Pre-Qualification Inspection. Your rebate application, sales receipt and water bill will be collected by a Water Resources Association representative at this time.
8. Note: Rebate amounts and specified products are subject to change without prior notice and based upon availability of funds and manufacturers products. This rebate program will expire when funds are depleted.
9. The applicant agrees to hold the Water Resources Association of San Benito County and its agents harmless for any liability for damages which arise from participating in this program.
10. Allow 6-8 weeks for processing AFTER Post Installation Inspection to receive your rebate.

Volume 16 Issue 1

Spring/Summer 2020

Water Conservation Update
Water Resources Association San Benito County

May is Water Awareness Month

Are you water efficient?

Over 50% of residential water use is for landscapes.

Spring and Summer Conservation Activities

- Use native plants or plants that require little water to thrive in our region.
- Plant turf grass only in areas where people will use it actively for recreation.
- Organize your landscape into hydro-zones. Hydro-zones are areas of landscape with plant and vegetation that have similar water requirements. This prevents over-watering some plants and under-watering others.
- Keep soil healthy and add compost to prevent water loss through evaporation.
- If watering with a hose, make sure it has a shut-off nozzle. (FREE from WRASBC)
- Water in the early morning to prevent water loss due to evaporation. Avoid watering when it is windy.

Other tips:

Check water bills for any instances of high water use, as this may be an indication of a leak.

If so, call the WRASBC for a FREE leak check.

This Year's Water Supply Outlook

Storm after storm has swerved away from California, and drought conditions have started to return.

A persistent storm track has kept winter storms to the north and east of California since December.

All reservoirs in Northern and Central California were filled to near- or above-average levels in mid-February, while levels in Southern California were slightly below average.

However, the Sierra Nevada only had about 44% of its average snowpack (February measurements) with a lot of ground to make up before the storm season ends in April.

Snowfall during the winter months is like California depositing money into a bank to be used later. The more snow that falls during the winter, the less likely the Golden State will have water issues later in the year.

Reservoirs will decline as long as it stays dry, and we'll soon be waiting for the snowpack to melt to keep the water running for Californians.

NOAA's Climate Prediction Center says Northern California will continue deeper into drought through the end of April, citing that the "persistent high pressure over the North Pacific Ocean is expected to continue, diverting storm systems to the north and south and away from California and parts of the Southwest."

Locally, Water Year 2019 (October 2018—September 2019) was 116 per cent of normal. Groundwater elevations, in general, rose throughout the basin. With the exception of the northern portions of the Bolsa and San Juan. Overall, the basin is still recovering from the most recent drought (2013-2016) but at a slower rate than the very wet year we had in 2017. Dry years often are characterized by increased groundwater pumping for agricultural irrigation to offset lack of rainfall and reduced Central Valley Project water that is imported into the county.

Water efficiency is key all the time, but especially now. Another dry year will put is right back into serious drought. The first thing you should do is **call the WRASBC for a FREE home leak check and irrigation check.**

Water Resources Association
San Benito County
(831) 637-4378

Representing the City of Hollister, the City of San Juan Bautista, Sunnyslope County Water District, and San Benito County Water District.

50th Anniversary of Earth Day

San Benito County Integrated Waste Management will host the county's

Earth Day Event in partnership with:
Water Resources Association of San Benito County
Recology
San Benito County Chamber of Commerce
Hollister Recreation
And more!
This event will bring educational resources, art, a green award ceremony and environmental activities to our community and include:

FREE compost giveaway and workshop, FREE E-waste collection, FREE on-site security document shredding and FREE landscape efficiency ideas and rebates to help you save water and $

www.cosb.us/county-departments/iwm/ (831) 636-4110

Compost Workshop
Saturday, April 25th from 11am – 12 noon
Veteran's Memorial Park

Enroll in the compost workshop and enjoy the Earth Day festivities on the same day! Free compost container to those that attend the workshop. Space is limited and sign-up is required. Email sbcwz@recology.com or call 408-858-0724.

Otis Johnson is a compost enthusiast and wants to share compost consciousness with other people. As a farmer and landscaper he has a burning desire to expose others to the joy of decomposition and change the way we view waste. Otis is a certified Green Gardener, Master Composter and Master Gardener. He will be leading the workshop.

Some of the benefits of composting:

Enriches soil, helping retain moisture and suppress plant diseases and pests.

Reduces the need for chemical fertilizers.

Encourages the production of beneficial bacteria and fungi that break down organic matter to create humus, a rich nutrient-filled material.

Reduces methane emissions from landfills and lowers your carbon footprint.

Water Resources Association San Benito County (WRASBC)
P.O. Box 899, 30 Mansfield Road, Hollister, CA 95024-0899
(831) 637-4378

TOILET REBATE PROGRAM

Program Overview: WRASBC offers a rebate program to eliminate pre-1992, 3.5 – 7 gallons per flush toilets with new High Efficiency 1.28 – 1.6 gallons per flush toilets. This rebate is for replacing toilets that were manufactured prior to 1992 which are date stamped into the porcelain either in the inside part of the lid on the tank, or on the sidewall inside the tank. Your toilet is NOT eligible if it says "1.6 gpf" behind the toilet seat where the manufacturer's logo is usually found

Eligibility: Eligible residents of San Benito County are those who have water service through the City of Hollister, City of San Juan Bautista, Sunnyslope Water District or reside in CSA 31 (Stonegate). Customers served by private wells are not eligible.

Rebate: There are two types of rebates. (A) The WRASBC offers a free High Efficiency Toilet in exchange for your old pre-1992 toilet. Participants have 45 days to return old toilet after receiving free one; or (B) you can apply for a $75 rebate if you choose to purchase your own toilet (an additional $10 will be paid if you return your old toilet to the WRASBC for recycling). These rebates are limited to the number of bathrooms in your household with pre-1992 toilets and cannot be used for a new house or bathroom addition. This rebate applies only to purchases within the last six months. **All rebate programs are subject to available funds.**

Instructions:

A. How to Apply for a Free Toilet:

1. Complete Rebate Program Application. Incomplete applications will not be processed
2. Call to schedule an appointment to pick up a free toilet at the WRASBC
3. Attach copy of your current water bill
4. Return your old toilet for recycling and toilet age verification to WRASBC on Mondays through Fridays, 8:00 – 5:00 (closed noon to 1:00). If you cannot return the toilet, call the WRASBC and make arrangements to have the toilet picked up for recycling. If your old toilet does not meet the age verification pre-1992 requirement, you will be charged $125 for the toilet on your next water provider utility bill. Old toilet(s) must be returned within 45 days after the new toilet is picked up

B. How to Apply for a $75 Toilet Rebate:

1. Complete Rebate Program Application. Incomplete applications will not be processed
2. Attach copy of your current water bill
3. Attach the original receipt of your toilet purchase(s). Original receipts will not be returned
4. Return your old toilet to WRASBC on Mondays through Fridays, 8:00 – 5:00 (closed noon to 1:00). An additional $10 will be paid if you return your old toilet to the WRASBC for recycling and toilet age verification. If your old toilet does not meet the age verification pre-1992 requirement, your rebate application will be denied. Old toilet(s) must be returned within 45 days after applying

Inspection(s): No pre-inspection or post-inspection is required, however, WRASBC will verify that your old toilet is pre-1992 to meet the rebate program requirements. A pre-inspection is required for toilet rebates of 3 or more.

Upon completion of all requirements of the rebate program, you will receive your rebate within 30-45 days

Water Resources Association San Benito County (WRASBC)
P.O. Box 899, 30 Mansfield Road, Hollister, CA 95024-0899
(831) 637-4378

WATER SOFTENER REBATE PROGRAM

Program Overview: WRASBC offers two different rebate program options for the elimination or replacement of water softener. Most Water Softeners use roughly 75 gallons of water during regeneration. Waste water from Water Softeners contains high levels of sodium (salt and/or potassium) which makes it much more costly to recycle the water and negatively affects the groundwater aquifers.

Eligibility: Eligible residents of San Benito County are those who have water service through the City of Hollister, City of San Juan Bautista, Sunnyslope Water District or reside in CSA 31 (Stonegate). Customers served by private wells are not eligible.

Rebate: The WRASBC offers two different rebates for those who currently have a water softener:

Option 1 is a $250 rebate to eliminate any type of water softener and switch to an offsite regeneration service. Customers must submit proof by providing a copy of the 1-year minimum contract; or

Option 2 is a $300 rebate if you demolish your old, self-regulating Water Softener that uses salt/potassium, with a salt-free Water Conditioner, or remove it entirely and do not replace it. This rebate is limited to one Water Softener per household. .

This rebate applies only to purchases within the last six months. **All rebate programs are subject to available funds.**

How to Apply for Option 1 – Contracting for Outside Regeneration Service ($250 rebate):

1. Complete Rebate Program Application. Incomplete applications will not be processed
2. Attach copy of your current water bill
3. Call the WRASBC to schedule an on-site pre-inspection (your old water softener cannot be removed before pre-inspection).
4. After pre-inspection, submit a copy of your minimum 1-year contract for an offsite regeneration service and schedule a post inspection

How to Apply for Option 2 - Demolition of Water Softener with No Replacement ($300 rebate):

1. Complete Water Conservation Rebate Program Application. Incomplete applications will not be processed.
2. Attach copy of your current water bill
3. Call the WRASBC to schedule an on-site pre-inspection
4. After pre-inspection, remove your old Water Softener as instructed by WRASBC representative within 120 days
5. Call the WRASBC to (1) schedule an on-site post-inspection to verify that your old Water Softener has been demolished (valves protruding from the wall have been capped off or a pipe must be soldered from one valve to the other creating a loop); OR (2) verify that you have installed a new salt-free alternative Water Conditioner

Inspection(s): Pre-inspection: An on-site pre-inspection is required for both options. Prior to removing your old Water Softener, you must have a pre-inspection by a WRASBC representative who will explain the procedures for both options in detail as described above.

Post-inspection: An on-site post-inspection is required to verify that your old Water Softener has been demolished (valves protruding from the wall have been capped off or a pipe must be soldered from one valve to the other creating a loop); OR (2) verify that you have installed a new salt-free alternative water Conditioner.

Upon completion of all requirements of the rebate program, you will receive your rebate within 30-45 days

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LANDSCAPE IRRIGATION HARDWARE REBATE PROGRAM

Program Overview: WRASBC offers a rebate program to purchase new/replacement landscape irrigation hardware/equipment to reduce the amount of water waste. The program includes MP Rotators by Hunter Industries, and Hose Timers and/or Rain Sensors which are on the list provided by WRASBC. The goal is to water early in the morning to minimize evaporation, never water faster than the ground can absorb the water, and adjust sprinklers to avoid watering the sidewalks and driveways.

Eligibility: Eligible residents of San Benito County are those who have water service through the City of Hollister, City of San Juan Bautista, Sunnyslope Water District or reside in CSA 31 (Stonegate). Customers served by private wells are not eligible.

Rebate: The WRASBC offers a maximum of $100 rebate for materials purchased per household. This program provides a 50% rebate on your purchase price of hardware (excluding labor), up to a maximum of $100 rebate. This rebate applies only to purchases within the last six months. **All rebate programs are subject to available funds.**

How to Apply:

1. Complete Rebate Program Application. Incomplete applications will not be processed.
2. Attach copy of your current water bill
3. Call the WRASBC to schedule an on-site pre-inspection
4. After pre-inspection, purchase and install the pre-qualified hardware from the list provided by the WRASBC within 60 days of the pre-inspection
5. Call the WRASBC to schedule an on-site post-inspection to verify that hardware has been installed correctly. The WRASBC representative will also develop an irrigation schedule for you to follow

Inspection(s): Pre-inspection: A pre-inspection is required to determine what hardware can be used for your landscape area and what items you are qualified to purchase from the WRASBC-approved list.

Post-inspection: After you have purchased and installed the hardware within 60 days of the pre-inspection, call WRASBC to schedule an on-site post-inspection to confirm that the hardware is installed.

Upon completion of all requirements of the rebate program, you will receive your rebate within 30-45 days

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