2020 Urban Water Management Plan

Draft

JULY 2021

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Message From The Board of Directors

For over 100 years, the Beaumont-Cherry Valley Water District (BCVWD) has dedicated itself to providing a cost-effective, safe, and reliable water supply to the City of Beaumont and Community of Cherry Valley. Through the years, BCVWD has strategically invested in projects and programs that have expanded and diversified its water supply portfolio to meet the rapidly-changing needs of the region's diverse water users. BCVWD continues to focus its efforts on meeting the region's ongoing water demands through close planning efforts with its State Water Contractor (San Gorgonio Pass Water Agency [SGPWA]). Additionally, BCVWD is continuing its efforts with the City of Beaumont to produce recycled water in the area and include it as part of BCVWD's water supply portfolio.

The BCVWD Board is pleased to submit this 2020 Urban Water Management Plan to the California Department of Water Resources. The Plan provides a detailed summary of all current and projected water supplies and demands within BCVWD's service area. The Plan further demonstrates the water reliability of BCVWD's water supplies for the next 25 years and provides a comprehensive overview of BCVWD's short- and long-term partnerships, programs, and priorities.

Beaumont-Cherry Valley Water District Board of Directors

Division 2 – Lona Williams (Vice President)

Division 4 – John Covington (Member)

Division 1 – Andy Ramirez (Secretary)

Division 3 – Daniel Slawson (President)

Division 5 – David Hoffman (Treasurer)

Acknowledgements

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TABLE OF CONTENTS

Title Page

SECTION 6 WATER SUPPLY CHARACTERIZATION

Title Page

APPENDICES

LIST OF TABLES

LIST OF TABLES (CONT'D)

LIST OF TABLES (CONT'D)

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

Abbreviation	Definition
Acre-ft or AF	Acre-feet (1 acre-ft = 325,800 gallons)
Acre-ft/yr	Acre-feet per year
ACS	American Community Survey
Act	California Urban Water Management Planning Act
AF	Acre-feet (1 acre-ft = 325,800 gallons)
AFY	Acre-feet per year
Alliance	San Gorgonio Pass Regional Water Alliance
AMI	Automatic Meter Infrastructure
AMR	Automatic Meter Reading
Annual Assessment	Annual Water Supply and Demand Assessment
AWWA	American Water Works Association
BCVWD	Beaumont Cherry Valley Water District
BGS	Below Ground Surface
BIA	Building Industry Association
BSU	Beaumont Storage Unit, Beaumont Basin
Board	BCVWD Board of Directors
CDP	Census Designated Place
CFD	Community Facilities District
CFS	Cubic feet per second
CIMIS	California Irrigation Management Information System
City	The City of Beaumont
Cr+3	Trivalent Chromium
Cr+6	Hexavalent Chromium
CVAN	Cherry Valley Acres and Neighbors
CVCOI	Cherry Valley Community of Interest
CVP	Central Valley Project
CWC	California Water Code
DCP	Delta Conveyance Project
DDW	State Water Resources Control Board, Division of Drinking Water
District	Beaumont Cherry Valley Water District
DMM	Demand Management Measure (water conservation)
DoF	Division of Finance

Abbreviation	Definition
DWR	Department of Water Resources
DWR Guidebook	2020 UWMP Guidebook for Urban Water Suppliers
EBX	East Branch Extension of the State Water Project
EBX II	East Branch Extension of the State Water Project Phase II
EDU	Equivalent Dwelling Unit
EMWD	Eastern Municipal Water District
ERP	Emergency Response Plan
Eto	Evapotranspiration
Ft	feet
GEIMS or GeoTracker	Regional Board's Geographic Environmental Information Management System
GIS	Geographic Information System
gpcd or GPCD	Gallons per capita per day
GPD	Gallons per day
GPM	Gallons per minute
Groundwater	Beaumont Basin Groundwater
HCF	hundred cubic feet (748 gallons) = 1 "unit"
HGL	Hydraulic Grade Line
HOA	Homeowners Association
IEBL	Inland Empire Brine Line (connects to SARI)
kWh	kilowatt–hours
LAFCO	Local Agency Formation Commission
MBR	Membrane Bioreactor
MCL	Maximum Contaminant Level
Metropolitan	Metropolitan Water District of Southern California
MG	Million gallons
Mgd	millions of gallons per day
MIH	miner's inch-hours, a volume of water, 0.020 cfs flowing for 1 hour in Southern California, (72 cubic feet or 538.6 gallons)
MOU	Memorandum of Understanding
MSL	Mean Sea Level
NAICS	North American Industry Classification System
NCRF	Noble Creek Recharge Facility
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service

Abbreviation	Definition
Overliers	Overlying Parties
Pass	San Gorgonio Pass Water Agency
Pass Agency	San Gorgonio Pass Water Agency
PIER	Public Interest Energy Research
Plan	Urban Water Management Plan of 2020
PPCP	Pharmaceuticals and Personal Care Products
PSPS	Public Safety Power Shutoffs
RCFC&WCD	Riverside County Flood Control and Water Conservation District
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAWPA	Santa Ana Watershed Project Authority
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SGPWA	San Gorgonio Pass Water Agency (Pass or Pass Agency)
SGPRWA	San Gorgonio Pass Regional Water Alliance
SMWC	South Mesa Water Company
SOI	Sphere of Influence
SPW	State Project Water (Imported water from Northern California)
sq mi	square mile
STWMA	San Timoteo Watershed Management Authority
SWE	Snow Water Equivalent
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF/year	Thousand acre-feet per year
TDS	Total Dissolved Solids
TIN	Total Inorganic Nitrogen (sum of ammonia-nitrogen + nitrite-nitrogen + nitrate-nitrogen)
TOU	Time of Use
Towers	Southern California Edison Power Line Easement
UCR	University of California, Riverside
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan

Abbreviation Definition

Abbreviation	Definition
Valley District	San Bernardino Valley Municipal Water District
VOC	Volatile Organic Chemical
Water Code	California Water Code
Watermaster	Beaumont Basin Watermaster
WRCOG	Western Riverside Council of Governments
WSCP	Water Shortage Contingency Plan
WUE	Water Use Efficiency
YVWD	Yucaipa Valley Water District

Executive Summary and Layperson's Description

CWC 10630.5

Each Plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan

Beaumont-Cherry Valley Water District (BCVWD or District) has prepared a 2020 Urban Water Management Plan (UWMP) as required by the California Department of Water Resources (DWR) for all urban water suppliers serving more than 3,000 customers or 3,000 acre-feet (acre-ft) of water annually within the State of California. The 2020 UWMP follows California state requirements as defined in the California Water Code and in the Urban Water Management Guidebook 2020 (DWR, 2021). The City's 2020 UWMP has been adopted by the Board of Directors on _____ and submitted to DWR after adoption.

BCVWD's 2020 UWMP addresses shortfalls in supply due to single and multiple consecutive dry years and identifies the management strategies to ensure a reliable supply despite the shortfalls.

BCVWD's 2020 UWMP is based on these principles:

- The waters of the state are a limited but renewable resource. Conservation and efficient use of water is essential.
- A long-term, reliable supply of water is essential to preserve the quality of life and promote continued economic growth of San Gorgonio Pass Area.
- Imported water delivery capability is highly variable from year to year and is subject to reliability issues, climate change, and seismic activity.
- As part of its long-range water supply planning activities, BCVWD must make every effort to ensure an appropriate level of reliability in its water supply sufficient to meet the needs of its customers during normal, dry, and multiple dry water years through efficient management and planning.
- Water and energy are linked; using water efficiently through recycling saves energy and reduces greenhouse gas emissions resulting from power generation.
- Groundwater banking is essential to BCVWD's water reliability.

In the preparation of this UWMP Update, BCVWD used the following documents among others:

- 2015 BCVWD Potable Water Master Plan Update (January 2016)
- 2016 BCVWD Non-potable Water Master Plan (in process)
- Recycled Water Facilities Planning Report for Recycled Water Pipeline and Pump Station (June 2014)
- BCVWD White Papers No. 1-7 (Published dates vary, range September 2017 – September 2018)
- City of Beaumont, General Plan (December 2020)
- Pass Area Land Use Plan (December 6, 2016), part of Riverside County General Plan (December 8, 2015)
- 2020 Urban Water Management Plan for San Gorgonio Pass Water Agency (June 2021)

The District reports on a calendar year (CY) basis with FY 2020 spanning from January 1, 2020 through December 31, 2020. UWMP regulations require the District to report actual supply and demand for CY 2020 in addition to projected supply and demand in five-year increments through 2045. Projecting supply and demand through 2045 allows the District to assess the reliability and potential shortages that may come from population growth, climate change, and projected regional supply changes.

ES-1 Water Supplies

The District relies on local groundwater from Edgar Canyon, imported water supplies purchased from the San Gorgonio Pass Water Agency (SGPWA), and in near-term recycled water purchased from the City of Beaumont.

The District has a potable water system and a non-potable water system. The potable water system is supplied exclusively by groundwater wells; the non-potable water system is designed to convey non-potable groundwater, recycled water, untreated imported water, and potable water, as make-up, or a blend of all.

The District's primary source of water is groundwater which is extracted from the Beaumont Basin which is adjudicated and managed by the Beaumont Basin Watermaster. BCVWD augments its groundwater supply with imported State Project Water (and other imported sources of supply) from the SGPWA which is recharged at BCVWD's recharge facility located at the northeast corner of Brookside Avenue and Beaumont Avenue. The Beaumont Basin Adjudication requires that the extracted amount of water from the Basin must be replaced.

Supplies from Edgar Canyon have limited yield, but are inexpensive to operate and are the preferred source due to there being no replenishment requirement.

The District has a total of 24 wells (1 well is a standby). One of the wells, Well 26, can pump into either the potable water or the non-potable water system.

Table ES-1 provides a simplified summary of the current and future water sources available to BCVWD. Section 6 provides further information regarding the District's supplies.

Table ES-1 – Current and Future Water Sources Available to BCVWD

Water Supply Source	Year					
	2020	2025	2030	2035	2040	2045
Imported Water, AF	11,005	12,216	11,142	13,355	14,711	16,050
Groundwater, AF	3,241	4,143	4,417	6,390	6,533	6,766
Recycled Water. AF	0	2,017	2,381	2,892	2,955	2,915
Stormwater, AF	0	185	535	535	535	535
Total, AF	**14,246**	**18,561**	**18,475**	**23,172**	**24,734**	**26,266**

(1) Imported water supplies include additional water for groundwater recharge for drought proofing

ES-2 Water Demands

Water production is the volume of water measured at the source (groundwater wells, meters, etc.), and includes all water delivered to residential, commercial, industrial, government, irrigation, and institutional connections, as well as unaccounted-for water (i.e. water lost from leaking pipes). All of the District's water comes from groundwater wells, which then distributes the water into the District's system. The District distributes both potable and non-potable water through its system. The non-potable system is supplied by potable water through State Division of Drinking Water (DDW) approved inter-ties on the west side of the District's service area. Upon the availability of recycled water from the City, the non-potable system will be completely severed from the potable system. Recycled water will help the District offset its potable demands, and will be used for irrigation of parks, parkways, common areas, etc.

The District provides potable and non-potable water to a total of approximately 19,215 residential, commercial, industrial, institutional and agricultural accounts in the City of Beaumont and the unincorporated community of Cherry Valley in Riverside and San Bernardino Counties. The bulk of the District's total demand is residential demand (in 2020, single family residential water demand made up approximately 70% of the total demand). Approximately 11% of the District's demand for 2020 was from commercial, industrial, and institutional accounts (CII). Non-potable landscape irrigation demands made up approximately 12% of the District's total demand. In 2020, the District's total water demand (potable and non-potable) was 13,818 AF. This demand includes metered data only and miscellaneous losses.

The current estimated population served by the District is 59,000. The City of Beaumont is currently experiencing rapid growth and is expected to nearly double in population by 2045. Cherry Valley, however, is not anticipated to be subject to substantial growth. Future water demand estimates are based on the assumptions that the City's (and Cherry Valley) population and housing units (see Figure ES-1) will increase at a consistent rate (see Figure ES-1) with the total water demand per capita remaining relatively stable. Based on the projected populations in the District's service area, it is estimated that the total (potable, non-potable and recycled) water demands will increase to about 20,660 AFY by 2045 (including estimated losses). This results in an increase in demand of about 30% over the next 25 years (shown in Table ES-2).

Figure ES-1 – Historic and Projected Population Served by BCVWD

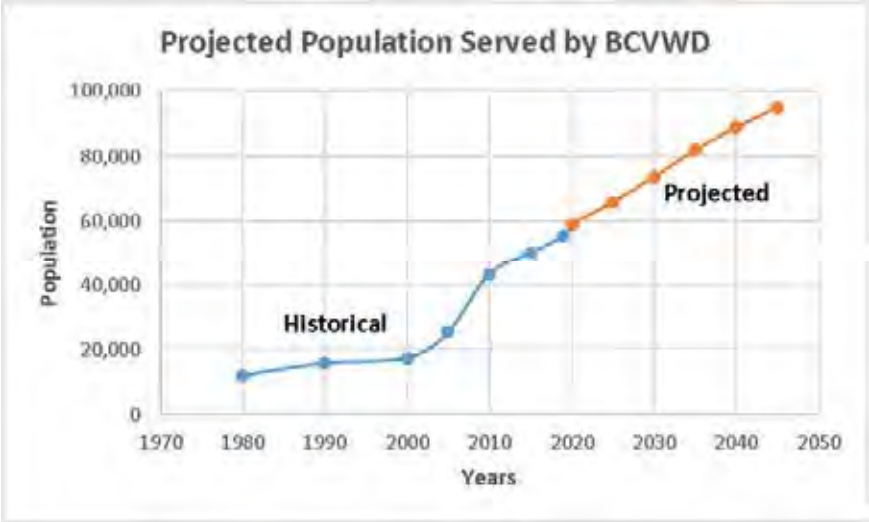


Table ES-2 – Projected Total Demands
(Including Recycled Water)

	Year					
	2020	**2025**	**2030**	**2035**	**2040**	**2045**
Potable Water, Raw, Other Non-Potable, AF	13,818	14,972	15,698	16,391	17,285	18,082
Recycled Water Demand, AF	0	1,957	2,175	2,478	2,561	2,578
Total, AF	**13,818**	**16,929**	**17,873**	**18,869**	**19,846**	**20,660**

ES-3 Water Service Reliability and Drought Risk Assessment

As part of the District's 2020 UWMP update, an analysis was performed to asses the potential water supplies available over the next 25 years under normal conditions, as well as the supply conditions during single and multiple dry years. The single and five consecutive dry year analysis was based primarily on historical SPW deliveries to BCVWD, as imported water makes up the majority of the District's supply. The District also considered how single or five consecutive dry years would affect projected stormwater capture efforts, as well as the availability of recycled water.

During any normal year conditions (normal is synonymous with average long term supply conditions), the District can expect a surplus in supply, which is ultimately stored in the District's groundwater storage account for drought proofing. A comparison of the District's present and projected supplies and demands is shown below in Table ES-3.

Table ES-3 – Normal Year Supply and Demand Comparison

Normal Year Supply and Demand Comparison						
	2020	2025	2030	2035	2040	2045
Supply totals, AF	14,246	18,561	18,475	23,172	24,734	26,266
Demand total, AF	13,818	16,929	17,873	18,869	19,846	20,660
Surplus (shortfall), AF	428	1,632	602	4,303	4,888	5,606
NOTES: (1) Demand totals includes all potable and non-potable demand, plus any recycled water demand from golf courses. Totals also include imported water supplies (demands) for additional groundwater banking.						

During drought conditions, the District has the benefit of utilizing groundwater stored in the Beaumont Basin to augment any shortfalls in supply from the State Water Project. A summary of the District's projected supplies and demands during a single dry year period is indicated below in Table ES-4. Section 7 in this UWMP presents an in depth analysis of projected supplies and demands during normal conditions, as well as single and multiple consecutive dry years. Section 7 also discusses the reliability of other various sources which the District believes will be available for beneficial use in the future.

Table ES-4 – Singly Dry Year Supply and Demand Comparison

Table 2: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045
Supply totals, AF	7,349	7,878	8,944	9,195	9,792
Demand totals, AF	15,429	16,673	18,097	19,124	19,988
Surplus (shortfall), AF	(8,080)	(8,795)	(9,153)	(9,929)	(10,196)

In the case of multiple consecutive dry years, the District has identified various response actions caused by a shortage in the long term average supply in its Water Shortage Contingency Plan (WSCP). The WSCP outlines the required demand reduction actions during various stages (the WSCP identifies 6 Water Shortage Levels), and discusses how the District will implement said actions to minimize shortfalls between available supplies and demands. The District anticipates demand reductions of up to 40% of normal demands during extreme water supply shortages.

As discussed previously, water from the State Water Project makes up the bulk of the District's supply, and is supplemented with groundwater from the Beaumont Basin and Edgar Canyon in Riverside County. Each year, the District will analyze its water supplies and projected demands, and a Water Supply and Demand Assessment will be prepared. This will aid the District in its continued commitment to providing reliable water to meet the needs of its customers.

Section 1 – Introduction and Overview

1.1 Overview

This document presents the Urban Water Management Plan 2020 (Plan) for the Beaumont Cherry Valley Water District (BCVWD or District) service area (Figure 3-1). This chapter describes the general purpose of the Plan, discusses Plan implementation, and provides general information about BCVWD and its service area characteristics.

As part of the California Urban Water Management Planning Act (Act) and resulting California Water Code (CWC or Water Code), an urban water supplier must prepare, adopt and submit an Urban Water Management Plan (UWMP) to the California Department of Water Resources (DWR) every five (5) years. An "urban water supplier" is defined as a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (AF or acre-ft) of water annually (Water Code § 10617). The UWMP must describe the water supplier's service area, water demands and supplies, water conservation activities, and assess the reliability of water sources over a 20-year planning time frame. Recent amendments to the Act changed the Water Code to require each urban supplier to update and submit its 2020 UWMP by July 1, 2021 and changed the update and submittal dates for subsequent UWMPs to July 1 in years ending in 6 and 1.

1.2 Purpose of 2020 Urban Water Management Plan

The UWMP is a foundational business support document for an urban water supplier. For BCVWD, this update to its 2015 UWMP emphasizes a cross-functional, systems approach that is intended to better guide and integrate any subsequent water resources studies, facilities master planning, and various regulatory reporting and assessment activities at the District, regional and state levels beyond a basic profiling of the District's water system.

1.2.1 Changes in the Act Since 2015

There have been numerous changes made and new requirements added to the Act since the 2015 UWMP. Set forth below is a general overview of the key current and new requirements for urban wholesale suppliers. Detailed descriptions of these existing and new requirements are provided in the various sections of this 2020 UWMP.

- Detailed evaluation of the supplies necessary to meet demands over at least a 20-year period, in five-year increments, under a normal water year, single dry-year, and droughts lasting at least five consecutive water years;
- Instead of a water shortage contingency analysis, suppliers must adopt a water shortage contingency plan which includes 10 prescribed elements, such as the procedures used to conduct an annual water supply and demand assessment; six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent

shortages and greater than 50 percent shortage; and shortage response actions that align with the defined shortage levels;

- Drought risk assessment which includes: (i) the data, methodology, and basis for one or more supply shortage conditions necessary to conduct a drought risk assessment for a 5-year drought; (ii) a determination of the reliability of each supply source under a variety of water shortage conditions; (iii) a comparison of total available water supply sources to total projected water use for the drought period; and (iv) a consideration of historical drought hydrology, projected supplies and demands under climate change conditions, and anticipated regulatory changes;
- Water use projections, where available, must display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans;
- Simple lay description of information necessary to provide a general understanding of the UWMP;
- Description of supplier's service area must include current and projected land uses affecting supplier's water management planning;
- Seismic risk assessment and mitigation plan;
- Compliance with the Act is required in order for a supplier to be eligible for a water grant or loan;
- Energy information that a supplier can readily obtain; and
- Evaluation of reasonable and practical efficient water uses, recycling, and conservation activities.

1.2.2 Senate Bill 7 of the Seventh Extraordinary Session of 2009, Water Conservation in the Delta Legislative Package

In addition to changes to the Act, the State Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, referred to as SB X7-7, on November 10, 2009, which became effective February 3, 2010. This law was the water conservation component to the historic Delta legislative package and seeks to achieve a 20 percent statewide reduction in urban per capita water use in California by December 31, 2020. This implements the Governor's similar 2008 water use reduction goals. The law requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020, and an interim urban water reduction target by 2015.

The bill states that the legislative intent is to require all water suppliers to increase the efficiency of use of water resources and to establish a framework to meet the State targets for urban water conservation called for by the Governor. The bill establishes methods for urban retail water suppliers to determine targets to help achieve increased water use efficiency by the year 2020. The law is intended to promote urban water conservation standards consistent with the California Urban Water Conservation Council's adopted best management practices.

1.2.3 DWR Guidance

In March 2021, DWR issued the Final 2020 UWMP Guidebook for Urban Water Suppliers (DWR Guidebook). The 2020 DWR Guidebook was updated from the 2015 version to reflect new legislation and to group the Water Code requirements by topic. As part of the Guidebook, DWR updated the Standardized Submittal Tables for the reporting and submittal of UWMP data to DWR. As mentioned above, water suppliers are required to use these Standardized Submittal Tables for electronic submittal of their UWMPs to DWR to satisfy the legislative requirement (Water Code § 10644(a)(2)). For the 2020 UWMP, BCVWD will electronically submit the Standardized Submittal Tables to DWR through its Water Use Efficiency portal within thirty (30) days of adoption from the Board. In addition, BCVWD included the Standardized Submittal Tables in this plan as Appendix D.

The 2020 DWR Guidebook includes a voluntary checklist to show reporting of required elements to assist DWR with its review of the submitted UWMP. Included in Appendix C of this 2020 UWMP is a compliance checklist, organized by Water Code section, which summarizes BCVWD's response to the requirements of the Water Code and indicates where each required element can be found in the Plan.

1.2.4 Urban Water Management Plans in Relationship to Other Planning Efforts

In the preparation of this UWMP Update, BCVWD used the following documents among others:

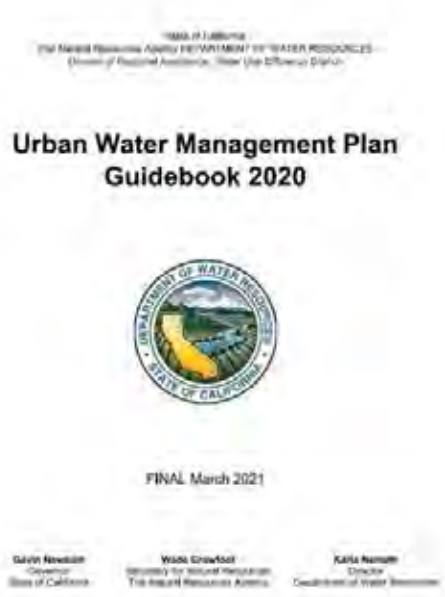
- 2015 BCVWD Potable Water Master Plan Update (January 2017)
- 2016 BCVWD Non-potable Water Master Plan (In-process)
- Recycled Water Facilities Planning Report for Recycled Water Pipeline and Pump Station (June 2014)
- BCVWD White Papers No. 1-7 (Published dates range from September 2017 – September 2018)
- City of Beaumont, General Plan (December 2020)
- Pass Area Land Use Plan (December 6, 2016), part of Riverside County General Plan (December 8, 2015)
- 2015 Urban Water Management Plan for San Gorgonio Pass Water Agency (March 2017)
- 2020 Urban Water Management Plan for San Gorgonio Pass Water Agency (June 2021)
- Resolution 2015-05, Resolution of The Board of Directors of the San Gorgonio Pass Water Agency to Adopt Facility Capacity Fees for Facilities and Water (July 27, 2015)

1.2.5 UWMP and Grant or Loan Eligibility

For an urban water supplier to be eligible for any water management grant or loan administered by DWR, the agency must have a current UWMP on file that has been determined by DWR to address the requirements of the CWC. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR. An UWMP may also be required to be eligible for other State funding, depending on the conditions that are specified in the funding guidelines.

1.3 Organization of this Document

Beaumont-Cherry Valley Water District's 2020 UWMP was prepared in compliance with CWC Sections 10610 through 10657 of the Act, which were added by Statute 1983, Chapter 1009 and became effective on January 1, 1984, and Section 10608.36 of SB X7-7, which was enacted in 2009. In addition to complying with the Act, this report details BCVWD's current situation and how it will meet the challenges of the future.



The plan is organized as follows:

- Section 1: Introduction
- Section 2: Plan Preparation
- Section 3: System Description
- Section 4: Water Use Characterization
- Section 5: SB X7-7 Baseline, Targets, and 2020 Compliance
- Section 6: Water Supply Characterization
- Section 7: Water Supply Reliability and Drought Risk Assessment
- Section 8: Water Shortage Contingency Plan
- Section 9: Demand Management Measures
- Section 10: Plan Adoption, Submittal and Implementation

The following Appendices are included to provide supporting information:

- Appendix A: California Water Code
- Appendix B: Adoption Resolution
- Appendix C: 2020 Urban Water Management Plan Checklist
- Appendix D: Department of Water Resources Standardized Data Submittal Tables
- Appendix E: 2020 Beaumont-Cherry Valley Water Shortage Contingency Plan
- Appendix F: Beaumont Basin Adjudication
- Appendix G: Public Notices
- Appendix H: Delta Reliance Tables
- Appendix I: Water Loss Audit
- Appendix J: Energy Reporting
- Appendix K: References

Section 2 – Plan Preparation

2.1. Basis for Preparing a Plan

The basis for preparing a UWMP is identified in the California Water Code:

> ***CWC 10617***
>
> *"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems.*
>
> ***CWC 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.*
>
> ***CWC 10621***
>
> *(a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding.*

BCVWD is a retail, urban water supplier as the District currently (2020) has over 19,000 connections and delivers over 12,000 acre-ft per year (AFY) of potable water. BCVWD has a non-potable water system with an annual demand of approximately 1,500 AFY of which all is supplemented by the potable water system.

2.1.1. Public Water System

BCVWD is a retail, public water system regulated by the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW).

> ***CWC 10644***
>
> *(a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*
>
> ***California Health and Safety Code 116275***
>
> *(h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.*

BCVWD has a single service area which includes the City of Beaumont, the unincorporated community of Cherry Valley in Riverside County, and a portion of San Bernardino County. Table 2-1 presents information on BCVWD.

Table 2-1 – Public Water System Information

DWR 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 *
Add additional rows as needed			
3310002	Beaumont-Cherry Valley Water District	19,635	12,492
	TOTAL	19,635	12,492
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Total Volume of Water Supplied includes both Potable and Non-Potable Water			

2.2. Regional Planning

BCVWD is one of thirteen regional water providers and local governments that are a part of the San Gorgonio Pass Regional Water Alliance (SGPRWA or Alliance) formed through a memorandum of understanding (MOU) in March 2014 (Table 2-2). The Alliance is not preparing a separate regional UMWP Update. The goals of the Alliance are:

- To improve coordination, collaboration and communication among local, state and federal governments and water purveyors and other water resource stakeholders in the San Gorgonio Pass region to achieve greater efficiency and effectiveness in delivering water supplies.
- To develop and promote common water strategies that will, when implemented, fulfill the water demands of the regional area for the future.

Table 2-2 – Plan Identification

DWR Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**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: BCVWD is a member of the San Gorgonio Pass Regional Water Alliance, which was formed in 2014; SGRPWA did not prepare a 2020 Integrated Regional Water Management			

2.3. Fiscal or Calendar Year and Units of Measurement

BCVWD is on a calendar year basis. Units of measure are AF or AFY, unless clearly indicated otherwise. Individual customer meter reads and customers are billed in terms of hundreds of cubic feet (HCF). Daily volumes are generally reported in million gallons (MG) or million gallons per day (mgd). Data reported herein includes all of 2020. Units are clearly indicated on all tables.

Table 2-3 shows the Agency Identification information.

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency 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	AF
NOTES:	

2.4. Coordination and Outreach

Retail suppliers that receive a water supply from one or more wholesalers are required to provide their wholesaler(s) with their projected water demand from each source, in five-year increments, for 20 years, or as far as data is available.

2.4.1. Wholesale and Retail Agency Coordination

The wholesale water provider in the San Gorgonio Pass area of Riverside County is the San Gorgonio Pass Water Agency (SGPWA). SGPWA has been informed of BCVWD's projected imported water needs, and BCVWD provided SGPWA with responses to their inquiries on the District's water demands, supplies and imported water needs. Several virtual meetings were held with BCVWD senior staff and SGPWA management and consultants between December 2020 and April 2021.

Table 2-4 – 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 Gorgonio Pass Water Agency
NOTES:

BCVWD provided comments on the SGPWA's Administrative Draft, dated May 2021.

2.4.2. Coordination with Other Agencies and the Community

On March 30, 2021, the 60-day notification was sent to the organizations indicated in Table 2-5. The notice stated that BCVWD was in the process of updating its UWMP. A formal notice of the date and time of the public hearing for adoption of the 2020 UWMP was sent to all of the Agencies in Table 2-5 on July 09, 2021, for a Public Hearing on July 22, 2021 in the Board Room, Beaumont Cherry Valley Water District, 560 Magnolia Avenue, Beaumont, CA 92223. The meeting was noticed for two (2) consecutive weeks, as required, in the *Record Gazette* newspaper.

The Draft 2020 UWMP was posted on BCVWD's website on July 9, 2021.

Table 2-5 – Agencies, Communities, and Organizations Having an Interest BCVWD's UWMP

Agency	Sent Notice		Agency	Sent Notice
City of Beaumont	■		Eastern MWD	■
City of Banning	■		SGPWA	■
City of Yucaipa	■		Beaumont Basin Watermaster	■
City of Calimesa	■		Riverside County LAFCO	■
YVWD	■		San Bernardino County LAFCO	■
South Mesa Mutual WC	■		CVAN (2)	■
Santa Ana Watershed Project Authority (SAWPA)	■		Riverside BIA (3)	■
Beaumont Cherry Valley Parks and Recreation District	■		Riverside County Flood Control and Water Conservation District	■
HOAs (1)	■		Beaumont Unified School District	■
Riverside County Planning Department	■		San Bernardino County Land Use Services	

(1) HOA's include: Sundance North, Sundance, Fairway Canyon, Tournament Hills (Oak Valley I), Tournament Hills 2 (Oak Valley II), Solera, Olivewood, Four Seasons, Altis, and Highland Springs Country Club
(2) Cherry Valley Acres and Neighbors; (3) Riverside Building Industry Association

The City of Beaumont (City) has a direct interest since the City is served by BCVWD; BCVWD is in the process of finalizing an agreement for purchase of recycled water from the City of Beaumont. A memorandum of understanding for recycled water use and purchase was signed by both parties in July 2019.

The City of Banning has agreements with BCVWD to recharge imported water on the City's behalf; has an existing emergency potable water connection with BCVWD and stub outs across Highland Springs Avenue for potable and non-potable water connections and has financially participated with BCVWD in the construction of several production wells to facilitate the extraction and transfer of imported water. BCVWD has pipeline facilities within the City of Calimesa; however, the District does not currently serve the City. BCVWD does anticipate that a small portion of Calimesa adjacent to Desert Lawn Drive may be served by BCVWD in the future.

The County of Riverside Planning Department is involved with land use planning and building permit approval in the unincorporated community of Cherry Valley. The County of San Bernardino Land Use Services controls land use planning in the unincorporated portion of the District's service in that county. Riverside County Flood Control and Water

Conservation District (RCFC&WCD) is involved with BCVWD on the Beaumont MDP Line 16 storm water capture project and control the flood control channels within BCVWD's service area. Some of these channels play a role in basin recharge.

The Beaumont Basin Watermaster manages the adjudicated groundwater basin which provides over 80% of the District's groundwater production.

The SGPWA is the State Water Contractor that imports water on behalf of the District and its other retail agencies through the East Branch Extension of the State Water Project. BCVWD has been purchasing water from SGPWA and percolating it at BCVWD's groundwater recharge facility since 2006. The SGPWA also has an agreement with BCVWD to use the recharge facilities at the mouth of Little San Gorgonio Canyon on BCVWD-owned land for the recharge of State Project Water. SGPWA has also constructed their own recharge facility.

The Cherry Valley Acres and Neighbors (CVAN) is a local organization which is very active on land use and water issues.

The Riverside Building Industry Association is included since they are also very active in the area and take an interest to ensure adequate water supply for developments. There are several Homeowner Associations (HOAs), which may have interest as well, as most of them are utilizing the non-potable water systems in their areas; the larger HOAs which have been notified are identified in Table 2-5. The Beaumont Cherry Valley Parks and Recreation District and the Beaumont Unified School District are major current users of BCVWD's potable and non-potable water.

The Santa Ana Watershed Planning Authority (SAWPA) is the major regional water resource planning organization in the Upper Santa Ana River and provides funding for projects in BCVWD's service area.

It should be pointed out that BCVWD does not serve any customers in San Bernardino County except its own residences.

2.5. Water Shortage Contingency Plan

There is a new requirement that a Water Shortage Contingency Plan (WSCP) be prepared with the UWMP and included with the UWMP for the July 1, 2021, submittal. The WSCP is an independent, stand-alone, document, that can be amended as necessary, independent of the UWMP, any time later, by going through a formal amendment process. The adoption of the WSCP can be done at the same time (same meeting) as the adoption of the UWMP, but must be done through a separate public hearing and adoption process. The process for both the UWMP and the WSCP, involves separate notification of agencies as described above, notification of the public through two newspaper publications, a public hearing, formal adoption, submittal to DWR, and

making the plan available on the agency's website. Again, separate notices, etc. for the UWMP and WSCP.

Section 3 – System Description

3.1. General Description of District

> ***CWC 10631***
>
> *A plan shall be adopted in accordance with this chapter and shall do all of the following:*
>
> *(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.*

The Beaumont-Cherry Valley Water District provides potable and non-potable water service to about 19,215 active accounts, (19,659 connections), as of September 2020[1], in the City of Beaumont and the unincorporated community of Cherry Valley in Riverside and San Bernardino Counties in Southern California. The District is located approximately 75 miles east of Los Angeles along Interstate 10. BCVWD's average day potable demand in 2020 was 10.8 mgd; maximum day was 21.6 mgd. This was an increase from 2015 when the average day and maximum day potable and non-potable demands were 9.2 mgd and 15.3 mgd, respectively.

The San Gorgonio Pass area started to develop in the late 1880s and in 1912, the community of Beaumont incorporated. BCVWD was formed in 1919 as the Beaumont Irrigation District under California Irrigation District Law, Water Code Section §20500 *et seq*. The name was changed to the Beaumont-Cherry Valley Water District in 1973. Beaumont and Cherry Valley remained small until about the mid-1980s.

BCVWD Office

The populations of Beaumont and Cherry Valley in 1980 were 6,818 and 5,012, respectively. The boom of the early 2000's, saw Beaumont's population to skyrocket to 36,837 by 2010; Cherry Valley showed only limited growth to 6,279 during that same time. Current (2020) population served by the District is approximately 59,000. Meeting the water demands for this rapid growth in Beaumont was challenging. The projected growth rate for BCVWD is higher than for Riverside County as a whole through the next 25 years. Table 3-1 shows BCVWD's retail population, current and projected, consistent with the Department of Water Resources format.

[1] BCVWD (2020). Adopted FY 2021 Operating & 2021-2025 Capital Improvement Budget.

Table 3-1 – BCVWD Current and Project Population

DWR Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	59,258	66,149	73,739	81,906	88,532	94,556
NOTES:						

The population served by the District is expected to increase 60% by 2045. The City of Beaumont's General Plan, adopted in 2020, identifies a potential projected build-out population of approximately 134,000[2]. District staff met with the City of Beaumont to confirm the current and projected retail populations.[3] The build out population within the District's Sphere of Influence (SOI) is estimated to be about 147,620 based on BCVWD estimates of current and proposed land use in the area. Potential population growth within the District's SOI is discussed further herein.

3.2. Service Area

The District's present service area covers approximately 28 square miles, virtually all of which is in Riverside County, and includes the City of Beaumont and the community of Cherry Valley. The District owns 1,524 acres of watershed land in Edgar Canyon (also called Little San Gorgonio Creek) in San Bernardino County located just north of the Riverside-San Bernardino County line where the District operates numerous wells and several reservoirs.

The District's SOI, or ultimate service planning area, encompasses an area of approximately 37.5 square miles (14.3 sq. mi. are in the City of Beaumont). The SOI, shown in Figure 3-1 (as a red boundary), was established by the Riverside and San Bernardino County Local Agency Formation Commissions (LAFCO's). SOIs are established as a planning tool and help establish agency boundaries and avoid problems in service, unnecessary duplication of costs, and inefficiencies associated with overlapping service.

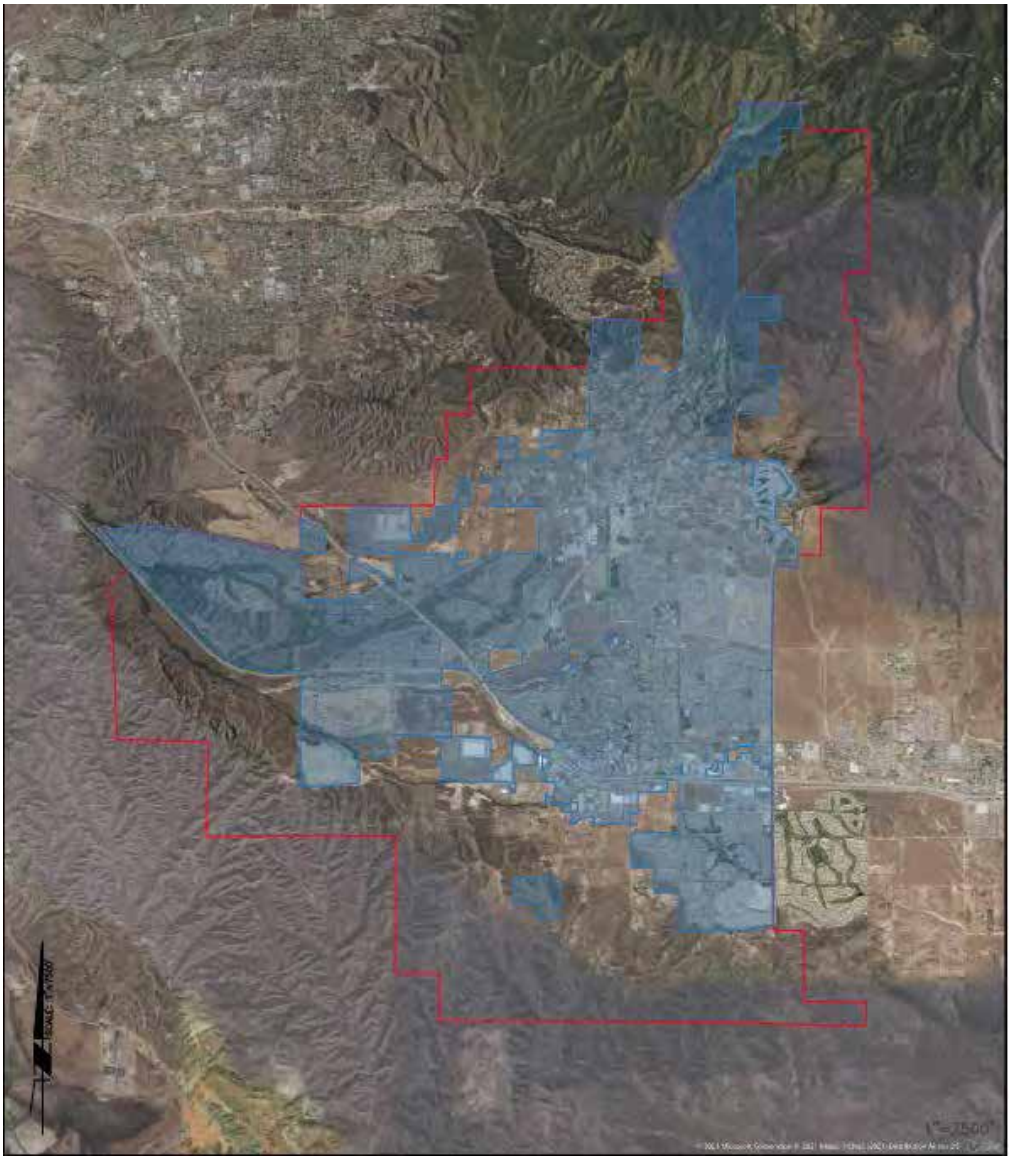
The District's SOI is bounded on the west and north by the Yucaipa Valley Water District (YVWD) and on the east by the City of Banning. The District is bounded on the south by Eastern Municipal Water District (EMWD), a member agency of the Metropolitan Water District of Southern California. Previously, the District's southern boundary and EMWD's northern boundary overlapped in several instances; this was adjusted by Riverside County LAFCO in October, 2020. The District's SOI in Little San Gorgonio Canyon follows Oak Glen Road. The

[2] Calculated based on City of Beaumont General Plan (2020), Table 3.2a, Page 45. Based on Riverside County average household size of 3.28 people/household.

[3] Per meeting with BCVWD and City of Beaumont staff held on 06/09/2021.

area west of Oak Glen Road is within YVWD's SOI; east of Oak Glen Road is within the District's SOI.

Figure 3-1 – District Boundary and Sphere of Influence



Source:2021 Microsoft Corporation 2021 Maxar CNES (2021) Distribution Airbus DS

Not To Scale

NORTH

Beaumont-Cherry Valley Water District
Beaumont, California

In 1999, as part of an agreement to transfer the "Midway Area" to the City of Banning, the easterly limit of the District's SOI was set at Highland Springs Road. Areas east of Highland Springs Road are now served by the City of Banning. (Note, the "Midway Area" was along 6th Street east of Highland Springs Road.)

West of I-10, between Oak Valley Parkway (formerly San Timoteo Canyon Road) and I-10, the District's SOI matches that of the City of Beaumont and extends northerly and westerly to Southern California Edison Power Line Easement (Towers). This corresponds to the northerly boundary of the Fairway Canyon Community. North of the Power Line Easement there is an open space reserve that would limit any development westerly along Oak Valley Parkway (San Timoteo Canyon Rd.). This portion of the District's SOI boundary abuts the City of Calimesa and Yucaipa Valley Water District.

About the year 2007, Riverside County LAFCO revised the District's SOI Boundaries east of I-10 in the vicinity of Calimesa. The area north of Cherry Valley Blvd from I-10 eastward to a point about 1,000 ft west of Hannon Rd is now in the City of Calimesa and in YVWD's SOI.

Though not in the District's service area boundary at the present time, a future development (Jack Rabbit Trail Project [Beaumont Pointe]) southerly of Highway 60 is in the District's SOI and ultimately would be served by the District.

The District's service area ranges in elevation from 2,100 feet above mean sea level (MSL) in Fairway Canyon area of Beaumont on the western boundary, to 2,900 feet in Cherry Valley, and over 4,000 feet in the upper reaches of the SOI. The area serves primarily as a "bedroom" community for the Riverside/San Bernardino Area and the communities east of Los Angeles County along the I-10 corridor.

The District is governed by a 5-member Board of Directors, each representing a division within the existing service area. Members of the Board of Directors are elected at large.

3.3. Service Area Climate

According to the Koppen Climate Classification System, the Beaumont and Cherry Valley area has a Cold Semi-Arid to Hot-Summer Mediterranean Climate, which is characterized by warm, dry summers and cold winters with limited rainfall.

3.3.1. Temperature

Table 3-2 presents temperature data for the City of Beaumont obtained from the Western Regional Climate Center. The climate in Cherry Valley is similar, but temperatures are cooler in the upper elevations of the District's SOI. Temperatures below freezing are common in winter in the upper elevations of the service area. Temperatures over 100°F are also common in the summer.

3.3.2. Precipitation

As shown in Table 3-2, virtually all the precipitation occurs during the months of November through April; most of the precipitation is in the form of rain, but snow is common in higher elevations of the service area during the winter. Some rainfall occurs in summer from thunderstorms that are associated with monsoonal moisture. Annual precipitation in Beaumont (2680 MSL) averages approximately 17.8 inches, with increasing amounts of precipitation with increasing elevation. Cherry Valley averaged 20.6 inches for the period 1911-2006; Oak Glen (4600 ft MSL) averaged 25.5 inches for the 61-year period 1946-2006.

Table 3-2 – Water Supplier Information Exchange Climate in BCVWD Service Area[1]

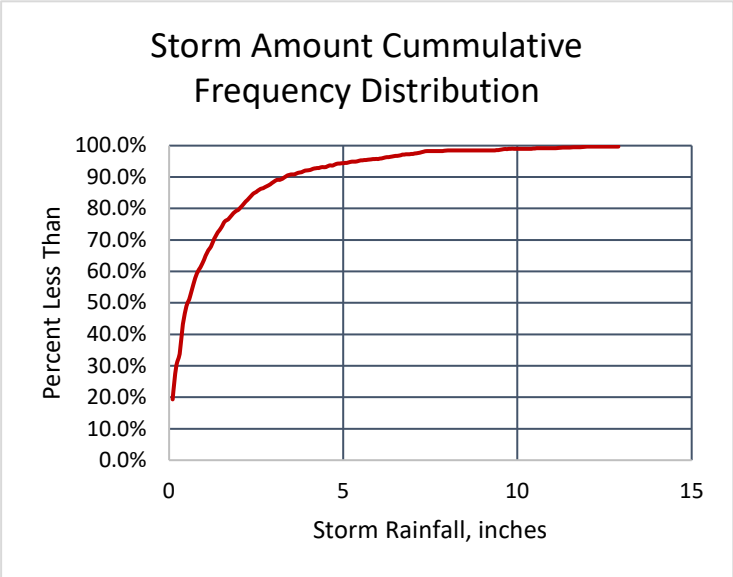
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)[1]	60.3	63.1	65.8	71.9	78.6	87.5	95.6	95.5	90.5	80.1	69	61.7	76.6
Average Min. Temperature (F)[1]	38.4	38.8	39.9	42.7	47.5	52.2	58.2	58.8	55.5	49.1	42.9	39.2	46.9
Average Total Precipitation (in.)[1]	3.52	3.4	3.12	1.44	0.55	0.14	0.23	0.27	0.51	0.65	1.72	2.26	17.8
Average Total Snowfall (in.)[1]	1	0.4	0.2	0	0	0	0	0	0	0	0.1	0.2	1.8
Monthly Average Evapotranspiration, ETo (2021)[2]	2.28	2.72	4.33	5.43	6.6	7.41	7.96	7.7	6.11	4.27	2.73	1.92	59.46

[1] Western Regional Climate Center, Beaumont Station #2 8/1/1939 – 6/10/2016
[2] CIMIS website – Winchester, CA

Table 3-3 shows the percentage of occurrence of storms of various total rainfall amounts in Beaumont. Rarely does a total storm rainfall exceed 3 inches. A “storm,” in the Table 3-3 analysis, is defined as a continuous period of measurable daily rainfall interrupted by not more than 3 consecutive days of no measurable rainfall.

Table 3-3 – Total Storm Rainfall Frequency in Beaumont (1918 – 2006)

Storm Total, in	Percent of Time
0.50 or less	49%
1.0 or less	63.9%
2.0 or less	79.8%
3.0 or less	88.5%
4.0 or less	92.2%
5.0 or less	94.5%
6.0 or less	95.8%
7.0 or less	97.4%
8.0 or less	98.5%
More than 8.0	1.5%



3.3.3. Evapotranspiration

Table 3-2, presented above, shows the monthly reference average Evapotranspiration (ETo) based on the California Irrigation Management Information System (CIMIS), Winchester, CA station. This station is located about 20 miles south of the BCVWD and is representative of the evapotranspiration in the District's service area. The reference ETo represents the amount of water used and evaporated by a 4-in to 7-in tall stand of grass in an open field. Water use by other crops and landscape materials can be determined using the appropriate crop coefficient in conjunction with the ETo.

The service area is in Reference ETo Zone 9 – South Coast Marine to Desert Transition.[4] Outdoor water consumption for corrals, orchards and lawns during the hot, dry summer months is high.

3.4. Climate Change

Climate change will result in reduced snowpack and more precipitation as rain. Although studies have shown that the average amount of precipitation may not change significantly under the different climate change (greenhouse gas scenarios) models, events will be more extreme. Wet

[4] California Department of Water Resources and University of California Cooperative Extension, A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California, The Landscape Coefficient Method and WUCOLS III, August 2000.

periods will be wetter and drought periods drier. DWR (2008) predicted that the Sierra snowpack water storage will be reduced 25% to 40% by 2050.[5] DWR projects that by the end of the current century the Sierra Nevada snowpack will experience a 48 to 65% loss from historical April 1 averages[6]. The timing of the runoff in the rivers will be accelerated. For example, the peak runoff period in the Sierra Nevada Mountains will occur earlier in the year and will be at a higher rate due to the warmer temperatures and rainfall, on a limited snowpack. Much of this runoff may not be able to be captured by existing reservoirs designed under historic hydrology and operating under "old" storage/outflow management rules. Existing conveyance systems will not be adequate to move this water to off stream storage reservoirs or to groundwater recharge facilities. This will result in more water lost to the ocean and unavailable to meet demands.

Chung, et al. (2009) estimated that climate change impacts will reduce Delta Exports through the State Water Project (SWP) and the Central Valley Project (CVP) by 7% to 10% by 2050 and by 21% to 25% by the end of the 21st century. (Note that DWR's 2019 SWP Reliability Report, referenced later in this UWMP, included the effects of climate change.)

It is estimated that snowpack in the western states measured on April 1 has declined by about 10% since the 1950's[7]. The snowpack in California provides for the storage for approximately 70% water which fills the state's reservoirs. Pierce, et al. (2018) determined that the mean snow water equivalent (SWE) in the Sierra Nevada region will decline to less than two-thirds of its historical average by 2050, and to less than half of the historical average by 2100. Climate change resulting in warmer temperatures and reduced snowpack has already impacted hydroelectric power generation. The State Water Project is one of the largest single users of power and is a large producer of hydroelectric power. Reductions in water supply will affect generation and cause increased operating costs for the transport of water. This will result in higher costs which will be passed on to the District's customers. A reduction in hydroelectric power will require generation from other renewable sources (wind and solar) to avoid using fossil fuels and the adverse effect of increased greenhouse gas emissions.

The Delta islands are already below sea level and sinking gradually. Sea level rise will increase water levels in the Delta, putting the already fragile levees at greater risk for failure and impact SWP deliveries and SWP water quality should a levee failure occur. There will also be a water quality impact as higher seawater elevations will cause greater saltwater intrusion into the Delta

[5] DWR 2008. *Managing an Uncertain Future, Climate Change Adaptation Strategies for California's Water*, State of California, The Resources Agency, Department of Water Resources, October.

[6] California Department of Water Resources, website, "Climate Change and Water" https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Change-and-Water Accessed 05/27/2021.

[7] California's Fourth Climate Change Assessment, 2018. Coordinating Agencies: California Natural Resources Agency, California Energy Commission, California Governor's Office of Planning and Research.

and require more fresh water to maintain Delta water quality. This would reduce the amount of water available for export to Southern California.

BCVWD conducted a climate change vulnerability assessment using the methodology in Appendix I of the UWMP Update Guidelines and the Climate Change Handbook for Regional Water Planning.[8] It should be pointed out that there is considerable speculation and variability between the various greenhouse gas/climate models. The approach in this UWMP is to consider climate change generically, rather than specifically. The vulnerability assessment will address:

- Water Demand
- Water Supply
- Water Quality
- Flooding
- Ecosystem and Habitat Vulnerability
- Wildfires and Erosion

3.4.1. Water Demand

Since water use in BCVWD's service area varies by more than 50% during the year due to outdoor water use, increases in temperature due to climate change would be expected to increase summertime urban and agricultural water. However, this will be more than offset by the installation of water efficient and drought tolerant landscaping in new developments in response to tightening landscape ordinances. The City of Beaumont and Riverside County have been continually updating their landscape ordinances in response to directives from DWR. The most recent DWR Model Water Efficient Landscape Ordinance version was July 2015. Outdoor residential potable water consumption could also be reduced in the future with the implementation of water reducing alternatives such as greywater systems using laundry wastewater for subsurface irrigation of plants and trees. Water use on orchards in the District will decrease as these areas are converted into urban uses. In summary, BCVWD believes climate change impacts on demand will be more than offset by more efficient outdoor water use, reduced turf areas, and land use conversion from orchards to residential, as well as the City of Beaumont's and Riverside County's Landscape Ordinance prohibiting turf in residential front yards. After 2025, street medians and similar areas with turf may not be allowed to be irrigated unless the turf serves a "community purpose" per a SWRCB 2018 regulation to prohibit wasteful water use practices. Beginning in 2018, even installing recycled water irrigation of street median

[8] USEPA Region 9 et al (2011*). Climate Change Handbook for Regional Water Planning,* prepared by CDM for US Environmental Protection Agency, Region 9, California Department of Water Resources, US Army Corps of Engineers South Pacific Division, and Resources Legacy Fund, November.

turf is not allowed. These ordinances and regulations will have a significant impact on outdoor water use. BCVWD has already noticed the impacts.

As an example, when BCVWD was under Stage 2 Water Conservation measures in 2015 and 2016, which limited outdoor water use and limited landscape sprinkling to two days per week, BCVWD was able to achieve a 23% reduction in water use from 2015-16 compared to the corresponding period in 2013.

3.4.2. Water Supply

Surface flow is not directly used for water supply by BCVWD. All streams in the area are ephemeral and dry up during the summer. Some only have flow during and shortly after rainfall events.

Other than imported SWP supply from the SGPWA, which will make up an increasing fraction of the District's water supply over time, very little of the District's direct supply comes from local snowmelt; so the direct impact of climate change on the local supply will be minimal. The impact on the SWP and Delta exports was discussed above in the introduction to this subsection.

BCVWD is very fortunate that the Beaumont Groundwater Basin has large storage capacity for banked water. At the end of 2020, there was over 117,000 acre-ft of water "banked" in the Beaumont Basin by all the appropriators. BCVWD has an 80,000 acre-ft storage account in the Basin. During wet years, BCVWD can bank SPW for dry years, as was successfully done from 2006 through 2014 when over 46,000 acre-ft were recharged. In 2014 and 2015, BCVWD did have to withdraw from its storage account due to decreased SWP supply available. However, since 2015 the District has been able to recharge over 59,600 acre-ft, of which over 14,000 acre-ft was banked to the storage account. The Beaumont Basin Watermaster maintains accounting of stored water. As of the end of 2020, BCVWD had 39,750 acre-ft of water "banked" in storage for use during dry years.

3.4.3. Water Quality

BCVWD's local water supply is groundwater, which is of excellent quality and minimal threat from contamination. Climate change will have minimal effect on water quality; however, as mentioned in the introduction to this climate change section, the SPW quality will be impacted by climate change. It is already impacted during dry periods when chloride levels in the SPW increase because there is not enough fresh water from the Sierra Nevada reservoirs to flush out the salt water that has intruded into the Delta. The water quality will continue to deteriorate until the Delta Conveyance Project (DCP) is constructed and operational. The DCP will not result in any significant amounts of "historical new" water but will return the SWP back to its 2015-2020 reliability thereby recovering water from lost reliability and will maintain or improve water quality. Importing water with elevated chloride levels will cause an increase in chloride levels in the groundwater from the recharged water but also from the increased concentrations in return flows from outdoor irrigation. Chloride levels in the recycled water will increase, but the City of

Beaumont has a reverse osmosis system to remove chlorides and other salts. The City provides desalting to a portion of the effluent to meet the discharge permit of 330 mg/L total dissolved solids limit on the effluent which is recycled. Increased salt concentration in the wastewater will mean additional operating costs as a larger fraction of the wastewater will require reverse osmosis desalting.

3.4.4. Flooding

BCVWD's has some well facilities that are likely within the 200-year flood plain in Little San Gorgonio Creek. Minor damage occurred on occasion; but noting that could not be repaired within a reasonable period of time. During 100- and 200-year flood events, some damage may occur, but the District can still manage since there is adequate spare capacity in the Beaumont Basin wells. The Beaumont Basin wells are outside of the 100-year flood plain and most likely outside of the 200-year flood plain, though there are no 200-year flood plain maps to verify this. RCFC&WCD has an improved channel for Noble Creek. It is well-maintained.

There was significant flooding in 1969. Aerial photos from District files show extensive flooding west of Noble Creek. Noble Creek is a tributary to San Timoteo Canyon Creek. A U.S. Geological Survey (USGS) stream gauge on San Timoteo Creek near Loma Linda recorded a peak flow of 15,000 cubic feet per second (cfs[9]). This flow rate was over twice the 200-year recurrence interval flow for this site. The District's pipeline in Edgar Canyon washed out. Much of this pipeline has been replaced with new ductile iron pipe since 1983 and the remaining portion is master planned to be replaced in the next 5 years.

3.4.5. Ecosystem and Habitat Vulnerability

Principal ecosystem and habitat areas are Noble Canyon and Little San Gorgonio Canyon and tributaries above Cherry Valley. Black bear, bobcats and mountain lions are frequently seen in Little San Gorgonio Creek canyon areas. These areas are under the ownership of BCVWD for the most part and will remain open space. San Timoteo Canyon and its tributaries between Beaumont and Redlands provide a corridor for habitat movement. There are some undeveloped lands south of BCVWD's SOI which are designated as open space. There may be some threatened and endangered species in these areas. These areas provide natural corridors for wildlife movement.

San Timoteo Creek and Cooper's Creek, a tributary of San Timoteo Creek, immediately downstream of the YVWD's and the City of Beaumont's wastewater treatment effluent discharge respectively, have some continuous flow at least for some distance downstream of their respective discharges. A portion of the effluent discharge from the City of Beaumont is required to be maintained by their Regional Board and US Fish and Wildlife for threatened and endangered species habitat that have been supported by the historic wastewater discharges. As

[9] nwis.waterdata.usgs.gov/nwis, USGS 11057500 San Timoteo C Nr Loma Linda Ca

a result, not all of the wastewater produced by the City of Beaumont's Treatment Facility can be recycled. It may be possible to capture some of the percolated discharge downstream of the sensitive habitat location using extraction wells. The District is looking into doing this to maximize local water resources.

3.4.6 Wildfires and Erosion

Wildfires are always a threat in the area, fortunately, CalFire and the local fire departments are very responsive. BCVWD, YVWD and the City of Banning have water distribution systems available for fire prevention which have been effective in controlling wildfires. Emergency response helicopters are able to take water from the ponds at the District's recharge facility when it's available. Erosion from burned areas is always a problem. The District has been effective at mitigating the effects of wildfire erosion by diverting streamflow to desilting ponds constructed in and at the mouth of Little San Gorgonio Creek and percolating the desilted flow. The California Public Interest Energy Research (PIER) Program predicted a 30% increase in burned area by 2085 due to potential climate change impacts. BCVWD believes that erosion from the increased burned area can be managed with the existing infrastructure.

In 2020, there were several significant fire events[10,11] which occurred at the north end of the District's SOI. Due to increased risk of potential erosion which would occur due to rainfall, the District coordinated efforts with RCFC&WCD to ensure protection for homes in the area against any potential debris-laden storm flows in Little San Gorgonio Creek. Additionally, sediment from erosion of burned areas is controlled by desilting basins in and at the mouth of Little San Gorgonio Creek.

3.5. Service Area Population and Demographics

> ***CWC Section 10631(a)***
>
> *The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities…*

Historically, the principal industry in the Beaumont-Cherry Valley area was agriculture and agriculture-related services, particularly those associated with fruit production (cherries) and egg ranching. Over the years, the agricultural areas and other vacant lands were converted to housing tracts as new home buyers seek more affordable homes, particularly within the City of Beaumont. A major egg ranch, Sunny Cal, is no longer in business and most of the facilities have been removed in anticipation of development. A Specific Plan has been developed for that

[10] Apple Fire, July 31, 2020 – November 16, 2020. Affected area was approximately 33,424 acres

[11] El Dorado Fire, September 5, 2020 – November 16, 2020. Affected area was approximately 22,744 acres.

project and both domestic and non-potable water improvement plans were approved by the District in 2017. To date, no construction activities have commenced for the project.

Several major commercial centers have been constructed since year 2015, most notably the extensive development along 1st and 2nd Streets in southeast Beaumont. Several major distribution centers have been constructed including the Amazon Warehouse and Fulfillment Center, and the Wolverine Distribution Center in southwest Beaumont.

Several large residential projects have been in construction since around 2014. These projects include Fairway Canyon, Pardee Sundance, and Olivewood (formerly known as Heartland). From 2017 – 2019 an average of 572 single family homes were constructed per year in Beaumont – about 1,900 people per year. In 2020, there were 275 single family home permits taken out; 335 single family homes were "finaled".

A number of projects have been previously approved by the City of Beaumont, however have not yet started construction due to various reasons. These projects include Kirkwood Ranch, Potrero Creek Estates, and Noble Creek Meadows (formerly Noble Creek Vistas). These projects are expected to be into construction in the not-too-distant future. Additionally, the Jack Rabbit Trail project (Beaumont Pointe) recently completed its Water Supply Assessment with the District. This project was slated to be 2,000 single-family homes in the early 2000's; however it is now proposed to be commercial and industrial.

The Legacy Highlands Project is still in preliminary planning stages. Legacy Highlands includes a total of 2,868 dwelling units, consisting of single family residential, commercial/industrial, and active adult, low density residential.

In addition, there are a number of projects which have been under construction for a number of years and they are continuing. Sundance still has a few more small tracts to complete. Fairway Canyon and Tournament Hills 3 are underway with the grading of the final phases of these projects; but they are not expected to be complete for another five years or more.

Growth in Cherry Valley has been much slower, yet continues to grow, typically about five to ten single family homes per year. The area is mostly rural residential.

3.5.1. Service Area Population

Historic and current populations for the District's service area were extracted from the District's 2015 UWMP are presented in Table 3-4 as the District is still awaiting the results of the 2020 census. There were some adjustments to account for the latest census data. The data in Table 3-4 came from several sources:

- 1980 and 1990 populations and household information – U.S. Census Bureau, 2000 Census of Population and Housing, Population and Housing Unit Counts, PHC-3-6, California, Washington D.C., 2003. This data was used for the City of Beaumont. Data for Cherry Valley for this period was estimated.

- 2000, and 2010, 2015, and 2019 population and household information – U.S. Census Bureau American Fact Finder for Beaumont, CA and Cherry Valley CDP[12], CA.

Table 3-4 – Historical Population and Housing

	1980	1990	2000	2005	2010	2015	2020
City of Beaumont							
Population	6,818	9,685	11,384	19,105	36,877	43,370	51,647
Households	2,852	3,718	3,881	6,307	11,801	12,759	
People/Household	2.39	2.60	2.93	3.03	3.12	3.18	
Housing Units			4,258	6,949	12,908	13,563	
Occupied Housing Units			3,881	6,307	11,801	12,759	
Cherry Valley							
Population	5,012	5,945	5,891	6,126	6,362	6,595	7,610
Households	2,023	2,530	2,310	2,416	2,612	2,692	
People/Household	2.48	2.35	2.55	2.54	2.44	2.45	
Housing Units			2,627	2,750	2,874	2,903	
Occupied Housing Units			2,434	2,523	2,612	2,692	
Total							
Population	11,830	15,630	17,275	25,231	43,239	49,965	59,258
Households	4,875	6,248	6,191	8,723	14,413	15,451	
People/Household	2.43	2.5	2.79	2.89	3.00	3.23	
Housing Units			6,885	9,699	15,782	16,466	
Occupied Housing Units			6,315	8,830	14,413	15,451	

- 2020 population – Estimated for Cherry Valley based on historic growth from 2018. Estimate for the City of Beaumont based on housing completions from City Planning Department, Major Project Status for period 2010 through 2019[13], and District staff discussion with various developers regarding construction progress for major projects in the District's service area (ongoing projects discussed herein).

The data in Table 3-4 are an approximation of all of the people living in the District's service area. Except for a relatively few number of people that are on private wells or local water systems, all are served by the District. The District's SOI extends beyond its service area; but the existing population between the service area and the sphere of influence boundary is small at this time.

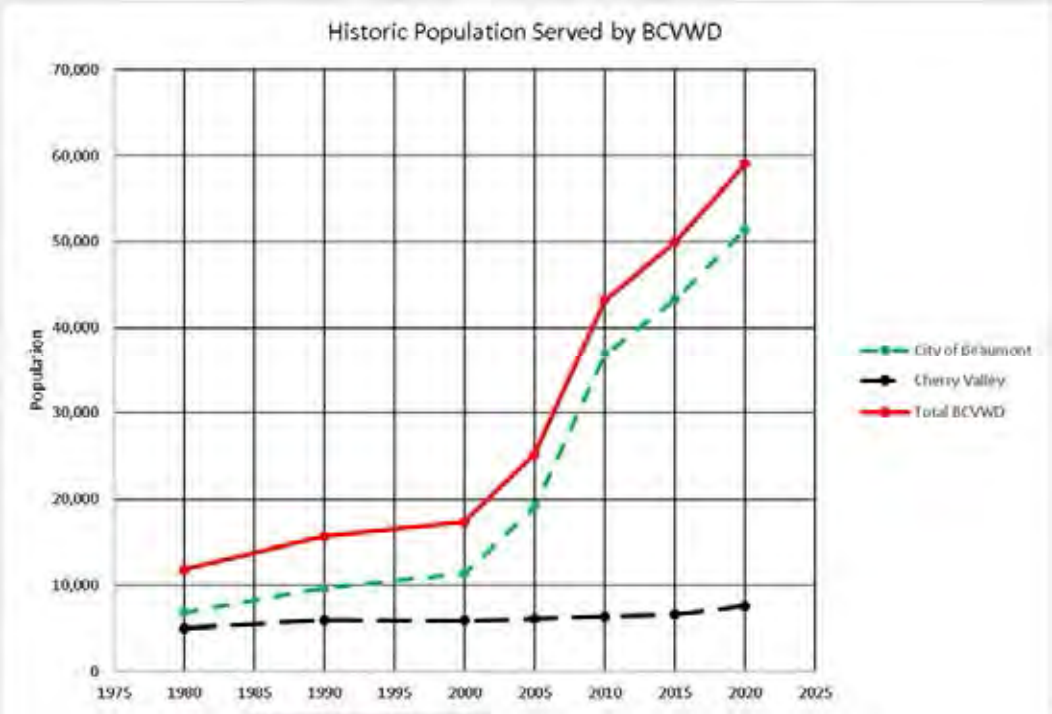
[12] CDP = Census-designated Place

[13] City of Beaumont Major Project Status Table and Map, December 16, 2019.

Figure 3-2 shows the population growth in the City of Beaumont and Cherry Valley from 1980 to 2020. The population after 2015 was estimated as described for Table 3-4.

The data in Table 3-4 and Figure 3-2 show very rapid growth for the City of Beaumont between the years 2000 to 2020. Nearly 2/3 of this growth occurred between 2000 and 2010 based on building permits issued by the City of Beaumont. The high rate of growth decreased after 2010 following the economic turndown in the U.S. and California in 2008 which continued for several years. The rate of growth in the District's service area has increased again after 2015 after the start of the economic recovery. The population in Cherry Valley remained relatively constant since 1990. The community of Cherry Valley did not experience the same growth spurt that occurred in the City of Beaumont and other areas in Western Riverside County.

Figure 3-2 – Historical Population Growth in District



The U.S. Census Bureau, American Fact Finder, provided some information about the housing units in Beaumont and Cherry Valley. This information is presented in Table 3-5 and shows the housing stock in Beaumont is relatively new with over 70% constructed since 2000 and over 76% since 1990. To further illustrate the young housing stock, 7.5% of residences in Beaumont have been constructed since 2014. This means most of the housing units have relatively water efficient plumbing systems and appliances. Chery Valley, on the other hand, has much older housing stock.

Figure 3-3 shows the number of single-family home building permits issued in the City of Beaumont for the years 2010 through 2019 (February 2020). BCVWD projects that approximately 500 single family home building permits were issued in 2020. Although not shown

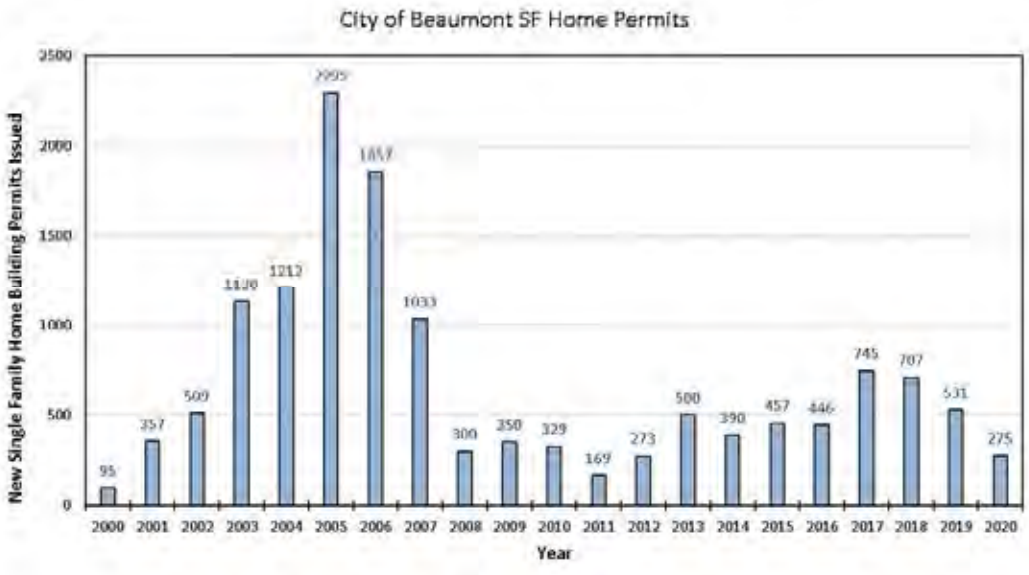
in Figure 3-3, the permits started picking up in 1999-2000 and reached their peak in 2005 with nearly 2,300 new home permits issued for that year. The number of permits for new homes declined to a low of 169 in 2011. Over the last 10 years (2011-2020), permits averaged 450 per year; over the last 5 years (2016-2020), permits averaged 541 per year. The 20-year average has been 693 per year. Future growth will likely be in the range of 350 to 650 permits per year, although some developers have projected slightly higher amounts in their build-out forecasts.

Table 3-5[14] – Housing Characteristics

Housing Type	Percent of Total Housing Units (2019 data)	
	Beaumont	Cherry Valley
Single Family	86.8%	70.2%
Multi-family	10.7%	1.6%
Mobile Home	2.3%	27.5%
Age of Housing (Constructed Since)	7.9% Since 2014 70.5% since 2000 76.2% since 1990	1.8% since 2014 7.5% since 2000 75.6% since 1960

Figure 3-3 – Growth in Beaumont as Shown by Single Family Home Building Permits

*Note: 2020 Data for Single Family Home Permits issued includes data through the end of February 2020.



[14] U.S. Census Bureau, 2019: American Community Survey Selected Housing Characteristics 5-Year Estimates Data Profiles

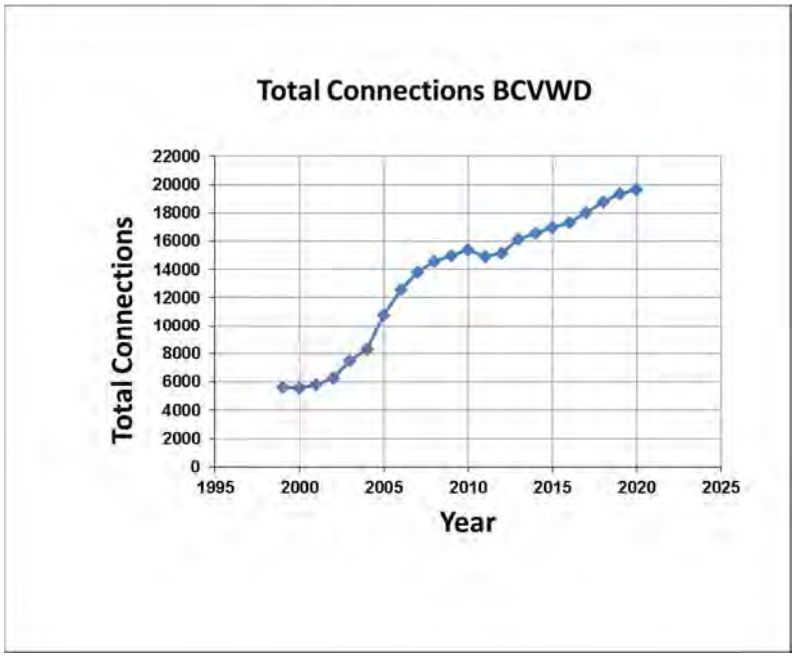
3.5.2. BCVWD Historic Connection Growth

Figure 3-4 shows the growth in total connections (services) within BCVWD's service area. Most of these occurred in the City of Beaumont. Total connections at the end of 2020 were 19,659 as stated in the 2021 BCVWD Operating Budget. Prior to the year 2000, the District had about 5,600 total connections. The number of connections increased steadily until about 2008 when the annual increase began to slow down and level off.

The peak year was 2005 when 2,433 connections were added. For 2009 and 2015, the increase was just under 350 connections per year. The average for the period 2001 through 2020 was 668 new connections per year. For 2019 and 2020, the District added 579 and 314 connections, respectively.

Figure 3-4 shows the number of connections since 2000. This was probably as a result of the high number "closed" accounts due to the high number of foreclosures in the service area at the time.

Figure 3-4 – Connection Growth in BCVWD Since 1999



3.5.3. Projected Service Area Growth

BCVWD uses Equivalent Dwelling Units (EDUs) to project water demands, water supply needs, and estimated population growth in the service area. BCVWD developed a spreadsheet in 2017 as part of a series of "white papers" on regional imported water requirements and supply needs and sources. This spreadsheet is updated on a regular basis as information on planned projects becomes available and as on-going projects are completed. The spreadsheet has inputs for:

- Infill projects per year

- Commercial and Institutional EDUs per year expressed as a percent of new single-family EDUs with an adjustable minimum
- On-going or planned development projects, total EDUs and EDUs yet to constructed. An estimate is made of the number of units to be constructed per year until project completion based on discussions with the developers, the developers' past experience on the project, and drive-by surveys of completed construction.
- Potential EDUs in Cherry Valley

Review of the City of Beaumont's Major Project Status Report[15] listed six projects that were currently under development (on-going construction). These are listed in Table 3-6. It appears there are about 3,155 EDUs in the current on-going projects yet to be constructed as of February 2021.

Table 3-7 presents a list of other projects in various stages of approval the City of Beaumont. The total number EDUs is estimated to about 9,200.

Table 3-6 – Projects within BCVWD Service Area Under Construction

Development Name	Total Anticipated EDU's	Estimated Housing Units Yet to be Constructed (Feb. 2021) [16]	Estimated Build-out Year
Sundance	4,450	808	2027
Fairway Canyon SCPGA	3,300	1,650	2035
Olivewood (Heartland)	981	697	2030
Hidden Canyon Industrial Park (Beaumont Distribution Center)	Industrial	-	2021
Sundance Corporate Center	Commercial	-	2021
Totals	**8,731**	**3,155**	

The housing units yet to be constructed in Table 3-6 plus the EDUs in the other projects in Table 3-7 total about 12,400 EDUs in the City of Beaumont. This would result in an increase in population of about 35,000 people based on 3.28 people per EDU (average density for the City of Beaumont). This would bring the total Beaumont population to about 95,000. Based on the estimated build-out year for each project in Table 3-7, this population would not occur until 2045 or later.

[15] City of Beaumont, Major Project Status Report, December 16, 2019.

[16] District staff field survey on December 16, 2020, by E. Ward.

Table 3-7 – Other Projects in BCVWD's Service Area

Development Name	Total Probable EDU's	Estimated Build-out Year	Status (April 2021)
Beaumont Industrial Park (Industrial) [1,2]	70	2040	
Beaumont Downtown District	900	Unknown	
Beaumont Village (Mixed Use) [1,2]	2350	Unknown	
Beaumont Pointe (Jack Rabbit Trail – Commercial/Industrial) [1]	221	2027	
CJ Foods (Industrial)	225	2023	Incremental EDU increase per year, beginning 2018 and ending in 2023
Dowling Orchard (Industrial)[1,2]	50	Unknown	
Hidden Canyon II [1,2]	59	2031	
I-10 & Oak Valley Parkway (Commercial)[1]	200	2035	
Kirkwood Ranch	391	2040	Specific Plan (1991), Tent. Tract Map 27357 Approved
Loma Linda/BUSD (Commercial/Industrial)[1,2]	100	2040	
MCM Chicken Ranch (Industrial) [1,2]	50	2045	
Noble Creek Vistas (Tract 29522)	298	Unknown	
Noble Creek Meadows (Tract 29267)	274	2025	
Oak Creek Village*(Commercial) [1,2]	100	Unknown	
Oak Valley Parkway/Oak View Drive (Commercial) [1,2]	75	Unknown	
Olivewood (Commercial) [1,2]	40	2035	
Potrero Creek Estates [1,2]	700	Unknown	Specific Plan (1989)
Riedman Properties (Merlin Properties)	140	2035	

Table 3-7 Cont. – Other Projects in BCVWD's Service Area

Development Name	Total Probable EDU's	Estimated Build-out Year	Status (April 2021)
SDC Fairway Canyon Commercial[1,2]	75	Unknown	
Sunny Cal Egg Ranch	529	2040	
Taurek	244	Unknown	
Legacy Highlands (Residential, Commercial, Industrial)[2]	2,542	Unknown	
Tournament Hills Phase 3, (TM 36307)	284	2028	Tract 36307, Amendment to Oak Valley Specific Plan Approved
Oak Valley Towncenter (NW Corner Beaumont Avenue & Oak Valley Parkway)	60	2030	
Manzanita (Tract 32850)	95	2035	
Xenia Apartments[3]	100	2029	
Totals	**9,272**		

(1) Commercial/Industrial "EDUs" determined based on 0.546 AFY/EDU, or approximately 487 gal/EDU/day.
(2) District staff estimated EDUs due to project not fully entitled.

BCVWD's 2020 UWMP projected EDU growth is based on discussions with the developers having on-going projects. The EDU growth is summarized in Table 3-8.

Table 3-8 – Summary of New EDUs in BCVWD Service Area

	Cumulative New EDUs					
	2020	**2025**	**2030**	**2035**	**2040**	**2045**
Beaumont	1947	4026	6293	8732	10693	12502
Cherry Valley	14	40	97	158	228	262
Total	1961	4066	6390	8889	10922	12764
Average New EDUs/year	654	421	465	500	406	368

Based on the past history of building permits in the City of Beaumont, presented previously in Figure 3-3, an average of 470 EDUs per year for the period 2020 through 2045 shown in Table 3-8 is believed to be a reasonable market assimilation rate for the area.

Table 3-9 shows the growth in population for Beaumont, Cherry Valley and BCVWD, as a whole, based on the anticipated EDU growth shown in Table 3-8.

Table 3-9 – Current and Projected Population in BCVWD Service Area

	Based on Expected EDU Growth in Table 3-8					
	2020	**2025**	**2030**	**2035**	**2040**	**2045**
Beaumont	51,647	58,467	65,901	73,901	80,335	86,266
Cherry Valley	7,610	7,682	7,838	8,005	8,197	8,290
Total	59,258	66,149	73,739	81,906	88,532	94,556

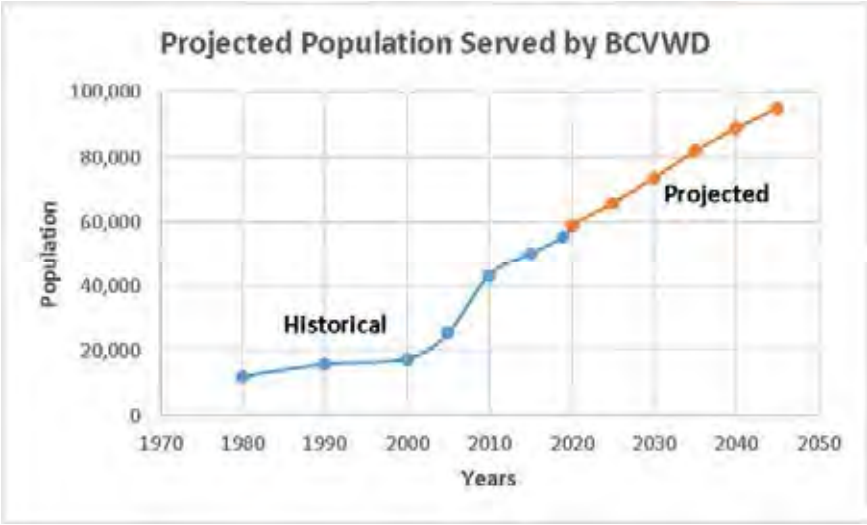
The growth in EDUs in Table 3-8 will be the basis for projecting the water demand in this 2020 UWMP presented in Section 4.

District staff met with City staff on June 09, 2021 to discuss population forecasts as described in the City's recent General Plan Update and how the population estimates identified by the City measure up with the forecasted estimates provided herein. The meeting with City staff was productive and populations provided herein appear to be reasonable.

Figure 3-5 shows the historic and projected population served by BCVWD taken from Tables 3-4 and 3-9 using the EDU growth in Table 3-8.

Figure 3-5 – Historic and Projected Population Served by BCVWD

(based on EDU growth rate in Table 3-7)



3.5.4. Comparison with Department of Finance Projections

Table 3-10 shows a comparison between State of California Division of Finance (DoF) population growth rate for Riverside County and the population growth rate shown in Table 3-9.

Table 3-10 – DoF Riverside County vs. BCVWD 2020 UWMP Population Growth Rates

	Population					
	2020	2025	2030	2035	2040	2045
CA Dept. of Finance Projection - Riverside County (x1,000 People)	2,449	2,594	2,728	2,841	2,933	3,005
5 Year % Change	-	5.90%	5.17%	4.13%	3.25%	2.45%
BCVWD	59,258	66,149	73,739	81,906	88,532	94,556
5 Year % Change	-	11.63%	11.47%	11.08%	8.09%	6.80%

The projected growth rate for BCVWD is higher than for Riverside County, as a whole, through the next 25 years.

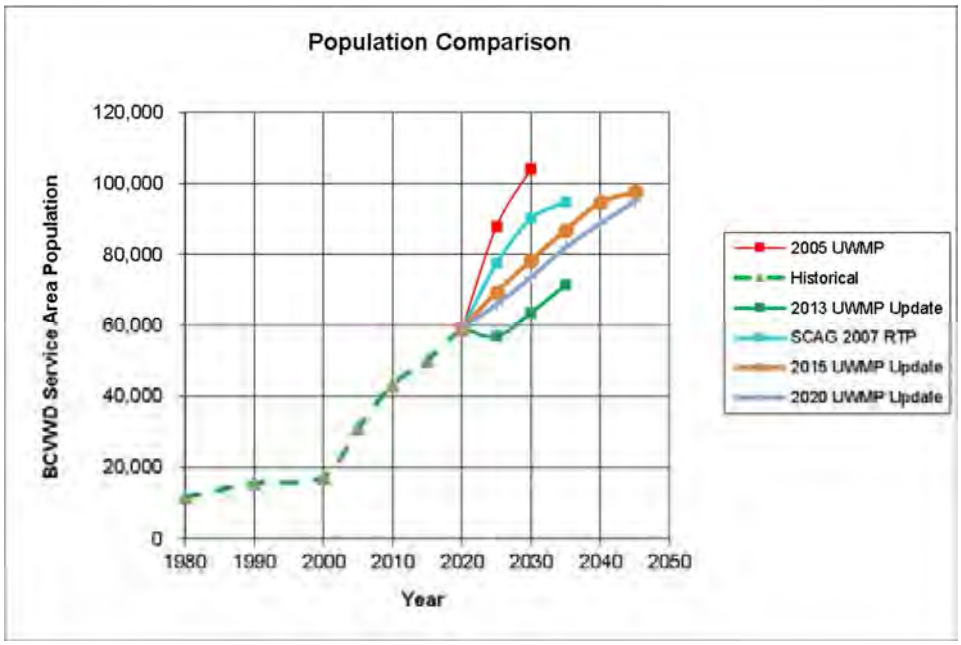
3.5.5. Comparison to Previous UWMPs

To provide a perspective on population growth estimates, Figure 3-6 shows the historic population through the 2020 census along with the population projections in the 2005, 2013, and 2015 UWMP updates. Also included for reference is the Southern California Association of Government's (SCAG's) 2020 Regional Transportation Plan (RTP) Population forecast[17].

[17] Note: SCAG 2020 RTP population only includes City of Beaumont projections

The 2020 UWMP shows more aggressive growth than the previous (2015) version, as well as SCAG. As indicated in Figure 3-6, this aggressive growth rate will decrease over time.

Figure 3-6 – Historical Population and Previous UWMP Population Projections



3.5.6. Other Demographic Information

Income and Home Values

Table 3-11 presents data on the household income and median home values in the service area.

Table 3-11 – Income and Housing Values for 2019[18]

	City of Beaumont	Cherry Valley	Riverside County
Median Household Income (2019 Dollars)	$ 84,105	$ 54,750	$ 67,005
Per Capita income (2019 Dollars)	$ 28,883	$ 32,650	$ 25,596
Owner Occupied Units Median Value	$ 320,500	$ 276,100	$ 350,110

[18] 2015-2019: American Community Survey (ACS) 5 Year Estimates

Population Age and Diversity

The median age in Beaumont is 34.5 years; Cherry Valley is 49.8 years. The median age in California is 37.0 years, the U.S. as a whole is 38.5 years. Beaumont is a young community, with many first-time home buyers; Cherry Valley is an older community.

The service area is ethnically diverse. Beaumont is primarily Caucasian and Hispanic with a small number of Asians; Cherry Valley is primarily Caucasian.

Employment

The latest data on employment in the service area is for the year 2019 from the U.S. Census Bureau American Community Survey (ACS) Estimates. This is summarized in Table 3-12.

Table 3-12 – 2019 Employment Data

	City of Beaumont	Cherry Valley	Total
Total Population 16 Years and Older	34,648	6,900	41,548
Total Population 16 Years and Older in Labor Force	21,274 (61.4%)	3,305 (47.9%)	24,578 (59.2%)

Principal industries for males in the City of Beaumont are construction, retail trade and manufacturing; for females, principal industries are retail sales, cashiers and office administration. In Cherry Valley, the principal industries for males are construction and retail trade; for females, education and healthcare/social services.

3.5.7. Build-out Population

The City of Beaumont has recently completed a General Plan Update[19] which involved some modifications in the land use plan for the downtown area. As stated in the General Plan Update:

> *Downtown is a vital anchor of the community, housing many civic and historical buildings and a diverse mix of uses. The City understands the importance of coordinating investments and land use planning decisions to support the redevelopment of Downtown. The City will implement strategies to reduce existing vacancies and promote a mix of active uses and a variety of retail and housing. Downtown development will encourage human scale design that supports pedestrian activity, including an improved pedestrian experience, multi-modal streets, and adequate density to create a sense of place.*

The downtown area proposes commercial/residential mixed use which is different from the previous General Plan. BCVWD is in the process of evaluating the impact of these land use changes on the build-out population. But before this is completed, BCVWD wants to evaluate it in concert with data from the 2020 census, which will not be available until later in 2021.

[19] City of Beaumont General Plan, Adopted December 2020.

The BCVWD service area build-out or "saturation" population will be determined using the City of Beaumont's Zoning Map and Table 3.2a from the City's General Plan (2020) to determine the total areas of the various zoning categories in the District's SOI. Actual GIS data was obtained from the City and integrated into the District's GIS system to determine the land uses within the District's SOI. The zoning designation includes a range of dwelling units/acre. Table 3.2 from the City's General Plan Update includes the estimated number of residential units per land use category.

A similar approach will be used for Cherry Valley, only this time data from Riverside County General Plan, Pass Area Land Use Plan will be used[20]. Again, the GIS data set was obtained from the County and integrated into the District's GIS system to determine the land use category areas within the District's SOI.

BCVWD believes the build-out population for the SOI will increase from that presented in the 2015 UWMP, but the increase is yet to be determined. The build-out population does not impact this 2020 UWMP as forecasts are only to 2045. Build-out will not occur until sometime after 2045. Build-out population is valuable to determine ultimate water demands and ultimate facility requirements.

3.6. BCVWD's Water Supply System

BCVWD has a potable water system and a non-potable water system. The potable water system is supplied exclusively by groundwater wells; the non-potable water system is designed to convey non-potable groundwater, recycled water, untreated imported water, and potable water, as make-up, or a blend of all. In addition to these systems, the District owns and operates a groundwater recharge facility and imported water pipeline connection to SGPWA's turnout on the East Branch Extension of the State Water Project. BCVWD's historical average day and maximum day potable demands were 10.8 mgd and 21.6 mgd, respectively. Average day and maximum day non-potable water demands for 2020 were 5.6 mgd and 6.7 mgd, respectively. These demands are higher than 2015 when the average day total potable and non-potable demand was 9.2 mgd; maximum day was 15.3 mgd. The impact of increased development in the City of Beaumont is evident.

[20] The Pass Area Land Use Plan, December 6, 2016. (Part of Riverside County General Plan)

3.6.1. Potable Water System

BCVWD's potable water system is supplied by wells in Little San Gorgonio Creek (Edgar Canyon) and the Beaumont Basin (sometimes called the Beaumont Storage Unit or the Beaumont Management Zone). The District has a total of 24 wells (1 well is a standby). One of the wells, Well 26, can pump into either the potable water or the non-potable water system. Currently, it is pumping into the non-potable water system. The Beaumont Basin is adjudicated and managed by the Beaumont Basin Watermaster. BCVWD augments its groundwater supply with imported State Project Water from the SGPWA which is recharged at BCVWD's recharge facility at the intersection of Brookside Avenue and Beaumont Avenue.

Wells in Edgar Canyon have limited yield, particularly in dry years, and take water from shallow alluvial and fractured bedrock aquifers. Wells in the Beaumont Basin are large capacity and pump from deep aquifers – some as deep as 1,500 ft below the ground surface. The Edgar Canyon wells are very inexpensive to operate and are the preferred source; however, those wells are not able to meet the current average day demand. The Edgar Canyon wells pump to a gravity transmission main that extends the full length of the District-owned properties in Edgar Canyon. The transmission main connects to the distribution system in Cherry Valley. Water from the Edgar Canyon Wells, which is not used in the developed areas adjacent to Edgar Canyon or Cherry Valley, is transferred to lower pressure zones serving the City of Beaumont. The Edgar Canyon Wells provide about 15 to 20 percent of the total annual supply; the rest is pumped from wells in the Beaumont Basin supplemented by recharged imported water.

BCVWD has two active stream diversion locations within Little San Gorgonio Creek (Edgar Canyon) that are in the State Water Resources Control Board, Division of Water Rights database (S014351, S014352). The diversions have pre-1914 recorded water rights amounting to 3,000 miner's inch hours (MIH) or approximately 45,000 AFY of right for diversion of water for domestic and irrigation uses. These date back to the early history of the District. However, the District has never had a demand that requires such large quantities of water supply; and the watersheds may not be capable of supplying such quantities during an average year. At the present time, the District currently diverts streamflow in Edgar Canyon to a series of percolation ponds which recharge the shallow wells in Edgar Canyon. This water is then extracted for domestic purposes.

BCVWD's total well capacity (Edgar Canyon and Beaumont Basin) is about 27.5 mgd with the largest well out of service, which is greater than the current 21.6 mgd maximum day demand (2020).

The District has 11 pressure zones and 14 reservoirs (tanks) ranging in size from 0.5 MG to 5 MG. Total storage is approximately 22 MG –just over two average days or just over one maximum day. The reservoirs provide gravity supply to their respective pressure zones. The BCVWD's potable system is constructed such that any higher zone reservoir can supply water on an emergency basis to any lower zone reservoir. There are booster pumps in the system to pump water up from a lower pressure zone to a higher pressure zone also.

The transmission system in the main pressure zones is comprised of 24-in diameter pipelines (there are some 30-in diameter pipelines at some reservoirs). The bulk of the transmission system is ductile iron pipe with cement mortar lining and was installed in the last 10 to 15 years. There are a number of small distribution lines (4-in and smaller) that are gradually being replaced over time with minimum 8-in diameter ductile iron pipe. All developments, since the early 1980s, have installed mortar lined, ductile iron pipe. The distribution system is capable of providing over 4,000 gallons per minute (gpm) fire flow in the industrial/commercial areas of the service area.

3.6.2. Imported Water and Recharge Facilities

Around 2001, BCVWD began investigating an 80-acre site on the east side of Beaumont Avenue between Brookside Avenue and Cherry Valley Boulevard as a location for a facility to recharge captured storm flow and imported water. After extensive hydrogeologic investigations, including pilot testing, the District eventually purchased the site (known as the Oda Property) and developed Phase 1 of the recharge facility on the westerly half of the site. The Phase 1 facilities were completed and went online in late summer 2006. Phase 2 of the recharge facility was completed in 2014. The 80-acre site has excellent recharge capabilities with long-term percolation rates around 7 to 10 acre-ft/acre/day, with proper maintenance.

The District completed construction of a 24-in pipeline from the SGPWA turnout on East Branch Extension (EBX) of the State Water Project to the District's recharge facilities in 2006. A metering station was installed at the turnout at Noble Creek and Vineland Avenue and BCVWD began taking imported water deliveries from SGPWA for recharge in September of 2006. In 2019, the EBX facility was expanded to allow for additional imported water capacity. Since its operation in 2006 through the end of 2020, nearly 108,900 acre-ft (about 35.5 billion gallons) of

imported water have been recharged. As of the end of 2020, BCVWD has 39,750 acre-ft "banked" in the Beaumont Basin; this is more than a three-year supply.[21]

The District is also currently working with RCFC&WCD to complete the MDP Line 16 Project, which will allow the District to capture and recharge stormwater at the Phase 2 recharge facilities. The expected volume of stormwater able to be recharged is approximately 250 AFY. Construction is expected to begin in 2021 and be completed by fall 2022.

3.6.3. Non-potable (Recycled) Water System

Currently, BCVWD has over 40 miles of non-potable water transmission and distribution pipelines (6-in and larger) in-place. This construction has occurred since about 2002. A 24-in diameter ductile iron pipeline forms a loop around the City of Beaumont. The system includes a 2 million gallon recycled (non-potable) water reservoir which provides gravity storage and pressurization for the system. The 2 MG non-potable water reservoir is configured to receive potable water or untreated State Project Water (SPW) through air gap connections. The non-potable water system can have a blend of recycled water, imported water, non-potable groundwater, and potable water. The 2 MG reservoir is located at the District's groundwater recharge facility at Beaumont Avenue between Brookside Avenue and Cherry Valley Boulevard. There are about 300 existing landscape connections to the recycled water system receiving about 1,600 acre-ft of water based on 2020 water meter records (in 2019, the non-potable water demand was 1,540 acre-ft). The effects of increased development in the District's service area impacted the non-potable system too.

A large part of the non-potable water system is currently supplied from Well 26 and supplemented with potable water which is introduced into the 2 MG non-potable water tank through an air gap connection. The non-potable water system in the Tournament Hills and Fairway Canyon area is currently supplied with potable water through temporary interconnections between the potable and non-potable water system.

[21] Beaumont Basin Watermaster (2021). 2020 Consolidated Annual Report and Engineering Report (Draft) prepared by ALDA, Inc. in association with Thomas Harder& Company, Engineering: Rogers, Anderson, Malody, and Scott, LLP. Financial Auditors; Alvarado Smith, Legal Counsel. April

BCVWD is currently working with the City of Beaumont to secure recycled water for use in the non-potable water system. As of the end of 2020, the City is nearing the completion of the expansion and upgrade of its existing wastewater treatment facility to bring it to 6 MGD capacity and will be installing a new membrane bioreactor (MBR) treatment unit followed by reverse osmosis membrane treatment. A brine line from the treatment plant to the Inland Empire Brine Line (IEBL) in San Bernardino was constructed in 2020.

A memorandum of understanding between BCVWD and the City for recycled water purchase and use was signed in July 2019 and the City and BCVWD are in the process of finalizing an agreement for purchase of recycled water through an ad-hoc committee consisting of City Council members and BCVWD Board Members.

The Regional Water Quality Control Board (RWQCB) has ordered the City to be in compliance with the maximum benefit provisions, which include providing recycled water for beneficial use, by November 30, 2020. Construction completion has been delayed due to wet weather and the Covid-19 virus shutdown.

When the demand for recycled water for landscape irrigation is less than the supply available (winter months), BCVWD may ultimately recharge surplus recycled water at BCVWD's groundwater recharge facility or some alternative facility with appropriate treatment and permits. Recycled water use and recharge is permitted by the Beaumont Basin Adjudication.

3.7. BCVWD Authority Under the Irrigation District Law

As previously stated, BCVWD was formed as an "irrigation district" under California Water Code §20500 *et seq*. that defines the "powers" and authority of irrigation districts which are summarized below:

- Furnish water in the district for any beneficial use, including fire protection (§20500, 22077)
- Control, distribute, store, spread, treat, recapture and salvage any water (including but not limited to sewage waters for the beneficial use of the district or its residents [§22078])
- Provide for any and all drainage made necessary by the irrigation provided for by the District (§22095)
- Acquire lease and operate plants for the generation, transmission, distribution and sale of electric power (§22115)
- Acquire, construct, maintain, and operate facilities for the collection and disposal of sewage subject to approval by a majority of the voters of the District (§22170, 22176)
- Fix and collect charges for any service provided by the District including the sale of water (with standby charges), connections to new pipelines or extensions of existing

pipelines, use of water for groundwater recharge, use of water for power purposes and sale of electric power (§22280)

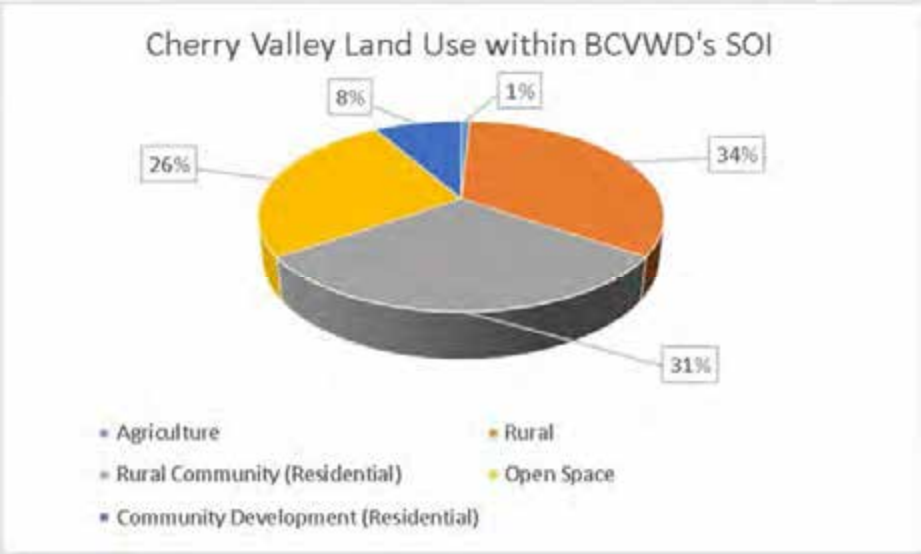
- Impose a special tax pursuant to Article 3.5 (commencing with §50075) of Chapter 1 of Part 1 of Division 1 of Title 5 of the Government Code. The special taxes shall be applied uniformly to all taxpayers or all real property within the District, except that unimproved property may be taxed at a lower rate than improved property (§22078.5)

Although these powers are permitted under statute, approval from LAFCO may be required before certain activities are undertaken.

3.8. Land Use

Figure 3-7 shows the distribution of land use within the District's SOI based on the City of Beaumont and Riverside County Zoning (for the Cherry Valley area) as presented in the latest General Plans. This does not necessarily represent the current land use distribution. Almost 39% of the land use is residential; 60% is open space, conservation or rural mountainous.

Figure 3-7 – Cherry Valley Land Use Distribution within BCVWD SOI based on Current Zoning



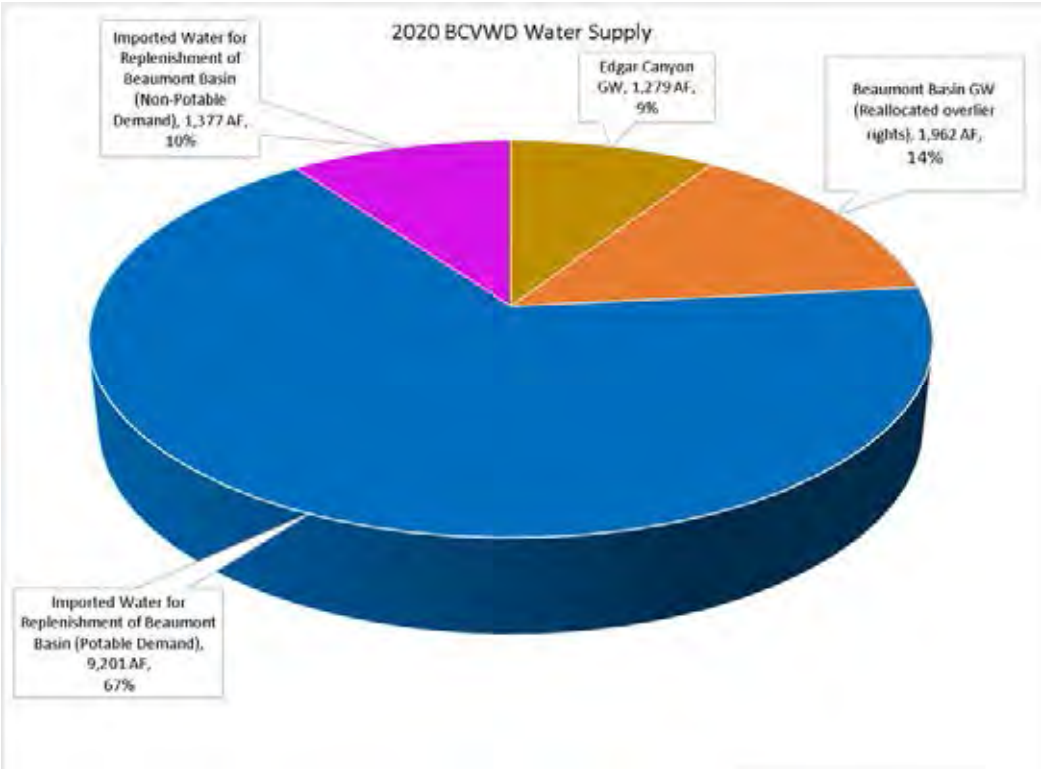
Section 4 - Water Use Characterization

This section provides data on the historic and projected water use within the BCVWD service area. For purposes of this UWMP, the terms “water use” and “water demand” are used interchangeably.

4.1. BCVWD Water Supply Portfolio

BCVWD’s overall water supply portfolio for 2020 includes imported State Project Water (recharged and/or taken from banked storage), groundwater, and non-potable groundwater. In the future, the non-potable water will include recycled water from the City of Beaumont along with non-potable groundwater, and untreated SPW[1]. Depending on demand, the non-potable system may also need to be supplemented with potable groundwater. Figure 4-1 shows the mix of water sources for BCVWD in year 2020.[2]

Figure 4-1 – BCVWD Water Sources Year 2020



[1] If used in the non-potable water system, SPW will be screened using a fine screen to remove material which may increase operation and maintenance requirements.

[2] 2020 Water Supply and local area service was affected by Covid-19 shutdown activities.

In the above Figure 4-1, “Beaumont Basin GW” (groundwater) would include only “forbearance” water and “reallocation of overlier pumping rights” based on the Beaumont Basin Adjudication. However, the District does not currently receive forbearance water from any overlier.

As part of the Adjudication, the “basin safe yield” was allocated entirely to the overlying parties. The appropriating parties, like BCVWD, were allocated a portion of a “temporary surplus” created to increase the available storage in the basin to allow for increased conjunctive use. Pumping of the “temporary surplus” ended in 2014.

- **Forbearance Water**. When an appropriator, such as BCVWD, provides potable or non-potable (e.g., recycled) water service to an overlying party or their successors in interest, such as would occur if the overlying party developed the parcel, the equivalent volume of water provided to the overlier shall be earmarked by the appropriator providing the water. The overlying party shall forbear the use of that volume of water earmarked by the appropriator. The appropriator, then, has the right to pump the volume of water forgone by the overlier. This is done through the Basin Watermaster who transfers forgone water to the appropriator’s groundwater storage account on an annual basis.
- **Reallocation of Overlier Pumping Rights**. As stated above, all of the “safe yield” was allocated to the overlying parties (overliers). Each overlier was given a share of the safe yield and was allowed to pump more than five times that share in any five-year period. Most, if not all, of the overliers do not pump their entire share of the safe yield. The amount of groundwater not produced by an overlying party shall be available for allocation to appropriators in accordance with their percentage shares of unused safe yield stated in the Adjudication Exhibit C[3]. BCVWD’s share is 42.51% of the unused overlier pumping rights. The Beaumont Basin Watermaster administers this reallocation and transfers the appropriate amounts into the appropriators’ storage accounts on an annual basis.

For 2020, BCVWD recharged approximately 11,006 AF of SPW. Of this, approximately 427 AF was banked in BCVWD’s groundwater storage account.

In the future, there will be greater use of non-potable water as BCVWD continues to convert existing irrigation service connections currently taking potable water to the non-potable system.

[3] Beaumont Basin Watermaster Rules and Regulations, Article 7.8.

4.2. Past, Current, and Projected Water Use by Sector

CWC 10631

(d)(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a)

(d)(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(d)(4A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(d)(4B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

4.2.1. Water Use Sectors Listed in Water Code

For purposes of the 2020 UWMP, the following definitions are used by DWR for each of the water sectors listed in the CWC. The order of the sectors follows the order found in the CWC. Each of these sectors are the only sectors that will be accepted by the Water Use Efficiency (WUE) data online submittal tool.

Single-family Residential – A single-family dwelling unit. A parcel/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.

Commercial – A water user that provides or distributes a product or service. CWC 10608.12 (d).

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: https://www.census.gov/naics/

Institutional (and Governmental) – A water user dedicated to public service. 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). Note that BCVWD account codes lump “Institutional” in with “Commercial.” In the tables to follow; the institutional and commercial fractions were estimated.

Landscape - Water connections supplying water solely for landscape irrigation. Such landscape connections may also be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered “landscape” if the connection is solely for landscape irrigation. If there is not a separate landscape connection, the landscape water use by these facilities is included with the facility category total water use.

Sales to Other Agencies –Water sales made to another agency. BCVWD and the City of Banning have been working cooperatively for over 20 years. BCVWD recharges water for Banning at BCVWD’s Noble Creek Recharge Facility, as requested. The City of Banning has participated with BCVWD in funding several wells in the Beaumont Basin for the purpose of extracting the recharged water and conveying the water thorough metered connections to Banning. BCVWD pumped an estimated 340 AF of water on behalf of the City of Banning in 2020. When water is pumped by BCVWD for the City of Banning, it is considered as City of Banning pumping and is not included in BCVWD’s extractions.

Conjunctive Use – A management strategy where surface water is managed in conjunction with an underground aquifer. This can be accomplished by recharging or treating and distributing surface water when available in lieu of pumping groundwater. This is frequently called “in lieu replenishment” and allows the groundwater basin to “recover.” BCVWD believes this is an operational strategy rather than a “water use.”

Groundwater Recharge – The managed and intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells. Water used for groundwater banking or storage may also be reported using this sector. If all, or a portion of, the groundwater recharge water is subsequently pumped out of the basin in the same year, that water will be reported by the pumping agency as a supply from groundwater (Tables 6-1 and/or 6-8 and 6-9). BCVWD is required to meet replacement water obligations of the Beaumont Basin Watermaster by recharge or by transferring water from BCVWD’s groundwater storage account. Future

years include a groundwater recharge (“banking”) component to build up BCVWD’s storage account for dry years.

Saline Water Intrusion Barriers – Injection of water into a freshwater aquifer to prevent the intrusion of saltwater. BCVWD does not supply any water to saline water intrusion barriers.

Agricultural – Water used for commercial agricultural irrigation through BCVWD’s agricultural irrigation meters. BCVWD has a number of metered agricultural irrigation connections. Water used for processing agricultural products (e.g., food, beverage, or textile manufacturing) is considered by BCVWD to be industrial water use rather than an agriculture water use.

Distribution System Losses – Reporting of system losses is required by the CWC in the 2020 UWMP. The methodology for calculating system losses is described elsewhere in this UWMP. As part of the 2020 UWMP, the CWC requires reporting losses for the previous 5 years for which annual data is available; BCVWD reports by calendar year. BCVWD’s losses for the previous 5 years (2015 - 2020) are indicated in Table 4-2. Note that 2020 data is still under development.

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

There are several other water uses mentioned in the UWMP Guidelines, each of which are described below:

Exchanges – Water exchanges are typically water delivered by one water user to another water user, with the receiving water user returning the water at a specified time or when the conditions of the parties’ agreement are met. BCVWD does not currently exchange water with any agency.

Surface Water Augmentation – The planned placement of recycled water into a surface water reservoir that is used as a source of domestic drinking water supply (See Section 6.6 Wastewater and Recycled Water). BCVWD does not have an immediate plan to do “surface water augmentation”.

Transfers – The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights. For the Beaumont Basin, the Adjudication allows for transfers between appropriators. In the past, BCVWD has purchased adjudicated groundwater from South Mesa Water Company This occurred between 2004 and 2014 when South Mesa has more than adequate groundwater supply to meet their needs at

that time. The need for this transfer has not been exercised in recent years, however BCVWD considers this option available in the event of an emergency.

Wetlands or Wildlife Habitat – Water used for a managed environmental use to improve an environmental condition. The City of Beaumont is required to maintain a flow of 1.8 mgd in Cooper's Creek, a tributary of San Timoteo Creek from the City's wastewater treatment plant. Currently, BCVWD is not currently receiving recycled water from the City of Beaumont, but the use of recycled water is anticipated in the near future. The requirement to maintain streamflow affects the amount of recycled water available to BCVWD. The wastewater production in the District's service area exceeds the amount of recycled water available as a result of the City's need to maintain the streamflow (environmental habitat mitigation). This is discussed further in the sections on recycled water; however, it is not considered as a "water use" in this UWMP.

4.2.3. Past Water Use

BCVWD's historical water use is summarized in Table 4-1 below:

Table 4-1 – Historical Potable and Non-Potable Water Demands

Year	1990	2000	2005	2010	2015	2020
Potable Water Demand (AFY)	5,572	6,308	8,268	9,201	9,278	10,845
Non-Potable Water Demand (AFY)	-	-	1,038	1,822	514	1647[1]
Total Water Demand (Potable and Non-Potable, AFY)	5,572	6,308	9,306	11,023	9,792	12,492[2]

(1) Includes supplemental potable water
(2) Does not include system losses

In Table 4-1, the "Non-potable Water Demand" is supplied by Beaumont Basin potable and non-potable groundwater. Beaumont Basin groundwater, regardless of potable or non-potable is subject to the replenishment obligations of the Adjudication (imported water). When recycled water becomes available, most of this non-potable demand will be met with recycled water and imported water, replenishment of Beaumont Basin groundwater will be reduced.

The drought from 2013 – 2015 or so resulted in significant water conservation measures imposed which caused a great reduction in water use around 2015. There has since been an increase in the potable and non-potable water demand as the water conservation measures have since been relaxed and as development continues to occur in the District's service area. However, a reduction in BCVWD's potable and non-potable water demand is anticipated in the

future with the enforcement of more stringent landscaping ordinances, reduction in indoor per-capita water use and outdoor water budgets, an increase in use of "water efficient" fixtures in homes and commercial/industrial businesses, and conversion of turfed street medians to low-water using plant materials (even if irrigated with recycled water).

4.2.4. Distribution System Water Losses

California Senate Bill No. 1420 (SB 1420), requires water utilities that submit Urban Water Management Plans to calculate annual system water losses using the water audit methodology developed by the American Water Works Association (AWWA). SB 1420 requires that utilities submit audits for the preceding five years as part of their respective Urban Water Management Plans.

> ***CWC 10631(d)***
>
> *(3)(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.*
>
> *(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association. (C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.*

Table 4-2 summarizes the water loss volume from the AWWA spreadsheet used in the District's Water Loss Audit.

Table 4-2 (DWR Submittal Table 4-4) – Last Five Years of Water Loss Audit Reporting

DWR Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (AF) [1,2]
01/2020	1350(1)
01/2019	992 (2)
01/2018	1236 (2)
01/2017	872 (2)
01/2016	913 (3)
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES: (1) Estimated for 2020 (2) Computed utilizing the American Water Works Association Method (3) Estimated	

4.2.5. Current (2020) Water Use by Sector

Table 4-3 shows BCVWD's water demand (water use) by sector for the year 2020.

Table 4-3 (DWR Submittal Table 4-1) – 2020 BCVWD Potable and Non-Potable Water Demands

DWR Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
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	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume (AF)
Add additional rows as needed			
Single Family		Drinking Water	8,580
Multi-Family		Drinking Water	339
Commercial	Estimated	Drinking Water	197
Industrial		Drinking Water	172
Institutional/Governmental	Estimated	Drinking Water	1,020
Landscape	Potable water only	Drinking Water	193
Landscape	Non-potable water only	Other Non-Potable Water	1,647
Agricultural irrigation		Drinking Water	51
Losses	Estimated	Drinking Water	1,326
Sales/Transfers/Exchanges to other Suppliers	(2) Production on behalf of City of Banning	Drinking Water	364
Other	Metered construction, street sweeping, etc.	Drinking Water	293
		TOTAL	13,818
[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: (1) Total does not include additional imported water for banking to storage. (2) 364 AF was pumped on behalf of the City of Banning			

4.2.5.1. Existing EDUs

BCVWD currently uses Equivalent Dwelling Units to calculate and project potable water demand. BCVWD Rules and Regulation, Section 5, defines an EDU as 580 gal/day. This is equivalent to 0.65 AFY/EDU. (An analysis developed for and presented in the 2015 Adopted Potable Water Master Plan supports this demand, however it is trending downward.)

4.2.6. Projected Water Use

> ***CWC 10631***
>
> *(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available… The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).*
>
> *(d)(4A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*
>
> *(d)(4B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:*
>
> *(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.*
>
> *(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

The water demand projections in Table 4-4 are based on BCVWD's estimated water usage per EDU (0.546 AFY/EDU) which are believed to be conservative and include the minor savings from increased consumer awareness of water conditions in the State, as well as an increase in water-efficient fixtures in new developments.

In spring 2019, BCVWD initiated an analysis of the potable water demand in thirty-two residential tracts constructed in the District from late 2007, through early 2018. The study reviewed the potable water demands, by customer meter, for all of 2016, 2017, and through summer 2018. The total demand for all of 2018 was projected based on historic consumption. The study encompassed 3,116 services. Tracts which were included in the analysis included Tournament Hills, Fairway Canyon, K. Hovnanian Four Seasons, Pardee Sundance, and Seneca Springs.

This unit demand factor includes an additional 10 to 15 percent water use to account for associated commercial and institutional demand associated with the residential development. The 0.546 AF/EDU/yr is approximately the same demand factor used by the SGPWA in their 2015 Capacity fee nexus study prepared by David Taussig and Associates.

Going forward, further reduction in the 0.546 AF/EDU/yr water demand factor may occur taking into consideration the following factors:

- Active Adult developments and small lot size residential developments are likely to be a greater portion of the development mix in Beaumont which will likely reduce the demand factor over time.
- Legislation signed by the Governor (AB 1668/SB 606), establishes 55 gpcd as the standard for indoor residential water use. Beginning January 1, 2025, the indoor residential water use standard will drop to 52.5 gpcd and may drop further to 50 gpcd by January 1, 2030. This could have an effect on indoor water consumption.
- More stringent landscape ordinances implemented by the County of Riverside and the City of Beaumont will reduce turf area and outdoor water use of potable water in single family homes and non-potable water use in common areas and street medians. Turf irrigation, even with non-potable water, may not be allowed unless there is a recreational purpose for the turf. The City of Beaumont's Ordinance effectively prohibits new, natural turfgrass lawns in the front yard of new residential subdivisions and medians and parkways along roads.

The 0.546 AFY/EDU is based on an ongoing (draft) analysis of water demand based on historic consumption for thirty-two tracts etc. and 3,116 services, began by the District in 2019. The draft analysis included a very preliminary evaluation of potable water. The study is ongoing with the intent of clarifying usage over wet/dry year periods in order to establish long term averages and trends. The following preliminary conclusions were made:

- The active adult communities (55+) use less water than the conventional type developments.
- The older developments (constructed 2000 to 2007) are using more water than the newer developments.
- Density, in terms of EDUs/acre, has a slight effect on unit water demand, but lot size has a much greater impact on water demand.

As a result of this study, BCVWD has made some adjustments in its water demand planning since preparing the 2015 UWMP. For water resource planning purposes, this UWMP uses a unit demand of 0.65 AFY/EDU/yr for all EDUs constructed prior to 2018 and 0.546 AF/EDU/yr for all EDUs constructed after 2018.

In the future, BCVWD anticipates a decline in both potable and non-potable water use per connection. The analysis of potable water demands is ongoing, and District staff hopes to continue to improve upon the correlations and conclusions that have previously been identified.

It is anticipated that future codes and restrictions will have an effect at reducing consumption even further. Codes and ordinances which will reduce consumption, but are not considered in the demand projections, include:

- Executive Order B-29-15 and California Code of Regulations Title 23, Division 2, Chapter 2.7. Model Water Efficient Landscape Ordinance – 2015. DWR estimates that a typical California landscape will use 12,000 gallons less water in a year or about 20% less than projected with the 2009 ordinance; commercial landscapes will cut water use by as much as 35%.
- City of Beaumont Municipal Code 17.06 Landscaping.
- County of Riverside Ordinance No. 859 – Water Efficient Landscape Requirements
- SB 606 (Hertzberg) and AB 1686 (Friedman) which require new efficiency standards for indoor use (per-capita limits), outdoor use (water budgets), street median and turf irrigation, and leakage loss.
- BCVWD Resolution 2016-05 –Authorizing the Implementation of Water Use Restrictions and Rescinding Resolution 2015–05. This resolution rescinded the twice per week landscape watering restrictions but did maintain the other conservation measures in the May 18, 2016, Drought Emergency Water Conservation Regulations, which was designed to prevent waste and unreasonable use of water and promote water conservation.

4.2.6.1. Projected Water Use by Sector

Table 4-4 shows the estimated future water use by sector. Included in Table 4-4 are planned quantities of groundwater recharge of imported water (for banking, not for adjudication replacement within the upcoming year). In May 2016, an Emergency Conservation Regulation was adopted by the SWRCB which requires water suppliers to maintain a 3-year supply during statewide drought conditions to avoid state-mandated water restrictions. In October 2014, the BCVWD Board adopted Resolution 2014-05 which suspends the issuance of will serve letters during statewide drought conditions, while there are mandatory conservation measures applicable to the District's ratepayers, or when BCVWD's supplies are less than the projected demands for five years. The groundwater recharge quantities are planned amounts that achieve a minimum 5-year firm water supply to ensure water supply for new EDUs and meet new State Emergency Water Conservation Regulation, "stress test" requirements.

4.2.6.2. Existing EDUs

Table 4-4 (DWR Submittal Table 4-2) – Projected Total Demands (Not Including Recycled Water)

DWR Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use (AF) *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)
Add additional rows as needed						
Single Family		9,302	10,047	10,849	11,479	12,041
Multi-Family		367	397	429	454	476
Commercial		214	231	249	264	276
Industrial		186	201	217	230	241
Institutional/Governmental		1,106	1,194	1,290	1,365	1,431
Agricultural irrigation		55	60	64	68	72
Landscape	Potable Water	209	226	244	258	271
Other	Metered construction and street sweeping water etc.	318	343	370	392	411
Other Non-Potable	Raw water to supplement non-potable water system (used for irrigation)	276	246	228	278	328
Groundwater recharge	Imported raw water banked for future extractions during dry periods. Does NOT include imported water to meet Adjudication replacement obligations.	1,500	1,200	1,000	1,000	1,000
Losses	Estimated	1,499	1,614	1,738	1,835	1,922
	TOTAL	15,032	15,759	16,678	17,623	18,469

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*
[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: (1) Projected water use by sector based off of water demand distribution by sector for 2020. (2)Groundwater recharge quantities are planned quantities to build and maintain 5-year supply per BCVWD Resolution No. 2014-05; landscape demand will be met with recycled water and supplemented with other non-potable water as needed.

The potable water demands, (i.e., the demands in Table 4-4 except “Landscape” and “Groundwater Recharge”), are based on BCVWD’s current and projected EDUs utilizing an estimated demand of 0.546 AF/EDU/year. Section 3.5.3 Table 3-8 showed EDU growth to 2045. The methodology for those projections was also presented in Section 3.

Developers are constructing much more water efficient homes with limited turf landscaping and more efficient appliances. New landscape ordinances may likely limit turf areas in street medians and common areas, which could further reduce the demands projected in Table 4-4.

The water demand to the multi-family, commercial, industrial, institutional/governmental, and "other" categories were projected from the actual 2020 values through 2045 on the basis that the changes in demand would be proportional to the changes in single family demand. As single-family residences increase there will be a proportionate increase in commercial, institutional, and industrial to support it. Multi-family units will grow also as land becomes more valuable and project economics become favorable.

The agricultural irrigation connections are declining at a gradual rate as the land use changes from orchards to residential land and the cost of water continues to increase. Most of the irrigation customers are in Cherry Valley and would not likely be served by the recycled water system within the foreseeable future. The orchards will continue to be served with potable water.

The projected landscape demands, (irrigated by the non-potable water system), are derived from BCVWD's current and projected number of EDUs and are associated with BCVWD's non-potable water system. The non-potable system is capable of providing recycled water from the City of Beaumont's wastewater treatment plant, non-potable groundwater, or imported SPW. The non-potable landscape irrigation demands do not include the irrigation demands from the two golf courses: Tukwet Canyon (268 AFY) and Oak Valley Greens (203 AFY). These golf courses are on their own wells and have Beaumont Basin Groundwater Overlier Rights. Irrigation of these golf courses from BCVWD's non-potable water system would depend on the amount of recycled water available. BCVWD's operational plan is to supply the landscape demands first, then if there is recycled water available, supply recycled water to the golf courses. Any unused recycled water (typical of wintertime operations) could be advance treated and recharged (planned indirect potable water reuse project) with the appropriate permits.

The Groundwater Recharge quantities shown in Table 4-4, above, are for planned recharge to build-up or maintain BCVWD's Beaumont Basin groundwater storage account. They are not actual demands. The quantities shown herein are over and above the supply needed by BCVWD to meet its normal Beaumont Basin replacement water obligations (as determined by the Beaumont Basin Watermaster). Banking water in the storage account is critical to meeting demands during dry years.

If imported SPW is not available in a given year, no groundwater recharge would occur. But, when imported water is available, any deficiencies from previous years would be "carried over" and made up.

Table 4-5 below, shows the total water demands which summarizes the demands from Table 4-4.

Table 4-5 (DWR Submittal Table 4-3) – Projected Potable and Non-Potable Water Demands

DWR Table 4-3 Retail: Total Water Use (Potable and Non-Potable) - In Units of AF						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	13,818	15,032	15,759	16,678	17,623	18,469
Recycled Water Demand[1] *From Table 6-4*	0	1,957	2,175	2,478	2,561	2,578
TOTAL WATER USE	13,818	16,989	17,934	19,156	20,184	21,047

[1] Recycled water demand fields will be blank until Table 6-4 is complete

*[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES: (1) The recycled water demand includes the forecast amount used on landscaping irrigated by the non-potable water system. Source of recycled water is the City of Beaumont. Also includes golf course irrigation demands. (2) Total includes additional imported water for banking to storage. (3) Total includes estimated losses.

4.3. Water Use for Lower Income Households

CWC 10631.1

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

California Health and Safety Code 50079.5

(a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families… In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.

Table 4-6 presents the long-term low-income housing needs, per capita water demand and annual water demand per low-income housing unit for the City of Beaumont and Cherry Valley.

The number of low-income housing units for the City of Beaumont was based on information in the Pre-Certified Local Housing Data for Beaumont prepared by SCAG dated April 2021. The

overall projected allocation for low income (income less than 80% of the Area Mean Income) housing in the City was estimated to be 1,950 dwelling units. For the purposes of this UWMP update, the allocation of 1,950 dwelling units was assumed to be the ultimate build-out need.

The number of low-income housing units in 2010 (350 for Beaumont and 70 for Cherry Valley) was used as a starting point to project growth in low-income housing. These numbers came from the City's Housing Element (2013-2021, December 2013), Inventory of Government Assisted Housing Developments (rounded up). All of the low-income housing units are in multi-family units and that was assumed to continue through to the year 2045.

The City is currently working on updating its Housing Element to the 2020 General Plan which was adopted in December 2020; the Housing Element is expected to be adopted in October 2021. The City does not explicitly indicate the total need for low income housing in its 2020 General Plan Update, so the District followed a similar approach to its 2015 UWMP to project the number of low-income housing units in its service area by 2045. Please see Table 4-6 below. In recent discussion with City staff, it is unclear as to what the anticipated low-income housing demand will be from the City's perspective by 2045.

Table 4-6 – Current and Projected Low-Income Housing Needs

	2020	2025	2030	2035	2040	2045
Projected Low-Income Housing EDUs						
City of Beaumont						
Single Family	0	0	0	0	0	0
Multi-family	1,000	1,325	1,650	1,975	2,300	2,732
Subtotal EDU	1,000	1,325	1,650	1,975	2,300	2,732
Cherry Valley						
Single Family	77	80	83	87	90	100
Multi-family	7	10	13	17	40	75
Subtotal EDU	83	90	97	103	130	175
Total						
Single Family	77	80	83	87	90	100
Multi Family	1,007	1,335	1,663	1,992	2,340	2,807
Total Low Income	1,083	1,415	1,747	2,078	2,430	2,907
Water Use						
Typical gpcd	162	162	162	162	162	162
Typical AFY	0.546	0.546	0.546	0.546	0.546	0.546
Low Income Single Family[1] , AFY/EDU	0.41	0.41	0.41	0.41	0.41	0.41
Low Income Multi-Family[2] , AFY/EDU	0.36	0.36	0.36	0.36	0.36	0.36
Water Use, AFY						
Low Income Single Family	32	33	34	36	37	41
Low Income Multi-Family	363	481	599	717	842	1,011
Total Water Use	395	514	633	753	879	1,052

[1] Low-income single-family water use estimated to be 75% of a typical Beaumont single-family home

[2] Low-income multi-family water use estimated to be 2/3 of a typical single-family residence

The Western Riverside Council of Governments (WRCOG) developed a low-income housing need for the entire WRCOG area (10,311 units, 2015). A separate projection for Cherry Valley was not provided. The low-income housing allocation for Cherry Valley was estimated based on the ratio of the current population of Cherry Valley to the total WRCOG population. The result was an estimated “need” of 175 low-income housing units in Cherry Valley. For Cherry Valley, the low-income housing needs were assumed to be single family units with multi-family units only developed in the year 2045 and beyond.

The growth projections of low-income housing parallel the District's estimate of projected population growth in its service area. As previously discussed in Section 3, the District believes its population estimates to be conservative.

The 2045 low-income water demand of 828 acre-ft/yr represents about 4.2% of BCVWD's water demand for 2045, i.e., not significant. Compared to the information provided by SCAG in the Pre-Certified Local Housing Data for Beaumont document, the District's estimate of low-income housing units in its service area by 2045 is conservative. As more data becomes available from the City of Beaumont from its Housing Element in late 2021, the District will continue to refine the estimates presented in Table 4-6.

It is also noted that the water demand projections in Table 4-5 utilize a uniform per capita water use per day of 162 gpcd. As stated previously, new State regulations as well as the increased use of water-efficient fixtures will result in lower indoor water demands; the District's estimate of water demand for low-income housing is conservative.

Table 4-7 below, certifies to the following:

- Future Water Savings from codes and ordinances is not included. The water demand projections in Tables 4-4 and 4-5 are conservative. BCVWD does expect much reduction in the demand, on a per capita basis, over time.
- The water requirements for low-income housing are included in the demand projections in Tables 4-4 and 4-5.

Table 4-7 (DWR Submittal Table 4-5) – Inclusion in Water Use Projections

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:	

4.4. Climate Change Considerations

> ***CWC 10630***
>
> *It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.*
>
> ***CWC 10635(b)***
>
> *Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following…*
>
> *(4) Considerations of the historical drought hydrology, plausible changes on the projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

The District is located in a semi-arid region which currently has a relatively low rainfall bearing winter and high temperature summer. As climate change occurs, if nothing is done, an increase in the landscape and outdoor water demand over time would continue. However, new landscape ordinances, which limit turf and encourage drought tolerant plantings, will reduce the total water needs. In addition, new developments are reducing the turf areas on each lot and installing more drought-friendly landscaping in order to satisfy those ordinances. The drought-friendly landscaping is also likely to extend to street medians and common areas which would further lessen the total water demand. BCVWD believes the direct impact of climate change on future water demand should be minimal to its system. With proper conjunctive use, BCVWD anticipates being able to provide ample water supplies over long-term periods and has been working to position itself by working with various partners to locate and obtain new sources of supply.

Section 5 – SB X7-7 Baselines, Targets, and 2020 Compliance

In February 2008, the Governor introduced a seven-part comprehensive plan for improving the Sacramento-San Joaquin Delta. A key component of his plan was a goal to achieve a 20 percent reduction in per capita water use statewide by the year 2020 (called "20x2020").

In November 2009, SB X7-7, The Water Conservation Act of 2009, was signed into law as part of a comprehensive water legislation package. With the adoption of the Water Conservation Act of 2009, the Governor's 2008 water reduction plan was codified, and the State was required to set a goal of reducing urban water use by 20 percent by the year 2020. Each retail urban water supplier had to determine baseline water use during their baseline period and also establish target water use for the years 2015 and 2020 to help the State achieve the 20 percent reduction.

In 2018, the Governor approved legislation (SB 606 and AB 1668, May 2018) which requires SWRCB, in coordination with DWR, to establish and adopt long-term standards for efficient water use for commercial, industrial, institutional, and indoor residential sectors. The legislation states that until January 1, 2025, 55 gallons per capita per day (GPCD) is the standard for indoor residential use. From January 1, 2025 to January 1, 2030, the standard would be 52.5 GPCD (unless determined otherwise by DWR) for indoor residential use. Beginning January 1, 2030, the standard would be 50 GPCD for indoor residential use (unless determined otherwise by DWR). It is noted that although these standards are not considered for the determination of 2020 water use compliance in this UWMP, BCVWD recognizes that further conservation efforts will be required by legislation for water suppliers and residential water users in the near future.

In this 2020 UWMP, water agencies, such as BCVWD, must demonstrate if they achieved their 2020 water use target as determined in the previous 2015 UWMP update.

The 5- and 10 to 15-year water use baselines as determined in BCVWDs 2015 UWMP are indicated herein on Table 5-1. 2020 Water Use Compliance is verified by DWR's review of the SB X7-7 Compliance Form submitted with BCVWD's 2020 UWMP (see Table 5-2).

5.1. Baseline Water Use Calculation

> ***CWC 10608.20***
>
> *(e) An urban retail water supplier shall include in its urban water management plan due in 2010. . . the baseline daily per capita water use…along with the bases for determining those estimates, including references to supporting data.*
>
> *(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).*

The Water Code specifies two different base periods for compliance with SB X7-7:

1. The first base period is a 10- to 15-year continuous period and is used to calculate baseline per capita water use per §10608.12. The 15-year continuous period is used if

the Agency used recycled water to supply more than 10% of its retail water demands (BCVWD did not use recycled water during the baseline evaluation period.)

2. The second baseline period is a 5-year continuous period and is used to calculate baseline per capita water use per §10608.22. Note that if the water agency's per capita demand is 100 GPCD or less, it is not necessary to determine this 5-year base period. Note that BCVWD's per capita demand is much higher than 100 GPCD, so the 5-year baseline period must be calculated and is described below.

BCVWD last updated its UWMP in 2015. Since BCVWD has not had a change to its service area other than annexations for new construction since the 2015 UWMP update, there is no need to update the calculations for baselines and targets.

BCVWD used Target Method 1 – 80% of BCVWD's baseline per capita daily water use in its 2013 UWMP Update. It was compared to Target Method 4 – 95% of the applicable state hydrologic region target. Using the state hydrologic region target resulted in a very low, unattainable target; so, Target Method 1 was adopted and used in the 2013 and 2015 UWMP Updates.

A detailed analysis of various baseline periods conforming to the Water Code was presented in BCVWD's 2013 UWMP Update as stated above. The analysis resulted in the 10-year baseline period being 1999-2008 and the 5-year baseline period being 2004-2008. Verification form SB 7X-7 Table 5-1 is presented below which summarizes the baseline period analyses for 1999-2008 and 2004-2008.

5.1.1. Determination of the 10-15 Year Baseline Period (Baseline GPCD)

> ***CWC 10608.12***
>
> *(b) "Base daily per capita water use" means any of the following:*
>
> *(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
>
> *(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

In BCVWD's 2013 UWMP Update, the District performed a detailed analysis of 10-year baseline periods from 1995-2004 through 2001-2010. The period 1999-2008 was selected as the 10-year baseline period for calculation of targets. There is no need to update or change the 10-year baseline per capita water use for the 2020 UWMP. The 10-year Base Daily Per Capita Water Use for BCVWD is 302 GPCD and is reflected in Table 5-1.

5.1.2. Determination of the 5-Year Baseline Period (Target Confirmation)

> ***CWC 10608.12***
>
> *(b)(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.*

In the 2013 UWMP Update, BCVWD determined the 5-year, continuous baseline period was from 2004 through 2008. Again, there is no need to revisit or change the 5-year baseline period for the purpose of this UWMP update. The 5-year Base Daily Per Capita Water Use for BCVWD is 291 GPCD and is reflected in Table 5-1.

Table 5-1 – SB X7-7 Baseline Daily Gallons Per Capita Per Day

SB X7-7 Table 5: 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	17,131	5,887	307
Year 2	2000	17,298	6,308	326
Year 3	2001	18,014	5,063	251
Year 4	2002	19,223	8,896	413
Year 5	2003	22,390	7,109	283
Year 6	2004	24,612	8,308	301
Year 7	2005	30,994	9,306	268
Year 8	2006	35,745	11,339	283
Year 9	2007	39,013	13,054	299
Year 10	2008	40,894	13,441	293
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**302**
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	2004	24,612	8,308	301
Year 2	2005	30,994	9,306	268
Year 3	2006	35,745	11,503	287
Year 4	2007	39,013	13,164	301
Year 5	2008	40,894	13,554	296
5 Year Average Baseline GPCD				**291**
2020 Compliance Year GPCD				
2020		59,258	12,492	**188**
NOTES:				

5.1.3. 2020 Targets

The Water Code identifies four (CWC 1608.20) methods which could be used to establish the target GPCD and those methods are as follows:

1. Eighty percent (80%) of the urban retail water supplier's baseline per capita daily water use.
2. The per capita daily water use that is estimated using the sum of the following performance standards:
    a. For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2017 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
    b. For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.
    c. For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.
3. Ninety-five percent (95%) of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.
4. A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:
    a. Consider climatic differences within the state.
    b. Consider population density differences within the state.
    c. Provide flexibility to communities and regions in meeting the targets.
    d. Consider different levels of per capita water use according to plant water needs in different regions.
    e. Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
    f. Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

BCVWD chose Target Method 1 – 80% of the 10-year Baseline GPCD, which calculates to be as shown below:

*Year 2020 Target (by Target Method 1) = 0.80 * 302 GPCD = 242 GPCD*

BCVWD is in compliance for with its 2020 Target and no adjustments to the year 2020 per capita are required.

5.1.4. 5-year Target Confirmation

> ***CWC 10608.22***
>
> *Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.*

*Year 2025 Target (by Target Confirmation) = 0.95 * 291 GPCD = 276 GPCD*

In BCVWD's case, CWC §10608.22 controls, and the District's confirmed year 2020 target is 242 GPCD.

5.1.5. Baselines and Targets Summary

Table 5-1 presents a summary of results of the baseline per-capita and target analysis, as previously presented in the 2015 UWMP. Table 5-2 shows that BCVWD met the intermediate, year 2020 target by a considerable margin.

Table 5-2 (DWR Submittal Table 5-1)– Baselines and Targets Summary

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*302*	*242*
5 Year	*2004*	*2008*	*291*	
**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*				
NOTES:				

5.2. 2020 Compliance Daily per Capita Water Use (GPCD)

CWC 10608.12

(f) "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…

CWC 10608.20

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 . . . compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

CWC 10608.24

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

BCVWD's actual per capita water use for 2020 was 188 GPCD, which is well below the Target of 242 GPCD provided above in Table 5-2. See Table 5-3 below:

Table 5-3 (DWR Submittal Table 5-2) – 2020 Compliance From SB X7-7 Compliance Form

DWR Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form *Retail Supplier or Regional Alliance Only*				
2020 GPCD				
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*	2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
188	*0*	*188*	*242*	*Yes*
**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*				
NOTES:				

Compared to the 180 GPCD per capita water use reported in the 2015 UWMP, it may appear there has been a slight increase. However, at the time the 2015 UWMP was prepared, there were Stage II water restrictions and water conservation measures in effect which resulted in approximately 24.3% savings in potable water. Without the restrictions, it is estimated that the 2015 GPCD would have been about 223 GPCD.

A factor that has affected the District's per capita water use is the substantial amount new homes which have been constructed in the District. Since 2001, there have been approximately 10,315 new housing units constructed in Beaumont[1]. About 71[1]% of all of the housing units in Beaumont having modern plumbing fixtures, high efficiency appliances and California friendly, drought tolerant landscaping with much reduced turf areas.

New housing stock and new landscape ordinances and regulations in the District's service area are responsible for the reduction in per capita water consumption.

[1] 2000, 2010 U.S. Census Data and 2015-2019: U.S. Census Bureau American Community Survey Estimates for the City of Beaumont.

Section 6 – Water Supply Characterization

6.1 Water Supply Overview

CWC 10631 (b)

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier [in five-year increments to 20 years or as far as data is available] providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

CWC 10631 (h)

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

In the early years of the District, before the middle of the 20th Century, diverted surface water from Edgar Canyon (Little San Gorgonio Creek) was used for domestic and agricultural supply. Remnants of some of the diversion boxes are still visible in Edgar Canyon. Since the early 1900's, wells in Edgar Canyon supplemented the surface diversions. Eventually the surface diversions were no longer used, and the District relied solely on groundwater from both Edgar Canyon and, after 1936 or so, the Beaumont Storage Unit (BSU or the Beaumont Basin).

The Beaumont Basin was adjudicated on February 4, 2004, and the Beaumont Basin Watermaster was established for management of the basin (RIC389197). The Adjudication put the basin into a safe yield operation. The principal terms of

the Adjudication are described later in this section; the full Adjudication is included in Appendix F.

In September 2006, BCVWD completed construction of Phase I of its storm water capture and groundwater recharge project (Noble Creek Recharge Facilities or NCRF) located along Beaumont Avenue, between Brookside Avenue and Cherry Valley Boulevard and began recharging imported SPW purchased from the SGPWA. The facility sits astride Noble Creek. The imported water percolates into the ground and comingles with the native groundwater in the Beaumont Basin. Groundwater and percolated imported water are BCVWD's only current water source. In 2015, BCVWD completed Phase II of the recharge facility which more than doubled the recharge capacity.

Future water sources will include recycled water and could include captured and recharged storm water from Edgar, Noble, Marshall and other canyons, urban runoff captured and recharged in detention and water quality basins, captured, nitrate-contaminated underflow from the Edgar Canyon, groundwater from the Singleton Groundwater Basin and perhaps the San Timoteo groundwater basin.

BCVWD is considering introducing filtered SPW directly into the non-potable water distribution system. This will reduce the cost of water pumped into the non-potable system by about $100 per AF and will reduce energy and the District's carbon footprint (the $100 per AF is the cost of energy to pump the water from the Beaumont Basin groundwater table into the non-potable water distribution system).

Table 6-1 identifies the water sources which are currently used or planned to be used by the District to meet future demands. Each of these sources will be described in more detail in subsequent subsections.

The District's water supply plan is based on the following set of principles:

- The Plan must be sustainable in terms of water quality and quantity.
- Energy is a major consideration in the evaluation of alternative water supply strategies.
- Local water resources such as poor quality groundwater and recycled water should be maximized in the non-potable water system and used for irrigation.
- Surplus non-potable water should be supplied to golf courses whenever it is not needed to meet other landscape non-potable water demands. This will provide BCVWD with forbearance water, as described in the Adjudication, which can be extracted from the Beaumont Basin to meet potable water demands.

- Recycled Water not needed for landscaping or golf courses should be advance treated and percolated to augment the potable water supply in conformance with applicable rules and regulations.
- Urban runoff and storm runoff from Little San Gorgonio Creek, Marshall Creek, Noble Creek and other local watersheds should be captured and percolated to the extent practical to minimize the amount leaving the “basin.”
- The Beaumont Basin Adjudication will be followed with return flow credits given for imported and recycled water.
- The SGPWA has committed to provide the needed imported water supply to meet BCVWD’s needs through at least 2045.

Table 6-1 – Current and Future Water Sources Available to BCVWD

Water Source	Current	Future
Groundwater, Edgar Canyon	●	●
Groundwater stored in the Beaumont Basin	●	●
Imported Water purchased through SGPWA	●	●
Recycled water for landscape irrigation		■
Recycled water for groundwater recharge from the City of Beaumont		Potential
Storm Water Capture and Recharge from Edgar Canyon, Noble Creek and other local watershed		■
Urban Storm Runoff captured in detention and water quality basins		■
Captured, nitrate-contaminated shallow groundwater from Edgar Canyon to supplement non-potable water system		Potential
Singleton Basin groundwater		Potential
San Timoteo Basin groundwater to supplement non-potable water system		■
Joint Projects with Other Agencies with Exchanges		Potential
Sites Reservoir		Potential

● Firm, existing source ■ Firm, future source

There are constraints on the use of some of these sources, e.g. recycled water to ensure the water quality of the groundwater is maintained over time. These constraints are established by the RWQCB and are described later in this section. The RWQCB and the DDW have constraints on the use recycled water for irrigation and groundwater recharge.

The water supply plan which is developed must be flexible. Conditions will change over time, regulations will change, more information and experience will be gained with the existing facilities, and other things will occur requiring periodic adjustments to the water supply plan.

6.2 Purchased or Imported Water

As discussed previously, imported water is provided to BCVWD through the SGPWA in which SGPWA has a service area of 225 sq. mi. exclusively in Riverside County. In addition to BCVWD, the major water retailers in the SGPWA service area include the City of Banning, YVWD, Banning Heights Mutual Water Company, High Valley Water District, South Mesa Mutual Water Company, and Cabazon Water District. Currently, only BCVWD, YVWD and the

City of Banning have taken imported water. The SGPWA has recently started recharging imported water in its storage account within the Beaumont Groundwater Basin. Table 6-2 shows the historical SPW deliveries to SGPWA and the amount delivered to BCVWD. As can be seen from the table, the majority of the deliveries were to BCVWD over the time period. This percentage of BCVWD's share of SGPWA's deliveries is expected to continue into the future, but will decrease slightly as other retailers purchase more imported supply, i.e., 80 to 85% or so.

The SGPWA has a Table A amount of 17,300 acre-ft/year based on their contract with DWR. Table A amounts are used in allocating the total SPW supply that is determined by DWR to be available for delivery each year among the State Water Contractors. The Table A amount is the maximum amount a contractor may request in any year from DWR. It is also the maximum amount that DWR agrees to deliver to a contractor, like SGPWA, in a given year. The sum total of all of the Table A amounts for all of the 29 State Water Contractors under the Monterey Agreement (1994) shall not exceed 4.185 million acre-ft. (The DWR 2019 State Water Project Delivery Capability Report[1] states 4.008 million acre-ft as the total combined maximum Table A amount – not significantly different.) The SGPWA's Table A is shared with other agencies in the Pass' service area.

Under certain hydrologic and water supply conditions, DWR is not always able to deliver all of the water requested by the contractors. In these cases, a smaller amount ("allocation") is set by DWR by prorating the total amount available in proportion to the contractor's Table A amount. Thus, the SGPWA's Table A amount of 17,300 acre-ft/year is subject to the reliability of State Water Project. See Table 6-2 below.

[1] State Water Project Final Delivery Capability Report 2019 (2021). Department of Water Resources, (June)

Table 6-2 – Historical Deliveries of SPW to SGPWA and BCVWD

Calendar Year	Total SGPWA Deliveries, acre-ft (1)	BCVWD Deliveries, acre-ft (2)	BCVWD % of SGPWA Deliveries	DWR Allocation %
2003	116			90
2004	814			65
2005	687			90
2006	4,420	3,501	79.2	100
2007	4,815	4,501	93.5	60
2008	4,905	2,399	48.9	35
2009	6,609	2,741	41.4	40
2010	8,403	5,727	68.1	50
2011	10,730	7,979	74.4	80
2012	10,974	7,783	70.9	65
2013	9,695	7,434	76.7	35
2014	5,131	4,405	85.9	5
2015	3,930	2,773	70.6	20
2016	11,461	9,319	81.3	60
2017	15,843	13,590	85.8	85
2018	13,174	12,121	92.0	35
2019	14,152	13,645	96.4	75
2020	**11,469**	**11,005**	96.0	15
Total	**133,479**	**108,892**		

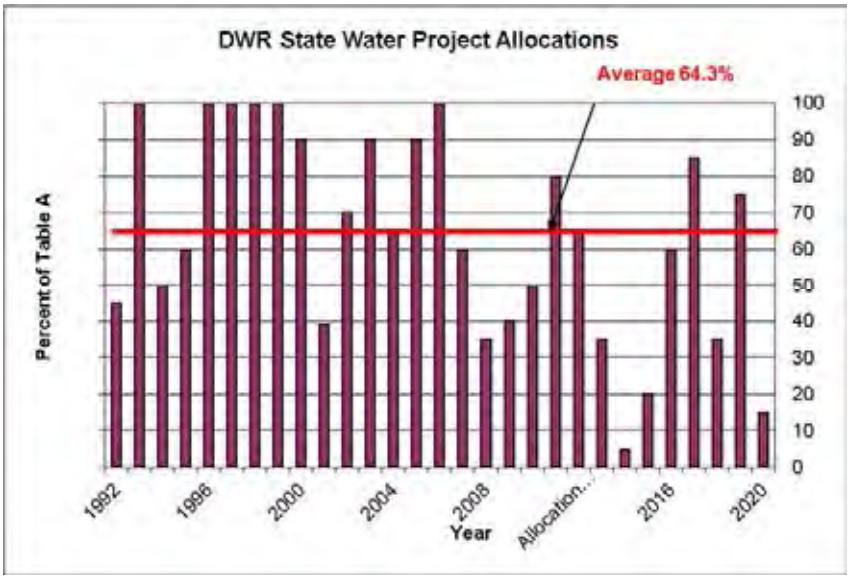
Sources: (1) Report on Water Conditions, Reporting Period 2018, SGPWA, (2) 2019 Draft Beaumont Basin Watermaster Annual Report, (3) 2020 Draft Beaumont Basin Watermaster Annual Report

The SWP has been, and continues to be, subject to delivery reduction caused by the operational restrictions of several biological opinions issued in December 2008 and June 2009 by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). These federal court decisions have been remanded (returned back) to the agencies for further study. In March 2014, the US Circuit Court of Appeals, 9th District, reversed a lower court decision by US District Court Judge Oliver Wanger and upheld the US Fish and Wildlife Service's protection of the Delta Smelt. In December 2014, the protection was extended to salmon and steelhead.

Historical delivery reliability was calculated by DWR using the CalSim2 computer model which simulates current and future operations of the SWP. The analyses are based on 82 years (1922-2003) of rainfall and runoff adjusted to reflect current and future levels of development. The impact of climate change is factored into the calculations.

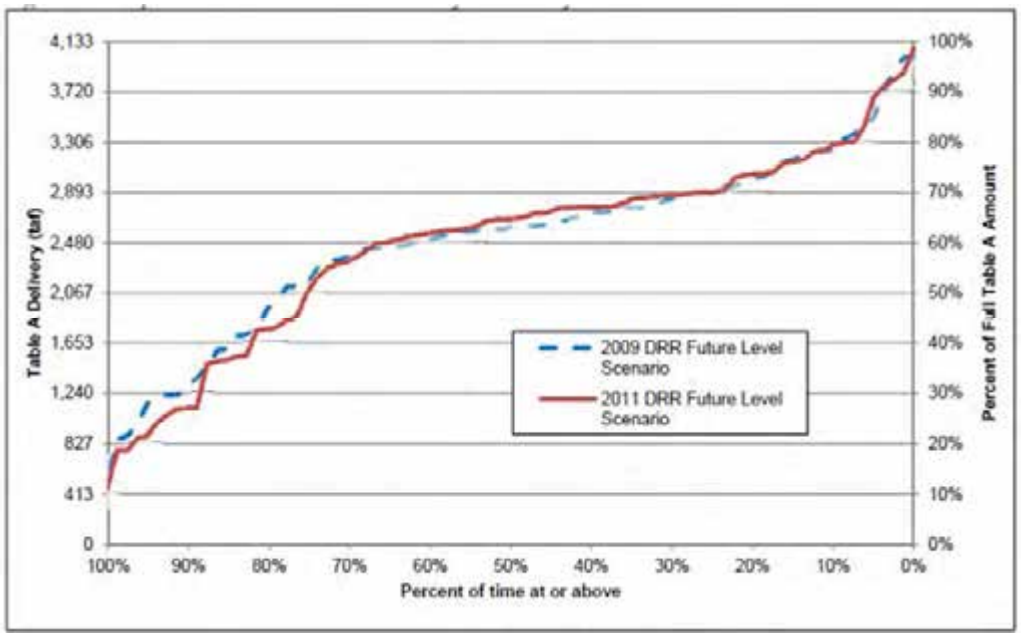
Figure 6-1 presents recent historical delivery percentages from 1992 – 2020.

Figure 6-1 – Historical SWP Delivery Percentages (1992 – 2020)



The average for the period is 64.3% or above the 58% determined in the 2019 Delivery Reliability Report. In recent years, an average of 62% delivery reliability has been used by DWR. For comparison, the 2011 Delivery Reliability Report projected an average allocation of 56%. See Figure 6-2 below for the SWP Table A Delivery Probability from the Technical Addendum to the 2011 SWP Delivery Reliability Report (June 2012).

Figure 6-2 – SWP Delivery Reliability (2011 data, based on future conditions)

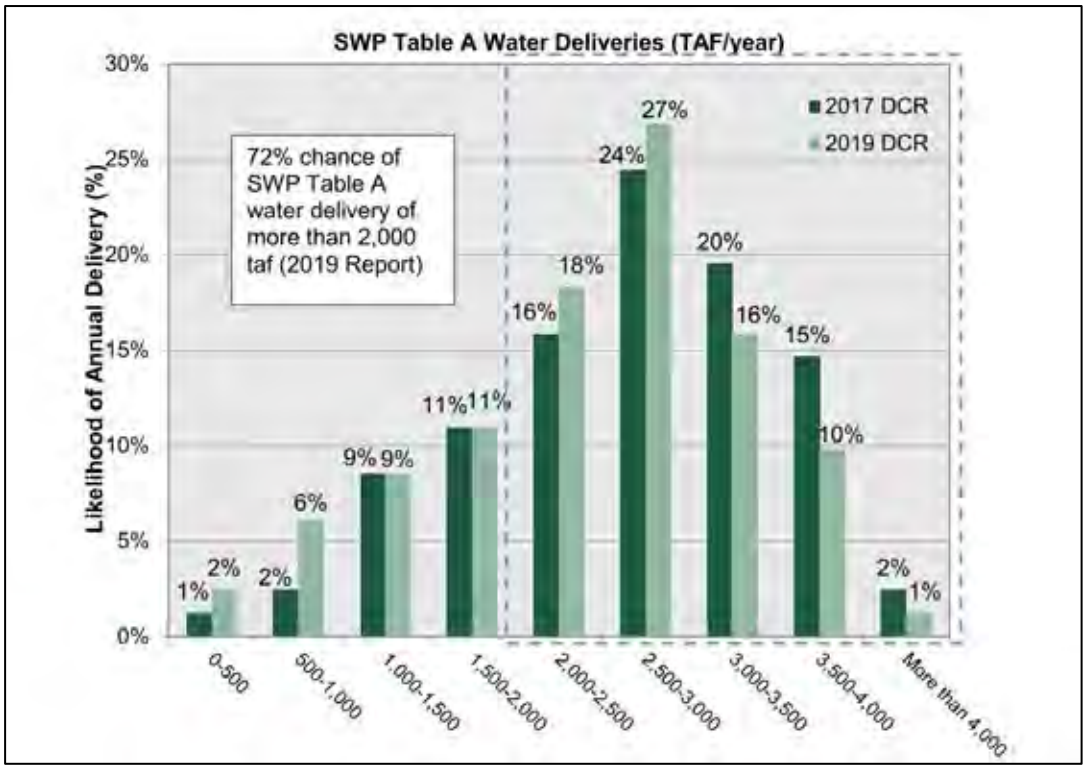


The DWR 2019 delivery capability report[2] uses the assumptions in the 2008/2009 biological opinions and there is essentially no change to the delivery reliability with the recent (2014) decisions.

Figure 6-3 below, presents a cumulative probability graph of deliveries as a percent of a Contractor's Table A amount for existing conditions (2019 delivery data). The results are summarized in Table 6-3 and Table 6-4. In reviewing Figure 6-1, Figure 6-2, Table 6-3, and Table 6-4, there is a 98% likelihood that the SWP will be able to deliver greater than 500 thousand acre-feet per year (TAF/year), which corresponds to an allocation greater than 12% of the maximum Table A amount in a given year. There is a 72% likelihood that the SWP will be able to deliver greater than 2,000 TAF/year, which corresponds to an allocation greater than 50% of the maximum Table A amount in a given year.

[2] Ibid

Figure 6-3 – SWP Delivery Reliability (Existing Conditions)



Source: 2019 Final Delivery Reliability Report (August 2020)

Table 6-3 – Percent Probability of Receiving Full Table A Amount
(In a Given Year)

Table A Delivery Amount (TAF/year)	% Likelihood of Delivery
0 - 500	2%
500 - 1,000	6%
1,000 - 1,500	9%
1,500 - 2,000	11%
2,000 - 2,500	18%
2,500 - 3,000	27%
3,000 - 3,500	16%
3,500 - 4,000	10%
> 4,000	1%

Table 6-4 – Percent Probability of Receiving Full Table A Amount

SWP Table A Deliveries (TAF/Year)	% of Total Table A	Probability Expressed as % Likelihood of Annual Delivery Greater Than
0	0%	100%
500	12%	98%
1,000	25%	92%
1,500	37%	83%
2,000	50%	72%
2,315[1]	58%	50%
2,500	62%	54%
3,000	75%	27%
3,500	87%	11%
4,000	99.8%	1%

(1) Estimated

Historically, based on the information presented in the prior tables, the SGPWA receives on the average approximately 10,034 AF (annually) from the SWP which is an allocation of approximately 58% of its maximum Table A allocation. From 2010-2020, the SGPWA has received (on average) 8,335 AF (48%) of the Table A contracted amount. Section 3.1.4 of the SGPWA's 2020 UWMP provides further information relating to recent historical deliveries of Table A amounts.[3]

As per SGPWA's 2020 UWMP Table 3-4, a normal year yield is depicted as 10,034 AF (58%). This quantity of water available in a given year is the normal year basis for this UWMP.

In addition to the maximum annual Table A amount, there is a contractual limit of 32 cfs on the instantaneous rate of delivery through the Aqueduct. If operated eleven (11) months out of the year (with one month of annual maintenance where the system is shut down), the California aqueduct (SGPWA's contractual portion) could convey approximately 21,230 acre-ft. Since this exceeds the annual Table A amount, the maximum amount which could be delivered on an annual basis is approximately17,300 acre-ft, which should not be an issue, even with annual maintenance.

BCVWD will need additional imported water to meet its long-term needs, even when maximizing local water resources.

BCVWD can reduce its need for supplemental water from the SGPWA through:

- Water conservation
- Use of recycled water for landscape irrigation

[3] 2020 Urban Water Management Plan, SGPWA – Adopted June 21, 2021

- Increased storm water capture and recharge
- Use of local non-potable groundwater in the non-potable water system
- Advanced wastewater treatment of City of Beaumont recycled water for groundwater recharge

6.2.1 Importation Facilities and Capacity

The SGPWA imports SPW through the East Branch Extension. EBX Phase I was completed in 2003; the Environmental Impact Report for EBX Phase II (EBX II) was certified in 2008.Phase II construction was completed in 2017 and is operational.

The EBX begins downstream of DWR's Devil Canyon Power Plant at the Devil Canyon Afterbay, north of the City of San Bernardino (Water Surface Elevation = 1,931 ft MSL). From the Afterbay, the SPW flows through the Foothill Pipeline to the Greenspot Pump Station. From the Greenspot Pump Station, the water is pumped through the Greenspot Pipeline to the Crafton Hills Pump Station. The Crafton Hills Pump Station then pumps the SPW through the Crafton Hills Pipeline to Crafton Hills Reservoir.

From the Crafton Hills Reservoir, the water flows by gravity to the inlet of the Cherry Valley Pump Station. The Cherry Valley Pump Station then pumps the SPW through the Noble Creek Pipeline to the EBX terminus at Noble Creek in Cherry Valley (hydraulic grade line [HGL] Elevation ≈ 3,000 ft MSL). The EBX has a total length of about 33 miles; the water is lifted over 1,000 ft to get it to the SGPWA. The EBX facilities up to the Garden Air Creek Metering Facilities are shared with San Bernardino Valley MWD (Valley District).

EBX II provides Valley District and the SGPWA additional capacity to deliver water and at the same time provides some system redundancy. EBX II begins at Greenspot Rd. and Cove Camp Rd. and goes south in the Mentone Pipeline crossing under the Santa Ana River to the Citrus Reservoir and Pump Station at the intersection of Opal St. and San Bernardino Ave. From the Citrus Pump Station, the SPW is pumped through the Mentone Pipeline East to the Crafton Hills Pump Station, constructed as part of the first phase of the EBX.

Table 6-5 presents a summary of the EBX I and II Facilities and capacities.

Table 6-5 – EBX I & II Facilities
(Foothill Pipeline to Crafton Hills Pump Station)

Facility	Description	Size	Capacity	SGPWA Capacity	Comment reference to SGPWA
Devil Canyon Afterbay to Crafton Hills Pump Station					
Foothill Pipeline	From Devil Canyon to Santa Ana River Crossing	78”	288 cfs	64 cfs	Can use additional capacity with SBVMWD Board Approval
Santa Ana River Crossing (SARC)	Under Santa Ana River to Greenspot Pump Station	42”	108 cfs	16 cfs	Has 48 cfs capacity in parallel route (EBX II)
Greenspot Pump Station	Greenspot Pump Station		70 cfs total	16 cfs	Has 48 cfs capacity in parallel route (EBX II)
Greenspot Pipeline	Greenspot Pump Station to Crafton Hills Pump Station	48”	70 cfs	16 cfs	Has 48 cfs capacity in parallel route(EBX II)
Parallel Facilities – Foothill Pipeline to Crafton Hills Pump Station					
Mentone Pipeline South (2nd SARC)	Foothill Pipeline to Citrus Reservoir	66”	175 cfs	48 cfs	Has 16 cfs capacity in parallel route (EBX I)
Citrus Reservoir			400 AF		
Citrus Pump Station			160 cfs 150 cfs firm	48 cfs	Has 16 cfs capacity in parallel route (EBX I) 4@ 25 cfs, 4 @ 20 cfs, 2@ 10 cfs
Mentone Pipeline East	Citrus Pump Station to Crafton Hills Pump Station	60”	160 cfs	48 cfs	Has 16 cfs capacity in parallel route (EBX I)
Crafton Hills Pump Station			135 cfs total;110 cfs firm	64cfs	3 @25 cfs, 2 @ 20cfs, 2 @ 10 cfs

Table 6-5 (cont.) – EBX I & II Facilities
(Crafton Hills Pipeline to Noble Creek Terminus)

Facility	Description	Size	Capacity	SGPWA Capacity	Comment reference to SGPWA
Crafton Hills Pipeline	Crafton Hills Pump Station to Crafton Hills Reservoir	54”		64 cfs	
Crafton Hills Reservoir			220 AF		Enlarged in EBX II from 85 AF
Bryant Street Pipeline	Crafton Hills Reservoir to Riverside San Bernardino County Line	54”	104 cfs	64 cfs	
Singleton Pipeline	Riverside San Bernardino County Line to Cherry Valley Pump Station	54”	64 cfs	64 cfs	
Cherry Valley Pump Station			52 cfs total; 32 cfs firm	52 cfs	Includes 20 cfs pump added in EBX II plus 1@16 cfs, 2@ 8 cfs
Noble Creek Pipeline	Cherry Valley Pump Station to Noble Creek Terminus	36”	32 cfs	32 cfs	Capacity could be as high as 52 cfs if velocity allowed to 7.4 ft/sec

BCVWD takes water from a 20-in diameter turnout and metering station at the current end of the EBX at Orchard Ave. and Noble Creek in Cherry Valley. The turnout has since been increased in capacity to 34 cfs in 2019.

From Table 6-5, the SGPWA has 64 cfs capacity in the EBX except for:

- ***Foothill Pipeline*** – SGPWA has 64 cfs in this pipeline but can use additional capacity if SBVMWD is not using the capacity. The 32 cfs is the maximum capacity SGPWA currently has in the rest of the California Aqueduct.
- ***Cherry Valley Pump Station*** – SGPWA has 52 cfs of total pumping capacity and 32 cfs of firm capacity (largest pump out of service). There is no space to add additional pumps in the building without major modifications.
- ***Noble Creek Pipeline*** – The velocity in this pipeline based on the total capacity of the Cherry Valley Pump Station of 52 cfs is 7.4 ft/sec. This is marginally acceptable with the headloss of 35 ft in the 10,000 ft length pipeline.

6.2.2 Facilities for Additional EBX Capacity

The SGPWA was limited to 32 cfs or 17,300 acre-ft/yr in the EBX assuming a 75% operating time. This was based on the SGPWA purchased capacity of 32 cfs in the Foothill Pipeline prior to mid-2020.

The SPGWA recognized the need to get additional capacity up to 64 cfs in the Foothill Pipeline and approved the Fourth Joint Facilities Agreement on June 08, 2020, to purchase an additional 32 cfs capacity in the Foothill Pipeline.

6.2.3 BCVWD Facilities for Imported Water

BCVWD takes water from a turnout and metering station at the current end of the EBX I at Orchard Ave. and Noble Creek in Cherry Valley. Water from the turnout is metered by DWR and then enters BCVWD's piping system which conveys imported water to the Noble Creek Recharge Facility.

Recent upgrades were completed in 2019 which increased the flow capacity to 34 cfs. These upgrades included the metering and piping components at the turnout before BCVWD's facilities.

Phase I of the Recharge Facility (west of Noble Creek Channel) was completed in September 2006 and BCVWD began to take imported water at that time. Phase I consists of approximately 10.2 wetted acres based on the projected horizontal area at the normal water depth. Phase I has 3 "trains," or sets of percolation ponds (2.7 acres, 4.2 acres, and 3.3 acres [wetted area] respectively for "trains" 1, 2, and 3). Phase II was completed in 2015. Phase II has an estimated horizontal wetted area of about 17 acres. It, too, is constructed in "trains" to allow wetting and drying.

Recharge of imported water has occurred since September 2006. As of December, 2020, 108,892 acre-ft (35.5 billion gallons) of water have been recharged to BCVWD's account. Since 2006, annual recharge has averaged 7,259 AFY with a maximum of nearly 13,700 AFY.

Based on operational studies from 2006 through 2010, Geoscience Support Services, Inc. (Geoscience) determined the weighted average recharge rate for the Phase I facility is 10.3 acre-ft/wetted acre/day. This is a very high rate. Since there are a total of 10.2 wetted acres in Phase I, the existing recharge facility would be able to percolate over 100 acre-ft/day. Theoretically, this would be over 36,000 acre-ft per year (about twice the SGPWA's Table A amount.) The 36,000 acre-ft per year, however, should be reduced because of the need to "rest" and "restore" the basins and perform routine maintenance. If 2 of the 3 Phase I trains were operating at any one time, the theoretical capacity would be about 25,000 acre-ft/yr for Phase I.

Taking a conservative approach, using a percolation rate of 6 acre-ft/wetted acre/day and considering both Phase I and Phase II facilities, the percolation capacity would be 150 acre-ft/day. Using a 75% utilization factor, the percolation capacity on an annual basis could be over

40,000 acre-ft. However, achieving a capacity of 40,000 AFY would require frequent rest periods along with frequent pond bottom scouring.

6.2.4 Aquifer Response

BCVWD installed monitoring wells with the initial construction of the recharge facility to track and "trace" the recharged water. According to the Geosciences Support Services, Inc., Feb 2010 report, BCVWD recharged over 15,000 acre-ft of water from September 2006 to December 20, 2009, in the Phase I facilities and water levels in the three shallow aquifer monitoring wells (perforated from 480 to 550 ft below ground surface [bgs]) increased 94.4 ft, 86.1 ft, and 89.5 ft, respectively. In the deeper aquifer (perforated 600 to 700 ft bgs), water levels increased in the fall and winter when BCVWD Well 23 was used less and decreased in summer when the well was used more. The water level in the two very deep monitoring wells (perforated 600 to 1000 ft bgs) increased 11.5 and 13.2 ft respectively since start of recharge in September 2006. In summary, it is clear the water is reaching the intended aquifers.

This data contradicts statements made in a USGS Report for the SGPWA[4]. Specifically, their report states that artificial recharge, including that from imported SPW in recharge ponds, takes between 23 and 71 years to reach the water table depending on location. Spreading data from monitoring wells during Phase I operation of the recharge facility supports a much faster vertical travel time – more like 60 days under saturated conditions.

6.2.5 Imported Water Quality

State Project Water experiences some changes in water quality in response to wet and dry cycles in Northern California. Data from the Metropolitan Water District of Southern California (Metropolitan), shown in Figure 6-4, shows the Total Dissolved Solids (TDS) in their imported water supplies from 1988 to 2020 – a 32-year period. Of particular interest is the Silverwood Reservoir source. The SGPWA also uses the same Silverwood Reservoir source. During high flow years, the TDS approached 100 mg/L; during the drought period of the early 1990s, TDS approached 400 mg/L. During the drought from about 2013-2016, the TDS has been in the 250 to 350 mg/L range. The nitrate and nitrite concentration (as nitrate) in the imported water for 2018 was 0.37 mg/L as N[5].

[4] USGS (2006). Geology, Ground-Water Hydrology, Geochemistry, and Ground-Water Simulation of the Beaumont and Banning Storage Units, San Gorgonio Pass Area, Riverside County, California, D. L. Rewis, A. H. Christensen, J. C. Matti, J. A. Hevesi, T. Nishikawa, and P. Martin, Scientific Investigations Report 2006-5026.

[5] San Gorgonio Pass Water Agency Report on Water Conditions (2018)

Figure 6-4 – Quality of Metropolitan's Imported Water Supplies[6]

Article 19 of the Department of Water Resources' contract with SGPWA states that it is the objective of the State, and the State shall take all reasonable measures to make available project water of such quality that the TDS concentration does not exceed 440 mg/L on a monthly average or 220 mg/L as an average during any 10-year period.[7]

The average TDS for the period January 2009 through January 2018 was 265 mg/L[8]. Measurements of TDS and other constituents related to water quality were measured by DWR at the Devil Canyon Afterbay, which is the source for the EBX. This generally matches the TDS for the 25-year period from 1972-97[9]. For the 10-year period 1988-97 the TDS averaged 300 mg/L. This indicates that there could be additional 10-year periods in the future where the SPW

[6] Metropolitan Water District of Southern California (Metropolitan 2020) Annual Report for the Fiscal Year July 1, 2019 to June 30, 2020. Chapter 4

[7] State of California Department of Water Resources (1962), Contract between the State of California, Department of Water Resources and San Gorgonio Pass Water Agency for a Water Supply. November 16.

[8] San Gorgonio Pass Water Agency Report on Water Conditions (2010, 2014, 2018)

[9] California Urban Water Agencies (1999). Recommended Salinity Targets and Program Actions for the CalFed Water Quality Program, December.

could exceed 250 mg/L and careful salinity management will be necessary. In their salinity management plan, Metropolitan used an average of 250 mg/L TDS for the East Branch.[10]

Implementation of the Bay Delta Conservation Plan should help maintain or improve the quality of the State Project Water; so, a TDS concentration of 250 mg/L as a 10-year average is reasonable at this time.

Finally, the average TDS ranges generally decrease during wet years due to more high-quality water available through the SWP.

6.3 Groundwater

CWC 10631

(b)(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

The District currently owns and operates a total of 24 groundwater wells of which only 20 are used to any great degree. Three of the wells have their capacity shared with the City of Banning (BCVWD constructed these wells under a cooperative agreement with Banning for shared capacity rights.) The 20 wells have a total production capability of approximately 27.3 mgd, not including the capacity shared with

[10] Metropolitan Water District of Southern California (2012). Salinity in Metropolitan Supplies, Historical Perspective, Handout #2. Presented at Salinity Management Update Study Workshop, Southern California Salinity Coalition, June 1.

Banning. Thirteen (13) of the wells are in Edgar Canyon; eleven (11) are in the Beaumont Basin.

Details on the District's wells and their current capacity can be found in the 2016 Potable Water Master Plan.

The greatest demand experienced by BCVWD occurred in 2009 when 22.1 mgd were used on one day (July 19); for 2020 the maximum day demand was 21.6 mgd. Historically, the maximum day/average day ratio has been 1.87, but BCVWD uses a ratio of 2.0 for planning purposes.

The District's wells are located in four areas:

- Upper Edgar Canyon (San Bernardino County)
- Middle Edgar Canyon (San Bernardino County)
- Lower Edgar Canyon (Riverside County)
- Beaumont Storage Unit (Beaumont Basin) (Riverside County)

Note that “Edgar Canyon” is synonymous with “Little San Gorgonio Creek”.

6.3.1 Edgar Canyon Wells

BCVWD has a total of 13 wells in Edgar Canyon; Well No. 13 is a standby for Well No. 12; Well No. 9A has limited use and Well RR-1 is in the process of being refurbished. Total capacity of the wells, not including RR-1, 9A and 12 is 1,510 gpm or 2.17 mgd. Individual well capacities range from 50 gpm to 300 gpm. Well capacities in Edgar Canyon vary from year to year throughout any given year depending on hydrologic conditions, i.e., wet year vs dry year.

Groundwater in Edgar Canyon primarily occurs in the shallower, younger and older alluvial valleys and within the rock fractures beneath the alluvium. Numerous faults cross the canyon generally in a southeast-northwest direction. These act as barriers to groundwater movement and subdivide the canyon into several sub basins. Over the years, BCVWD has drilled numerous wells, pilot holes and test wells in Edgar Canyon; but, because of the faulting, many of these wells have proven to be of limited use or value. Many “dry holes” are noted on some of the old BCVWD system maps.

The groundwater aquifer in Edgar Canyon is limited and storage is small. Groundwater levels vary from just a few feet bgs to about 200 feet bgs. The groundwater levels and groundwater production respond quickly to stream flow. During wet years, considerably more water can be pumped than during dry years.

BCVWD prefers to use the wells in Edgar Canyon since they are the least expensive to operate and the water can be conveyed to the District customers by gravity with no additional pumping. The wells in Edgar Canyon currently provide about 10% of the District’s potable water supply.

The District has arbitrarily subdivided Edgar Canyon into three production areas:

- **Upper Edgar Canyon** -- in San Bernardino County from the District's northern boundary, where Oak Glen Road crosses over Little San Gorgonio Creek, to a point about the center of Section 2, T1S/R1W approximately 1.5 miles north of the Riverside/San Bernardino County Line. The Upper Canyon wells include all wells except Wells 6, 4A, 5 and RR-1.
- **Middle Edgar Canyon** -- in San Bernardino County from the Riverside/San Bernardino County Line to a point about 0.5 mile north of the County line. Well 6 is in the Middle Edgar Canyon.
- **Lower Edgar Canyon** -- in Riverside County from the mouth of the Canyon at Orchard St. to about 1 mile north (upstream) where Well No. 5 is located. Well No. 4A is located about 1/4 mile below Well No. 5. Well RR-1 is about ½ mile north of Orchard St., downstream of Well 4A.

6.3.2 Beaumont Basin Wells

The Beaumont Basin, or Beaumont Storage Unit as it is also known, is one of the largest groundwater units in the San Gorgonio Pass area covering an area of about 27 sq. mi. with at least 1.1 million acre-feet of water in storage and about 200,000 to 400,000 acre-feet of unused groundwater storage capacity. The San Timoteo Watershed Management Authority (STWMA) estimated the amount of water in the Beaumont Basin could be as much as 2.4 million acre-ft based on usable groundwater extending down to 1,500 ft bgs.[11] This is 500 ft deeper than previously assumed and is based on several wells drilled by BCVWD and others.

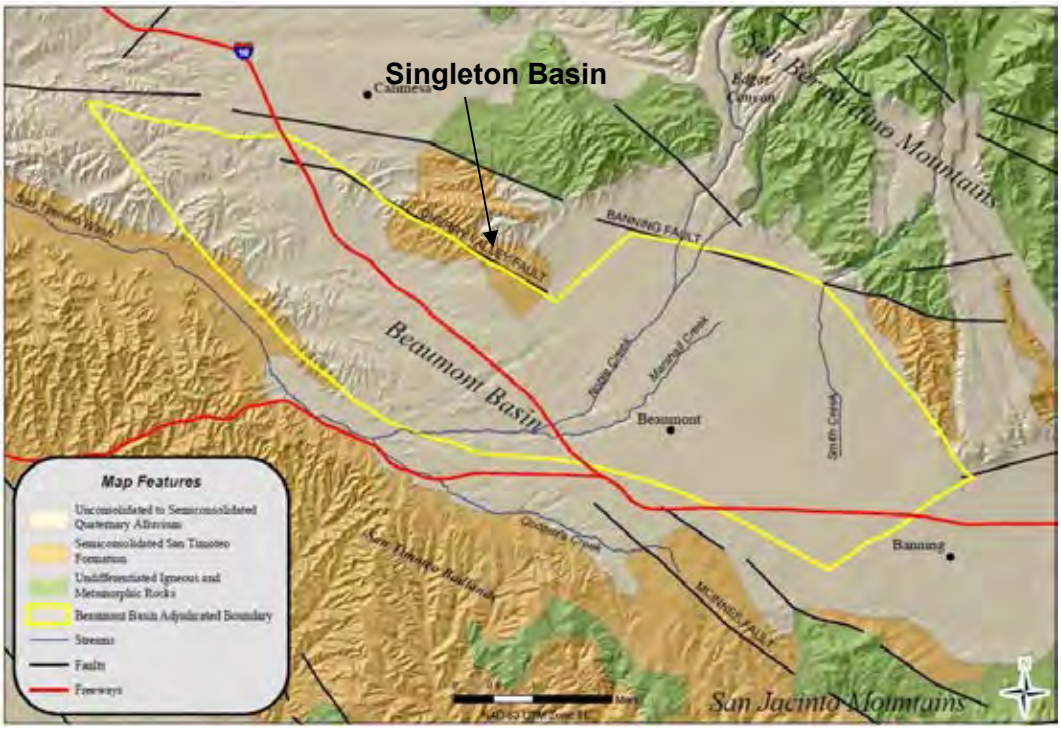
The boundaries of the BSU are defined on all sides by postulated faults including the Banning and Cherry Valley Faults to the north and unnamed faults to the south, east, and west. The Cherry Valley Fault is the dividing line between the BSU and the Singleton storage unit. See Figure 6-5.

Groundwater within the BSU primarily occurs in the older alluvium and the San Timoteo Formation. Groundwater elevations in the BSU range from approximately 160 ft bgs to 600 ft bgs. Underlying the BSU are nearly impermeable granitic/metamorphic basement rocks.

Prior to the Adjudication (2004), progressive drawdown of water levels in the Beaumont Basin occurred from the 1920s. Since the Adjudication, groundwater levels have stabilized, as the Beaumont Basin has been managed on a safe yield basis. See Section 6.3.5 for further discussion.

[11] "*Integrated Regional Water Management Program for the San Timoteo Watershed*," Final Draft, prepared for the San Timoteo Watershed Management Authority, Wildermuth Environmental, Inc., p 2-15, June 2005.

Figure 6-5 – Beaumont Groundwater Basin and Major Fault Boundaries



Source: Alda, Inc/Thomas Harder & Co., 2-1 2020 Watermaster Consolidated Annual Report and Engineering Report

Since startup of the BCVWD recharge facility and the recharge of SPW, groundwater in the BSU flows from the recharge site (at Beaumont and Brookside Avenues) in a southeasterly direction toward Banning and a southwesterly direction to San Timoteo Creek.

6.3.3 Groundwater Quality

Overall, the water quality from BCVWD's wells is excellent. Table 6-6 presents a summary of the quality of water from the District's 2019 Consumer Confidence Report.

Edgar Canyon

In Edgar Canyon, the TDS concentration is below 250 mg/L range; hardness is moderate; nitrate levels are low, except at the mouth of Edgar Canyon. At the mouth of Edgar Canyon, USGS has reported[12] that a monitoring well 2S/1W-22G4 had a nitrate-N concentration of 11.3 mg/L. This exceeds the drinking water MCL of 10 mg/L. Well 2S/1W-22G4 is a shallow monitoring well that is perforated from 138 to 158 bgs. USGS states that this well is likely

[12] USGS (2006). *Geology, Ground-Water Hydrology, Geochemistry, and Ground-Water Simulation of the Beaumont and Banning Storage Units, San Gorgonio Pass Area, Riverside, California*, U.S. Department of the Interior, U.S. Geologic Report, in cooperation with the San Gorgonio Pass Water Agency, Scientific Investigations Report 2006-5026.

affected by “an anthropogenic source of nitrogen that may include agricultural activity or septic tank seepage.” This well is not used for potable water supply; BCVWD has no production wells in the high nitrate area.

Table 6-6 – Summary of BCVWD Groundwater Quality[13]

Consituent	Concentration (mg/L unless noted otherwise)	Average Range of Concentrations (mg/L unless noted)	Sample Date(s)
Total Dissolved Solids (TDS)	256.6	200 - 350	2017 - 2019
Specific Conductance, µS/cm	440	350 - 590	2017 - 2019
pH, ph Units	8.0	7.7 - 8.3	2017-2019
Sodium	23.3	14 - 38	2017 - 2019
Calcium	42.3	35 - 64	2017 - 2019
Magnesium	16	12 - 20	2017 - 2019
Bicarbonate	173.3	130 - 220	2017 - 2019
Chloride	17.5	0 - 46	2017 - 2019
Sulfate	22	10 - 48	2017 - 2019
Nitrate (as N)	3.4	0.64 - 6.9	2019
Fluoride	0.43	0.23 - 0.64	2017 - 2019
Total Chromium, ppb	2.5	0 - 12	2016 - 2019
Total Hardness, mg/L as $CaCO_3$	173.3	130 - 240	2017 - 2019

Beaumont Basin

In the Beaumont Basin during the period 2002 – 2006, TDS concentrations in the groundwater ranged from 160 to 360 mg/L. Historical ambient TDS based on the period 1954 – 1973 was 230 mg/L; for the period 1984- 2003, the ambient TDS was 260 mg/L. Although there is a slight upward trend, the TDS is still very low.[14]

Average nitrate-N concentrations for 2019 ranged from 0.89 to 7.00 mg/L with average maximum concentrations of 2.62 mg/L. During this same period, other wells within the Beaumont Basin were sampled for nitrate-N had an average concentration less than 3.73 mg/L.

[13] BCVWD 2019 Consumer Confidence Report

[14] Wildermuth Environmental Inc. (2007). First Biennial Engineer’s Report, July 2003 through June 2006, Beaumont Basin Watermaster for San Timoteo Watershed Management Authority vs. City of Banning et.al, June.

None of the District's wells sampled within the Beaumont Basin had nitrate-N exceeding the MCL of 10 mg/L[15]. BCVWD's Well No. 16 in Cherry Valley experienced a "spike" in nitrate-N in 2005 reaching 9.0 mg/L; at the same time, Well No. 21 showed a concentration of 6.1 mg/L.[16] These concentrations have since decreased. This was investigated; but no conclusions could be drawn as to the exact cause. It is possible this could occur again.

The University of California Riverside (UCR), under contract with the SWRCB, conducted a water quality assessment of Beaumont Management Zone with the specific objective of looking at nitrate contamination from on-site wastewater disposal systems.[17]

Forty wells and eleven surface water sites were sampled and analyzed in the UCR study. In the central part of the BMZ, i.e., generally in Cherry Valley, several wells "showed clear signs of contamination by septic systems. The groundwater within the central part of Cherry Valley appeared to be more strongly affected by septic systems than groundwater on the periphery of Cherry Valley. Several wells had measurable concentrations of pharmaceuticals and personal care products (PPCPs) and major anions and cations [associated with wastewater], suggesting septic waste was entering the groundwater system.[18]"

BCVWD has been able to deal with the nitrate concentrations by blending with other lower nitrate source waters when it has become an issue. Riverside County Ordinance 871 requires any new septic tanks within the Cherry Valley Community of Interest be able to remove 50% of the nitrogen. Usually this requires an "add on" process to the conventional septic tank. At some point in time, it may be necessary to either install well-head treatment for nitrate removal (ion exchange or reverse osmosis) if blending alone cannot mitigate the problem. If the problem gets worse, sewers may need to be installed in the more densely developed portions of Cherry Valley.

One issue that has been a topic of discussion at the State level is hexavalent chromium (Cr+6). Total chromium is regulated by DDW at an MCL of 50 µg/L (50 parts per billion). There are two forms of chromium that exist in natural waters – trivalent chromium (Cr+3) and hexavalent chromium. Trivalent chromium is a trace metal that the human body needs; hexavalent

[15] Ibid

[16] Wildermuth Environmental, Inc. (2007). Water Quality Impacts from On-site Waste Disposal Systems in the Cherry Valley Community of Interest, Final Report, prepared for San Timoteo Watershed Management Authority, Project Committee No. 1, March.

[17] Univ. of California Riverside (2012). Final Report: Water Quality Assessment of the Beaumont Management Zone: Identifying Sources of Groundwater Contamination Using Chemical and Isotope Tracers. SWRCB Agreement No. R*-2010-0022, Department of Environmental Sciences, Riverside, CA 92521, Feb 3.

[18] Ibid, pg. 27

chromium is considered toxic based on laboratory animal studies. Trace amounts of hexavalent chromium are natural and found in rock and minerals. In some areas, high concentrations of hexavalent chromium are the result of industrial discharges. On July 1, 2014, a separate, State of California, Maximum Contaminant Level (MCL) of 10 µg/L (10 parts per billion) for Cr+6 was established. On May 31, 2017, the Superior Court of Sacramento County determined that the established MCL for Cr+6 was invalid, due to the fact that there was not proper consideration for the economic feasibility of necessary treatments with the MCL. In February 2020, the California Water Board published the White Paper Discussion on Economic Feasibility Analysis in Consideration of a Hexavalent Chromium MCL, which discusses various cost-benefit analyses of different treatment types versus potential exposure. The white paper concluded that a continued effort would need to occur to reassess the MCL for Cr+6. The Water Board held a series of public workshops in December 2020 on treatment cost estimates. It is projected that a Notice of Proposed Rulemaking will be published sometime in summer 2021, which may result in less stringent MCL regulations.

At the present time, nitrates are not an immediate concern, and the State is in the process of developing an MCL for hexavalent chromium. At some point, it may be necessary to provide treatment.

As part of the preparation of this 2020 UWMP, a review of past industrial/commercial operations, particularly their waste disposal practices, was researched on the SWRCB's GeoTracker[19] to see if there could be any future water quality impact from these discharges.

The SWRCB's GeoTracker list was reviewed for potentially contaminated sites in the BCVWD service area. There about 28 sites in the BCVWD SOI on the list; of which only one is still "open." Kinder Morgan Energy Partners, Inc. currently owns and operates a petroleum transmission pipeline (Colton-Phoenix Pipeline) on the south side of Oak Valley Parkway, in the vicinity of Nicklaus Park in Fairway Canyon. A leak was identified in February 2019, and SWRCB site review and assessment began in April 2019. In June 2020, SWRCB identified that approximately 20 hours of work for site inspection will be expected for the 2020-2021 fiscal year. This site has not affected any BCVWD wells; there are no BCVWD wells in the vicinity of this leak site. The leak as identified at this site is not within the limits of the Beaumont Basin.

[19] http://geotracker.waterboards.ca.gov/ Accessed 5/10/2021.

6.3.4 Groundwater Management

> ***CWC 10631***
>
> *...If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*
>
> *A copy of any groundwater management plan adopted by the urban water supplier…or any other specific authorization for groundwater management.*
>
> *…For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.*

The Beaumont Basin was adjudicated in February 2004, in Superior Court, Riverside County, Case RIC 389197, *San Timoteo Watershed Management Authority vs. City of Banning et al* (Adjudication or Judgment). The Judgment established the Beaumont Basin Watermaster (Watermaster) to administer the Judgment. It established the rights of the Overlying Parties and the Appropriator Parties, e.g., BCVWD and others. Some of the essential elements of the Judgment are as follows:

- The "Safe Yield" of the Basin was established at 8,650 AFY. This was to be re-evaluated every 10 years. §I 3.X and §VI 5.Y. It was re-evaluated in 2013 -2015 and on April 2015, through Resolution 2015-01, the safe yield was reduced to 6,700 AFY.
- A controlled overdraft of the basin was allowed for the first ten years to create more usable storage capacity in the Basin for Conjunctive Use. In the Judgment, this was termed "Temporary Surplus." This was established at 160,000 acre-ft. After ten years (February 2014), the controlled overdraft ceased. This provided a ten-year time frame for the appropriators to develop facilities to use or bank imported SPW and develop other water sources. § I3.BB and Exhibit C, Column (5).
- The Overlying Parties can extract, in total, a maximum of 8,650 acre-ft/yr, which was reduced to 6,700 AF in the safe yield adjustment of 2015. (All of the initial safe yield was dedicated to the Overlying Parties.) The Overlying Parties and their rights are shown in column (4) of Exhibit B. If an Overlying Party pumps more than five times its share of the operating safe yield (as shown in column (4) of Exhibit B) in any five consecutive year period, the overlying producer shall provide Watermaster with sufficient funds to replace the overproduction (typically with imported water). Exhibit B, Column (4) and §II 1.A
- An Overlying Party can request water service from an Appropriator Party. For example, an Overlying Party can subdivide its property and then request an Appropriator, such as BCVWD, to supply the new subdivision with water. When this happens, the Overlying must forgo extracting that volume of water provided by the Appropriating Party and the Appropriating Party shall have the right to

produce the equivalent volume of water which the Overlying Party did not pump. §III 3. (This is sometimes called “forbearance” water.)

- If an Appropriating Party serves recycled water to an Overlying Party, the Overlying Party’s water right is not diminished, but the Appropriator Party shall have the right to use that portion of the Overlying Water Right offset by the recycled water. In other words, serving recycled water to an Overlying Party allows the Appropriator to pump the equivalent amount of groundwater. §III 3 E.
- There is a provision which requires the BCVWD to set aside 2,400 AFY of projected water demand in the 2005 Urban Water Management Plan update specifically for Oak Valley Partners, LP. For the 2010 UWMP update, the Judgment states this figure should be revised to reflect the projected water demands. Oak Valley Partners, LP has an overlying pumping right per column (4) of Exhibit B equal to 1,806 AFY. However, it is unclear how this 1,806 AFY is to split between YVWD and BCVWD. BCVWD started to provide potable water service to Oak Valley Partners, LP land in 2005; in 2010, BCVWD provided a total of 1,307 acre-ft to them. BCVWD continues to provide water to the land from its potable and non-potable water distribution system §III.3.G.
- If any Overlying Party produces less than five times the share of the safe yield assigned to the Overlying Party during any 5 year period (per Column (4) of Exhibit B), the unused portion shall be apportioned to the Appropriator Parties per Column (2) of Exhibit C: BCVWD 42.51%, Yucaipa Valley Water District 13.58%, South Mesa Water Company 12.48%, and the City of Banning 31.43%. (Watermaster Rules and Regulations §7.3.)
- Any Appropriator may transfer all or any portion of its Appropriator’s Production Right or Operating Yield that is surplus to its needs to another Appropriator. (Watermaster Rules and Regulations §7.2.)
- Watermaster has the authority to enter into Groundwater Storage Agreements with producers for the storage of supplemental water, wellhead protection and recharge, well abandonment, well construction, monitoring, replenishment, mitigation of overdraft, and collection of assessments. §VI.5.
- Supplemental replenishment water can be recycled water, State Project Water, or other imported water. Replenishment can be accomplished by spreading and percolation, injection, or directly using treated surface water or raw or treated imported water. §VI 7.
- A minimum 200,000 acre-ft of groundwater storage capacity shall be reserved for conjunctive use. Any person, party or not a party to the Judgment, can make reasonable beneficial use of the groundwater storage capacity for storage of

supplemental water provided that it is in accordance with a storage agreement with Watermaster. §I.3.S and §V.5.B

- Minimal producers (10 or less acre-ft/yr) are exempt from the Adjudication. §III.4.and §I.3.K

Watermaster is responsible for providing the legal and practical means of ensuring the waters of the Beaumont Basin are put to maximum beneficial use and include:

- Administer the Judgement; approve Producer activities
- Maintain and improve water supply; maintain and improve water quality; monitor and understand the Basin
- Develop and administer a well policy; develop contracts for beneficial programs and services; provide cooperative leadership

To simplify the Judgement, an appropriator, like BCVWD, after February 2014, can only extract water within the appropriator's storage account as determined by Watermaster. Water in the storage account can include:

- Imported water recharged by the Appropriator.
- Water transferred from one Appropriator's storage account to the Appropriator.
- Recycled water recharged to the Beaumont Basin which meets Regional Board and SWRCB Division of Drinking Water groundwater water recharge regulations.
- "New" captured storm water or urban runoff recharged by the Appropriator.
- Unused Overlying Party pumping rights allocated back to the Appropriator.
- Return flows from imported water or recycled water applied to land overlying the Beaumont Basin by the Appropriator.
- Forbearance water allocated to the Appropriator for providing potable or recycled water to the Overlying Party's land.

Watermaster performs an annual accounting of these sources and produces an annual report identifying the water in storage for each appropriator.

According to Watermaster, BCVWD had 39,750 acre-ft in storage in the Beaumont Basin at the end of 2020[20]. BCVWD's storage account has a maximum capacity of 80,000 acre-ft.

The entire Judgment is contained in Appendix F.

[20] Beaumont Basin Watermaster (2021). 2020 Annual Report Draft, Alda, Inc., Thomas Harder and Company, April

6.3.5 Overdraft Conditions

> ***CWC 10631***
>
> *(b)(2) For basins that have not been adjudicated, (provide) information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.*

BCVWD has been extracting groundwater from Edgar Canyon for nearly 100 years. Data presented later in this section (see Table 6-8) shows BCVWD's average Edgar Canyon groundwater pumped over the period 1983-2020 was 2,073 AFY. A study by STWMA indicated a safe yield of about 2,600 AFY; a SGPWA water balance study put the safe yield between 2,000 and 2,800 AFY. Based on these studies and BCVWD's long term records of pumping, Edgar Canyon is not in overdraft.

Prior to 2004, the year the Adjudication came into effect, the Beaumont Basin was in overdraft. Groundwater levels had declined from historical levels. It should be noted that the BSU has been drawn down from the steady state groundwater elevations computed in the Bloyd (1971) report[21]. The Bloyd report shows that the groundwater elevation is approximately 100 feet below steady-state (pre-development) conditions. According to STWMA, progressive drawdown of water levels in the Beaumont Basin occurred from the 1920s. Since the Adjudication, groundwater levels have stabilized. Current levels in the basin are about 75 to 120 ft below the 1920 levels and about 10 to 40 ft below the 1980 level.[22] However, in spite of the drop in water levels, there were no water quality impacts or known subsidence. At the present time, with the Adjudication, the Beaumont Basin is operated on a long-term safe yield basis without further overdraft.

The SGPWA monitors the overdraft in the Beaumont Basin and Figure 6-6 shows the accumulated overdraft since 1997. As can be seen, once imported water began to be recharged, the accumulated overdraft leveled off. Groundwater levels decreased slightly from 2013-2015 due to the drought when imported water supplies were reduced. Basins managed on a long-term safe yield basis are expected to have fluctuations in groundwater levels from year to year depending on hydrologic conditions and the availability of imported water. During dry years, the water levels drop; during wet years, the levels recover.

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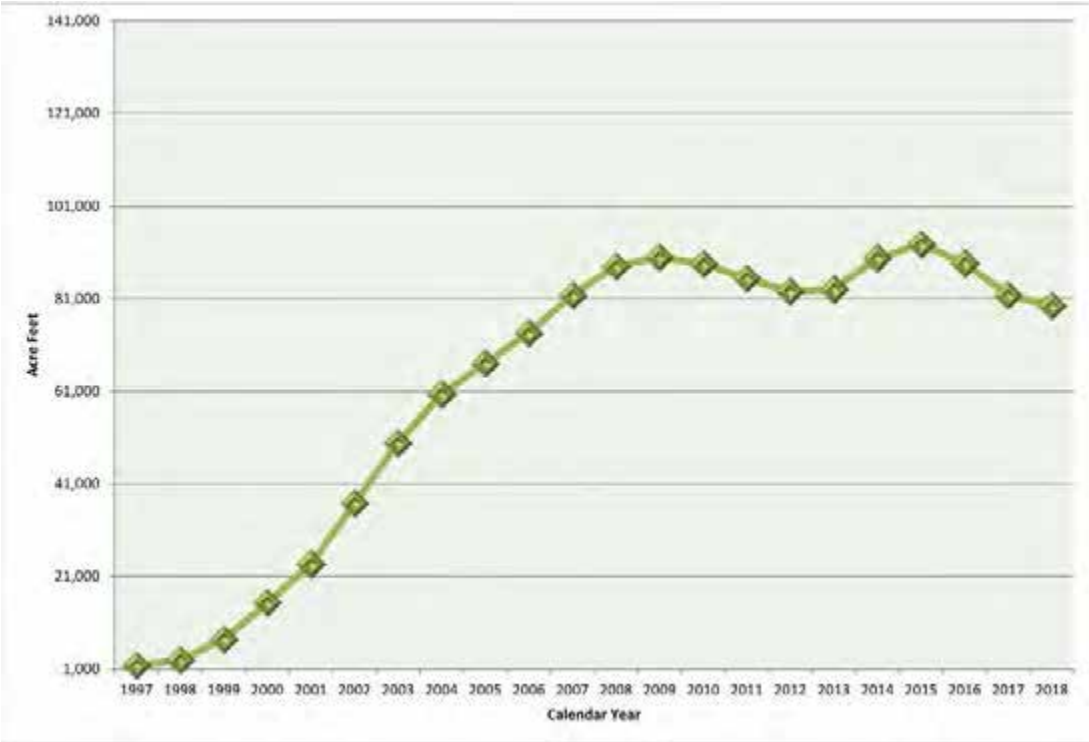
[21] Bloyd, R.M., 1971, Underground storage of imported water in the San Gorgonio Pass area, Southern California: U.S. Geological Survey Water-Supply Paper 1999-D.

[22] "*Integrated Regional Water Management Program for the San Timoteo Watershed*," Final Draft, prepared for the San Timoteo Watershed Management Authority, Wildermuth Environmental, Inc., p 2-13, June 2005

Figure 6-6 – Accumulated Overdraft in Beaumont Basin since 1997

(by SGPWA)(Includes the impact of imported replenishment water) [23]



The accumulated overdraft is expected to remain nearly constant with the Adjudication, although there could be some fluctuations due to wet and dry periods causing variable amounts of recharge water to be available. To minimize outflow and loss of recharged imported water, Beaumont Basin water levels should be maintained at or near current conditions. During "wet" years when more imported water is available, the accumulated overdraft will be reduced. This is normal operation for a groundwater basin.

The Beaumont Basin Watermaster has a calibrated groundwater model which is used to manage the basin. The model was used in the recent review of the safe yield value and resulted in a reduction to 6,700 AFY -- a value closer to some of the earlier hydrogeologic reports. In summary, although water levels are below historic levels, the Beaumont Basin, as a result of the Adjudication, is operating on a safe yield basis.

When the Adjudication was implemented, an extraction of 160,000 AF "temporary surplus" was planned to provide storage for conjunctive use and water banking. Watermaster was concerned about possible subsidence and implemented a basin-wide subsidence monitoring program. In 2006, Watermaster established a network of 72 benchmarks throughout the Basin and nearby basins and an initial level survey was conducted to establish a baseline. A second survey was

[23] SGPWA, 2020, Annual Report of Water Conditions, Reporting Period 2018, January

conducted in 2007 which showed little vertical change. Whatever minimal change occurred was evenly distributed throughout the Basin. The program envisioned performing the survey every 3 years with the next round scheduled for spring 2009. The 2009 survey was not conducted since it was determined the level of subsidence was minimal. No additional surveys are scheduled at this time.[24] It can be concluded; the overdraft and the temporary surplus have not had any adverse effects.

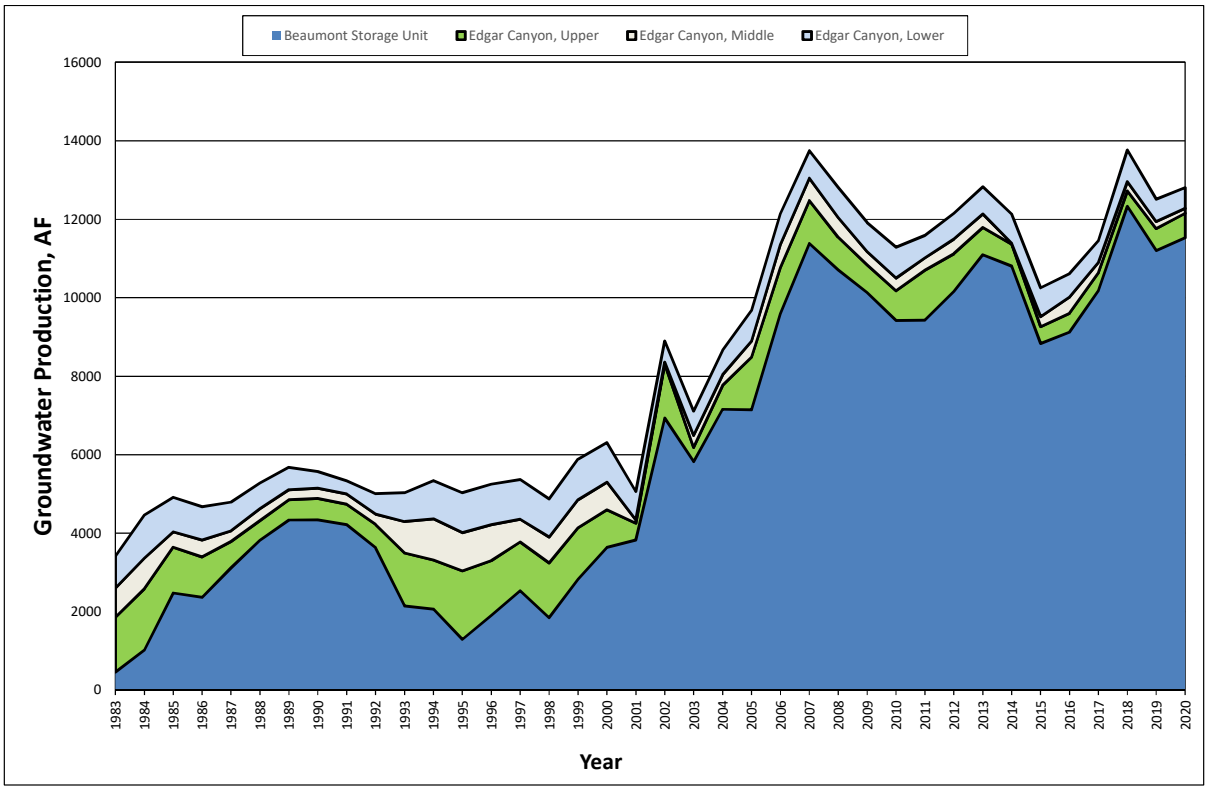
6.3.6 Historical Groundwater Pumping

> ***CWC 10631***
>
> *(b) ...If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*
>
> *(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*

Table 6-7 (DWR Table 6-1) shows BCVWD's historical pumping from Edgar Canyon and the Beaumont Basin for the last five years (2016-2020). Figure 6-7 shows BCVWD's pumping (Edgar Canyon and the Beaumont Basin) from 1983 – present.

[24] Beaumont Basin Watermaster (2021). 2020 Annual Report Draft, Alda, Inc., Thomas Harder and Company, April

Figure 6-7 – BCVWD Groundwater Production History Since 1983



Edgar Canyon

BCVWD has long-term records on pumping. From 1957 to 2020, a period of 64 years, the average production from the Edgar Canyon Wells is 1,881 AFY. However, prior to 1983, the ability to utilize the water pumped from Edgar Canyon was limited due to a lack of sufficient conveyance capacity to deliver water from Edgar Canyon to Cherry Valley and Beaumont. In 1983, the District installed the 14-in Edgar Canyon Transmission Main which enabled larger quantities of water to be conveyed from Edgar Canyon to Cherry Valley and Beaumont. From 1983 to 2020, a period of 38 years, the average amount pumped was 2,073 AFY. This is far more indicative of Edgar Canyon's ability to produce water.

Statistical information on the Edgar Canyon production for the period 1983 to 2020 is presented in Table 6-8. As can be seen in Table 6-7, Edgar Canyon Wells produced about 10% of the District's annual demand (potable and non-potable) in 2020.

Table 6-7(DWR Table 6-1) – BCVWD Groundwater Pumping (2016-2020)

DWR 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 *Drop Down List May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Little San Gorgonio Creek	1,493	1,271	1,436	1,308	1,279
Alluvial Basin	Beaumont Basin	9,123	10,183	12,329	11,202	12,904
	TOTAL	10,616	11,454	13,765	12,510	14,183
** Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Little San Gorgonio Creek, also known as Edgar Canyon, is a mix of shallow aluvial deposits and fractured rock aquifer.						

In Table 6-8, the term "10th Percentile" means that 90 percent of the time the production was greater than the value shown. In other words, there would be only one year in ten that the production would be less than 1,276 AFY. It is important to point out in Table 6-8 that annual production (far right column) will not be the total of the Upper, Middle, and Lower Canyon values (second and third columns) because the maximums and minimums, etc. may not have occurred simultaneously, i.e., in the same year.

Table 6-8 – Groundwater Extraction Statistics from Edgar Canyon Wells (1983-2020)

Parameter	**Annual Production: Upper and Middle Canyon, AF**	**Annual Production: Lower canyon, AF**	**Annual Production Total, AF**
Average	1,331	741	2,073
Maximum	2,720	1,095	3,738
Minimum	516	334	1,117
90th Percentile	2,195	1,014	3,121
10th Percentile	682	536	1,276

The STWMA[25] estimated the safe yield from Edgar Canyon to be 2,600 AFY.[26] This is reasonably consistent with the average amount of extractions shown in Table 6-8 from Edgar Canyon for the period 1983 –2020.

A water budget analysis in a report prepared for the SGPWA indicated the yield from Edgar Canyon was between 2,000 and 2,800 AFY. The SGPWA report stated that based on the 20-year period 1988-2008, when water levels were reported rising in Edgar Canyon, pumping averaged 2,900 AFY and suggests that the yield of Edgar Canyon may be in the range of 2,300 to 2,800 AFY. This also is generally consistent with both the District's data and that of STWMA.[27]

Based on production records for the 38-year period, 1983 – 2020, average and minimum production from Edgar Canyon was 2,073 AFY and 1,117 AFY, respectively. Minimum yield is about 54% of the average. Refer to Table 6-8. For planning purposes, 2,050 and 1,110 AFY will be used for the average and minimum year, respectively.

Beaumont Basin Groundwater

Table 6-7, presented previously, showed BCVWD's pumping from the Beaumont Basin for 2016-2020. The water pumped includes imported water recharged and extracted the same year. Some of imported water recharged was not extracted the same year and went into BCVWD's 80,000 acre-ft storage account monitored by Watermaster.

In the Judgement, described previously, BCVWD and the other appropriators were not given any share of the safe yield; all of the safe yield was assigned to the Overlying Parties. However, during the 10-year period 2004 -2014, BCVWD and the appropriators were granted a portion of the "temporary surplus." The "temporary surplus" was designed to create a 160,000 acre-ft volume in the Beaumont Basin that could be used by the parties for conjunctive use and banking of imported water. This also gave time for the appropriators to construct facilities to use or recharge imported water to meet their needs after 2014.

Although the Basin safe yield was reserved for the overliers, if any overlier receives potable water or recycled water from any of the appropriators, according to the adjudication, the appropriator may pump the amount of water delivered to the overlier. Annually, Watermaster makes an accounting of the unused overlier rights and distributes that amount to the

[25] The San Timoteo Watershed Management Authority (STWMA), was dissolved around the year 2011.

[26] Wildermuth Environmental, Inc. (2005). Integrated Regional Water Management Program for the San Timoteo Watershed, Final Draft, prepared for the San Timoteo Watershed Management Authority, June 2005.

[27] SGPWA (2010). *Report on the Sustainability of the Beaumont Basin and Beaumont Management Zone*, prepared for the SGPWA by Hahn Water Resources, LLC, Evergreen, CO, November.

appropriators in accordance with a predetermined share (BCVWD's share is 42.51%.). In addition, the Watermaster makes an accounting of the potable and recycled water supplied by an appropriator to an overlier. These two sources, along with any imported water recharged, go into the appropriator's storage account. Only stored water can be pumped. If an appropriator has insufficient stored water, Watermaster will assess the producer to pay for the purchase of imported water.

BCVWD has 11 wells in the Beaumont Basin. The total pumping capacity is 17,425 gpm or 25.1 mgd, assuming the pumps operate 24 hours per day. Because of the large motors and increased charges by Southern California Edison (SCE) during peak time of use (TOU), these wells do not typically operate during the peak power periods. At 19-hr/day pumping (wells do not typically operate from 4 PM – 9 PM), with all wells operating, the total pumping rate is 19.9 mgd. With the largest well out of service and 24 hr/day pumping the capacity is 13,425 gpm or 19.3 mgd; with 19 hours of pumping, the total pumping rate is 15.3 mgd.

The District's total well pumping capacity, Edgar Canyon plus Beaumont Basin Wells, with all wells operating 24 hr/day, is 27.3 mgd. With the largest well out of service (Well 29), the pumping capacity for 24-hr operation is 21.5 mgd.

In 2019 and 2020, SCE has implemented Public Safety Power Shutoffs (PSPS) due to increased risk of wildfires in the area. In such instances, the District has utilized standby power to continue to meet the demands in its service area during extended power shutoffs. However, as growth occurs in the service area, well capacity and standby power capacity will be increased to meet maximum day demands.

With the Adjudication as described previously in this section, the amount of extractable groundwater, not including stored water, recharged imported SPW or captured stormwater, consists of:

- Reallocation of unused overlier pumping rights
- Credit for providing potable water or non-potable water delivered to an overlying party or an overlying party's land (termed "Forbearance Water")
- Return flow credits

A detailed analysis of the projected amounts available is presented in BCVWD's 2016 Potable Water Master Plan. The results of this analysis is summarized in Table 6-9.

Table 6-9 includes a proportionate reduction in the reallocation of unused Overlying Party pumping rights to account for the reduction in Basin safe yield from 8,650 AFY to 6,700 AFY.

The non-potable forbearance water in Table 6-9 does include non-potable (recycled) water supplied to Tukwet Canyon and Oak Valley Golf Courses.

Table 6-9 – Summary of BCVWD Extractable Groundwater from Beaumont Basin

(without replacement and not including stored water)

Item	2025	2030	2035	2040	2045
BCVWD's Share of Reallocated Unused Overlier Pumping Rights, AFY	1,322	1,285	1,165	1,099	1,099
Potable Forbearance Water, AFY	0	67	263	384	384
Non-Potable Forbearance Water, AFY	471	479	523	557	557
Return Flow Credits above Baseline, AFY	280	514	868	922	1,155
Total, AFY	2,073	2,346	2,820	2,963	3,196

6.4 Surface Water

BCVWD does not use local surface water directly but does have two active surface water diversions in Edgar Canyon. These are on file with the State of California Division of Water Rights.

- Diversion Number S014351 located in the SE1/4 of NE1/4 of Section 2, T2S, R1W, SB&M and first used in 1907. This location is about 1,200 ft downstream of the USGS gauging station in Little San Gorgonio Creek, near the upper end of the District's property.
- Diversion Number S014352 located in the NW1/4 of SE1/4 or Section 22, T2S, R1W, SB&M and first used in 1894. This location is just upstream of the existing percolation ponds at the mouth of Edgar Canyon.

In the early years of the District, the upper diversion was used to provide domestic and irrigation supply. Water was diverted from Little San Gorgonio Creek and conveyed to sand and sediment removal structures and filter boxes in the Canyon and then piped down to consumers and orchards in Cherry Valley and Beaumont.

These diversions are used today to direct surface flows in Little San Gorgonio Creek into a series of percolation ponds in Edgar Canyon, which then recharge the shallow aquifers to help supply the existing wells in Upper and Middle Edgar Canyon. BCVWD has been doing this since the late 1800s and has a pre-1914 water right to divert up to 3,000 MIH or approximately 43,440 AFY for domestic and irrigation uses[28]. However, BCVWD has never had a demand that requires such large quantities of water supply; and the watersheds may not be capable of supplying such quantities during an average year. The diversion right is not included in

[28] A miner's inch in Southern California is reported to be 0.02 cubic ft/second (cfs)

BCVWD's water supply calculations, but is needed to ensure adequate supply from the Edgar Canyon wells.

6.5 Storm Water

Storm water capture plays a significant role in BCVWD's local water resource supply development. Several projects are currently in operation:

- Diversions and percolation ponds in Upper and Middle Edgar Canyon described above. See Figure 6-8.
- Construction of desilting basins and percolation basins immediately upstream of the Lower San Gorgonio percolation ponds at the outlet of Edgar Canyon. See Figure 6-9.

Figure 6-8 – Percolation Ponds in Upper Edgar Canyon

Figure 6-9– Desilting and Recharge Basins at the Mouth of Little San Gorgonio Creek (Edgar Canyon)

The diversions in Upper and Middle Edgar Canyon capture most of the storm flows and runoff that flows in the creek and diverts the flow to a series of percolation basins (Refer to Figure 6-8). The water is subsequently extracted by the adjacent wells.

On occasion, there are very high flows which flow the entire length of Edgar Canyon. A portion of these flows can be captured in the basins at the mouth of Edgar Canyon shown in Figure 6-9. In addition, BCVWD retains the right to use the older ponds downstream of the new basins to capture flood water, when they occur. During those times, the SGPWA would be precluded from percolating SPW. The SGPWA has constructed their own recharge facilities lower down in Noble Creek called the Fiesta Groundwater Recharge Facility. This new facility has a larger capacity than the spreading basins at the mouth of Edgar Canyon and it is believed that the SGPWA will not be using the Edgar Canyon spreading ground facilities extensively; so they will be available for stormwater capture.

6.5.1 Potential Storm Water Capture Projects

There were a number of projects which were explored in more detail in BCVWD's 2016 Potable Water Master Plan. These projects are listed in Table 6-10.

Edgar Canyon, Noble Creek and Marshall Creek

In BCVWD's 2013 UWMP Update, an estimate of the yield from the Edgar Canyon, Noble Creek and Marshall Creek Capture Projects was presented. No further work has been performed on these conceptual projects, so at this time the preliminary yield from the projects remains at 1,050 AFY.

Table 6-10 – Potential Storm Water Capture Projects

Project	Brief Description
Soft plug in Noble Creek at BCVWD Groundwater Recharge Facility	Large flows which would bypass the spreading basins at the mouth of Edgar Canyon (Figure 6-10 above) could still be captured. Provide "soft plug" in lined portion of Noble Creek channel and divert flows into BCVWD's recharge facility. (Note that only extreme flows actually make it out of the canyon). Estimated Yield – 500 AFY.
Stormwater Capture Noble Creek	Noble Creek flows could be desilted on property owned by BCVWD (15.7 acres) along Noble Creek upstream of Noble St and west of Cherry Ave. Unfortunately, this area is not over the Beaumont Basin, but the property could be used for desilting basins with the desilted water released back into Noble Cr. and recaptured at a soft plug in the lined channel and diverted into the District's recharge site. Estimated Yield = 400 AFY.
Marshall Creek s/o Elm to I-10	There is a significant amount of urban runoff from the developed area east of Beaumont Ave, between Oak Valley Parkway and Brookside Ave. which could be captured in the soft bottom of Marshall Creek using training dikes to prevent the water from going under the I-10 bridge. There is about 300 ac of urban drainage. Estimated Yield = 150 AFY.
Beaumont MDP Line 16	Approximately 517 acres of area could be intercepted by a storm drain along Grand Ave. and conveyed to the District's Recharge facility. This water is relatively free of sediments and runoff is generated with even the slightest amount of rainfall. Refer to Table 6-11 for estimates of stormwater capture.
Sundance Urban Runoff	Eighth St., Cherry Ave., and Starlight Ave. Basins capture runoff from the Sundance development. These basins capture runoff effectively, but percolation needs to be improved. Refer to Table 6-11 for estimates of stormwater capture.

Grand Avenue and Sundance Urban Runoff Capture

The Sundance Development, a project with over 4,000 housing units, between Cherry Ave. and Highland Springs Rd and Brookside Ave. and Eighth Street, has 3 detention/water quality basins to store and percolate runoff from the development. These include the Starlight, Eighth St., and Cherry Basins and are shown in Figure 6-10. Photos of captured runoff in the Sundance Basins are shown in Figure 6-11.

The location, drainage area and conceptual plan for the Beaumont MDP Line 16 Project is shown in Figure 6-12. This project will intercept runoff from this rural residential watershed in Cherry Valley and convey it to BCVWD's Groundwater Recharge facility. The Grand Avenue Storm Drain is a joint project with Riverside County Flood Control and Water Conservation District, the agency that is designing the project. Design for the project is complete and bids

were received in early June 2021 with construction to start in late 2021. The design and construction is partially funded through an Integrated Watershed Protection Program through the Santa Ana Watershed Project Authority. The grant funding is anticipated to total $1,220,000 which has been agreed to be split equally (50/50) between RCFC&WCD and the District.

Figure 6-10 – General Location of the Sundance Water Quality and Urban Runoff Capture Basins

Figure 6-11 – Runoff Collected in Sundance Detention Basins

Figure 6-12 – Beaumont MDP Line 16 Watershed Area

Table 6-11 shows information about the watershed and the detention basin volumes for the aforementioned storm water projects.

A detailed analysis of the runoff potential from these projects was performed as part of the 2016 BCVWD Potable Water Master Plan. Daily Beaumont rainfall totals for the 77-year period January 1, 1929, through December 31, 2006, were used in the runoff analysis. Individual rainfall periods were identified and the runoff from each storm was determined using the Natural Resources Conservation Service (NRCS) Curve Number approach. Table 6-12 shows the amount of storm runoff that can actually be captured – close to 800 acre-ft annual average.

Table 6-11 – Summary of the Urban Runoff Drainage Areas and Retention Basin Volumes

Facility	Drainage Area, acres	Basin Volume, acre-ft
Beaumont MDP Line 16	517	90
Cherry Ave Basin	426	240
Eighth St. Basin	475	128
Starlight Basin	250	32

"Before and after" development calculations were made to determine "new water." From a water resources perspective, the Beaumont Basin Watermaster would likely not consider all of the captured storm water as "new water." "New water" is water which is developed over and above what would have occurred naturally, in an undeveloped condition.

Table 6-12 – Urban Runoff Capture Summary

Facility	Estimated Captured Runoff, AFY	Percent of Storms Totally Captured	Total Average Annual Runoff, AFY, Based on 77 years of Record	Percent of All Possible Storm Water Captured
Beaumont MDP Line 16	200	98.5%	232	90.0%
Cherry Ave Basin	258	95.8%	276	93.4%
Eighth St Basin	237	94.6%	308	76.9%
Starlight Basin	89	89.2%	171	52%
Total	784			

Table 6-13 shows an estimate of "new water" from the projects – about 730 AFY.

Table 6-13 – Estimate of "New Water" from Storm Water Capture

Facility	Estimated Captured Runoff, AFY	Runoff from Undeveloped Land		Estimated Amount of New Water, AFY
		3-in Total Storm Rainfall, AFY	4-in Total Storm Rainfall, AFY	
Beaumont MDP Line 16	200	41	75	172 to 192 (Use185)
Cherry Ave Basin	258	9	19	249 to 239 (Use 245
Eighth St Basin	237	10	21	226 to 216 (Use 220)
Starlight Basin	89	5	11	84 to 78 (use 80)
Total				730

6.6 Wastewater and Recycled Water

Recycled water use for non-potable purposes has a major role in BCVWD's water portfolio. BCVWD began planning the use of non-potable water for landscape and golf course irrigation since the early 1990s with the development of a cooperative financing agreement to fund water supply infrastructure including recycled water. In November 1997, the City of Beaumont City Council adopted Ordinance 773 mandating the use of potable water for non-potable uses including cemeteries, golf courses, parks, street and highway landscaping, athletic fields, and other irrigation uses is a waste or an unreasonable use of water if recycled water is available.

BCVWD's UWMPs dating to the 90s included plans and projections for the use of recycled water from the City of Beaumont. BCVWD and the City of Beaumont entered into a Memorandum of Understanding on July 10, 2019, which defined the general terms, roles and responsibilities of both agencies as they relate to the delivery of recycled water from the City's new wastewater recycling facility to BCVWD. BCVWD and the City are in the process of developing an agreement to set the specific terms and responsibilities. Siting studies for the recycled water transfer pumping station have been completed and BCVWD has developed preliminary plans for the pumping station.

Around 2013, BCVWD's projected recycled water needs were forecast to be greater than the amount that could be produced by City of Beaumont and BCVWD began discussions with YVWD as a source of additional recycled water. In June 2014, BCVWD prepared a Recycled Water Facilities Planning Report for a Recycled Water Supply Pipeline and Pump Station for a connection to YVWD's non-potable water system. The Facilities Planning report was approved by the SWRCB in August 2014. However, YVWD is not able to provide recycled water to BCVWD as a result of YVWD's Change Petition Conditions filed with the State Division of Water Rights which precludes the use of recycled water outside of YVWD's service area. As a result this is not considered a viable source of recycled water, at least for the foreseeable future.

6.6.1 BCVWD's Existing Non-potable Water System

BCVWD has an extensive network of over 40 miles of non-potable water transmission pipelines already constructed that can convey untreated SPW, groundwater, and recycled water. An extensive network of smaller distribution mains have been constructed by tract developers to serve parks, medians, schools and common areas in their respective developments. The system includes a 2 MG non-potable water reservoir (2800 Zone Non-potable Reservoir). There are about 300 existing landscape connections to the non-potable water system receiving 1,620 acre-ft of water (year 2020 total). The existing non-potable water system is currently pressurized with groundwater from Well 26. This is supplemented during the high demand periods with potable water introduced into the non-potable water system through an air gap connection at the non-potable water storage tank (2800 Zone Non-potable Water Tank).

BCVWD's Non-potable Master Plan (under preparation) shows the system to have up to 4 pressures zones: 2400, 2600, 2800, and 3040. The 3040 Pressure Zone is not operational at the present time. It is noted that BCVWD is still analyzing the feasibility of operating non-potable facilities in a 3040 Pressure Zone.

The Tournament Hills and Fairway Canyon projects, south of I-10, have non-potable water distribution systems installed. This portion of the non-potable water system is isolated from and operates at a lower hydraulic grade line from the 2800 Non-potable Water Zone. This portion of non-potable water distribution system is currently supplied from the District's potable water system through two (2) interconnections having backflow prevention devices between the potable and non-potable water system. The non-potable water system was constructed from

2002 to the present using City of Beaumont Community Facilities District (CFD) bond funds, BCVWD funds derived from facilities (impact) fees collected from developers, BCVWD funding, and developer funding for the smaller distribution lines.

6.6.2 Recycled Water Coordination

> ***CWC 10633***
>
> *The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.*

Within BCVWD's service area, only the City of Beaumont provides wastewater collection, treatment, and disposal. Except for the Highland Springs Village area of Cherry Valley, which is served by the City of Beaumont, the unincorporated community of Cherry Valley relies on on-site disposal systems.

YVWD to the west and the City of Banning to the east, each provides wastewater collection, treatment and disposal of wastewater generated in their respective service areas. YVWD has an advanced wastewater treatment facility using UV disinfection and reverse osmosis and has an extensive recycled water system. The City of Banning has plans prepared to upgrade their existing treatment plant using a membrane bioreactor and provide recycled water to users in their service area.

6.6.3 Wastewater Collection, Treatment, and Disposal

> ***CWC 10633***
>
> *(Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*
>
> ***CWC 10633***
>
> *(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.*

There are three existing wastewater reclamation plants in the San Gorgonio Pass Area. Only the City of Beaumont Treatment Plant No. 1 is within BCVWD's service area.

- City of Beaumont Treatment Plant No. 1
- YVWD Henry Wochholz Water Reclamation Plant
- City of Banning Wastewater Treatment Facility.

City of Beaumont

The City of Beaumont provides wastewater collection, treatment and disposal for wastewater generated within the City plus the Highland Springs area of Cherry Valley. Wastewater generally flows by gravity to the City's wastewater treatment plant; however, there are 9 wastewater lift and pumping stations in the southeastern and western portions of the City that pump

wastewater collected in these areas and to the treatment plant or collection system leading to the treatment plant.

The City of Beaumont's Treatment Plant No. 1 (below) has a current permitted capacity of 4 mgd. The treatment facility is located on Fourth St., east of Viele Ave.

The existing treatment facility provides secondary treatment using the Biolac® activated sludge process, tertiary filtration and ultraviolet disinfection and operates under permit R8-2015-0026 NPDES CA 0105376. Waste biosolids from the secondary process is centrifuged and hauled offsite for disposal.

In a 2007 letter from CDPH (now DDW) to the City of Beaumont, the City was directed to upgrade the facility to meet Title 22 requirements for unrestricted use and perform validation testing on the UV disinfection system. In July 2016, the City completed a Title 22 Engineering Report[29] which included the UV Validation Testing which was accepted by the State with conditions. Some upgrades to the tertiary system were identified.

The City has been upgrading and expanding their treatment facility over the past few years in which the capacity will be increased from 4 MGD to 6 MGD, as well as construction of advanced treatment, lift station modifications, and the addition of on-site recycled water storage facilities. The treatment upgrades include a new fine screen system, conversion to activated sludge, a new activated sludge pump for secondary clarification, and a new membrane bio-reactor, with a reverse osmosis system to remove dissolved solids. Additionally, new dewatering equipment and optimization of the existing ultraviolet (UV) disinfection system are also a part of the upgrades.

Another component to the treatment facility upgrades is the construction of a 12-inch diameter gravity pipeline from the Beaumont WWTP to the nearest connection point in the Inland Empire Brine Line (IEBL) to dispose of the brine waste generated by the upgraded treatment facility. Construction of the brine line was completed around early 2020 and is approximately 23 miles long.

As part of the environmental permitting[30] for the recycled water system, the US Fish and Wildlife Service required that 1.8 mgd of effluent continue to be discharged to Cooper's Creek for

[29] City of Beaumont Wastewater Treatment Plant (2016). Title 22 Engineering Report and Validation Testing, Aqua Engineering and Albert A. Webb and Associates, July.

[30] Initial Study/Mitigated Negative Declaration Beaumont Cherry Valley Water District Recycled Water System Project, SCH 2007081127, June 2007.

maintenance of habitat[31]. The current operating permit allows for use of the effluent on the Tukwet Canyon and Oak Valley Golf Courses and landscape irrigation within the BCVWD service area.

BCVWD continues to work with the City relative to recycled water. Historically, the City of Beaumont's effluent has experienced TDS concentrations of about 400 mg/L, which is an excess of the Regional Board's Maximum Benefit Water Quality Objectives for the Beaumont Basin. With the implementation of the reverse osmosis system, the recycled water from the City will be treated to a high-level and should have no issue in achieving the Maximum Benefit Water Quality Objectives.

The discharge limits in the current operating permit in terms of TDS and Total Inorganic Nitrogen (TIN) are shown in Table 6-14.

Table 6-14 – City of Beaumont Wastewater Discharge Requirement for TDS and TIN

Parameter	DP-001 Cooper's Creek		DP-007 Unnamed Creek	Recycled Water
	Discharge up to 1.8 mgd	Discharge over 1.8 mgd	All Discharges	All Discharges
TDS	400 mg/L	300 mg/L	230 mg/L	330 mg/L
TIN	6 mg/L	3.6 mg/L	2 mg/L	No Limit

Table 6-15 shows the amount of recycled water which is available from the City of Beaumont's wastewater treatment facility over time. The table shows the deduction of 1.8 mgd for environmental habitat mitigation, and roughly 10% reduction for water used on the plant site for washdown and irrigation and water contained in the dewatered biosolids hauled offsite.

The population for the City of Beaumont indicated in Table 6-15 is based on a less aggressive population growth than that shown in Table 3-1 and Table 3-9, presented previously. The population projections below for the City of Beaumont were derived from the draft BCVWD Non-Potable Master Plan. Using a slower population growth will avoid over-estimating the amount of recycled water available and will be conservative from a water supply standpoint.

[31] Letter dated February 29, 2008, Karen Goebel USFWS to Michelle Jones SWRCB, Informal Consultation for Beaumont Cherry Valley Water District Recycled Water System, SRF Loan C-06-5157-110.

Table 6-15 – Recycled Water Available from City of Beaumont's WWTP

Year	2020	2025	2030	2035	2040	2045
City of Beaumont Population	51,663	59,261	67,104	74,891	79,522	81,513
Wastewater Generation Flow Rate, gpcd	70	67.5	65	65	62	60
Wastewater Flow, mgd	3.62	4	4.36	4.87	4.93	4.89
Environmental Mitigation Flow, mgd	1.8	1.8	1.8	1.8	1.8	1.8
Wastewater Available for Recycling, mgd	1.82	2.2	2.56	3.07	3.13	3.09
Estimated amount which can be recycled, mgd (10% loss)	1.45	1.8	2.13	2.58	2.64	2.6
Estimated amount which can be recycled, AFY	1,630	2,017	2,381	2,892	2,955	2,915
Estimated amount which can be recycled, AF/month	136	168	198	241	246	243
Estimated amount which can be recycled, gal/min	1,020	1,260	1,480	1,800	1,840	1,810

[1] The City of Beaumont population growth is less aggressive than shown in Tables presented in Section 3 to be conservative in the amount of recycled water available.

[2] Source: BCVWD Non-Potable Master Plan (in progress)

Table 6-15 shows the estimated recycled water produced, the recycled water that must be reserved for habitat mitigation (1.8 mgd), and the net amount of recycled water available for recycling. Not all of the recycled water available can be recycled. The estimated amount which can be recycled is reduced by 1) the amount of recycled water used on-site for wash down and irrigation and water contained in the waste biosolids which are hauled off-site; and 2) the reject water from reverse osmosis process facility to meet the TDS limit of 330 mg/L for recycled water discharged to the brine line.

A mass balance calculation was made based on an influent wastewater TDS of 450 mg/L, a reverse osmosis (RO) product water TDS of 50 mg/L, and the blended recycled water TDS requirement of 330 mg/L. The calculations indicated that about 33% of the wastewater will need to be treated in the RO process (about 2.0 mgd). At 80% recovery, typical of RO processes treating this quality of water, 7% of the total wastewater flow will be reject water or "brine." The total deduction for brine and on-site uses and water in hauled biosolids is rounded to 10%.

City of Banning

The City of Banning provides wastewater collection, treatment and disposal of wastewater collected in the City of Banning. The City also provides potable water service and is in the process of constructing a non-potable water supply system.

The City of Banning has a secondary treatment facility that percolates effluent into the alluvium along Smith Creek southeast of the City under a permit from the Colorado River Regional Water Quality Control Board. The City has begun construction of a recycled (non-potable) water line from Sun Lakes Golf Course east to the wastewater treatment plant. The City may pump percolated wastewater (groundwater) using a retrofitted well at the wastewater treatment plant into the pipeline to serve the golf course in the future. The City has plans to upgrade the wastewater treatment plant to a modern membrane bioreactor facility to provide recycled water for the future. It is possible that some surplus recycled water from the City of Banning could be introduced into the BCVWD recycled water system at some point in the distant future. It is not under consideration at this time however.

Community of Cherry Valley

The community of Cherry Valley relies exclusively on on-site systems for wastewater treatment except for the Highland Springs Village, which is connected to the City of Beaumont's sewerage system. Currently, there is about 0.5 mgd of wastewater generated in Cherry Valley; this volume of wastewater will grow to about 0.55 mgd by 2045.

In July 2007, BCVWD prepared a Facilities Planning Study to provide wastewater collection and treatment to a portion of Cherry Valley known as the Cherry Valley Community of Interest (CVCOI). The CVCOI was the area generally north of Brookside Ave., between Bellflower St. and Nancy St. It included the Cherry Oaks and Bonita Vista Areas. Providing sewers would minimize the nitrate contribution to the Beaumont Groundwater Basin and provide a source of recycled water, which could be beneficially used. BCVWD would be the agency operating the collection system and treating the wastewater in either a separate treatment plant or through a contract with the City of Beaumont or other agency for treatment.

Although BCVWD had the power to provide wastewater collection and treatment under the Irrigation District Act under which it was formed, this power was never exercised and LAFCO required a vote of the District residents to exercise the power. The ballot measure was defeated in September 2007 and as a result, BCVWD does not currently have sewer authority.

It is unlikely that Cherry Valley will have a sewer collection system within the next 20 years and so should not be considered as being a source of recycled water at this time.

Summary

Table 6-16 (DWR Table 6-2) shows a summary of the wastewater collected within BCVWD's service area in 2020. Table 6-17 (DWR Table 6-3) shows the wastewater treatment and discharge within BCVWD's service area in 2020.

Table 6-16 (DWR Table 6-2) – Wastewater Collected within Service Area in 2020

DWR 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.					
13	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
87	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? *Drop Down List*	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? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
City of Beaumont	Metered	4,032	City of Beaumont	Plant No. 1	Yes	Yes
Total Wastewater Collected from Service Area in 2020:		4,032				

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

NOTES: (1) Wastewater volume is based on monthly reports to RWQCB. Except for Highland Springs Village which is sewered by the City of Beaumont, the remainder of Cherry Valley is unsewered. (2) 2,020 AF must be discharged for environmental mitigation leaving 2,012 AF available for recycling.

6.6.4 Recycled Water System

> ***CWC 10633***
>
> *(c) (Describe) the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*

BCVWD has an extensive network of about 40 miles of transmission and main line, non-potable (recycled water) pipelines already constructed. These are shown in solid "purple" in Figure 6-13, which also shows BCVWD's non-potable water service area. The existing system includes a 2-million-gallon non-potable water reservoir. There are about 300 existing landscape connections to the recycled water system receiving 1,647 acre-ft of water (year 2020 total). The non-potable water system was constructed from 2002 to the present.

Table 6-17 (DWR Table 6-3) – Wastewater Treatment and Discharge within Service Area in 2020

DWR 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)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 Volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
City of Beaumont	DP-001	Cooper's Creek	8330101001	River or creek outfall	No	Tertiary	4,032	4,032	0	0	0
City of Beaumont	DP-007	Trib of Marshal Creek	8330101001	Bay or estuary outfall	No	Tertiary	0	0	0	0	0
City of Beaumont	R-001	Tukwet GC	8330101001	Other	No	Tertiary	0	0	0	0	0
City of Beaumont	R-002	Oak Valley GC	8330101001	Other	No	Tertiary	0	0	0	0	0
City of Beaumont	R-003	BCVWD RW	8330101001	Other	No	Tertiary	0	0	0	0	0
						Total	4,032	4,032	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: (1)City of Beaumont claims that a portion of the effluent discharged at DP-001 and DP-007 incidently recharge the Beaumont Groundwater Basin. Watermaster is still awaiting proof. The effluent does not comply with planned groundwater recharge regulations. (2) Partial reverse osmosis treatment was under construction in 2020.

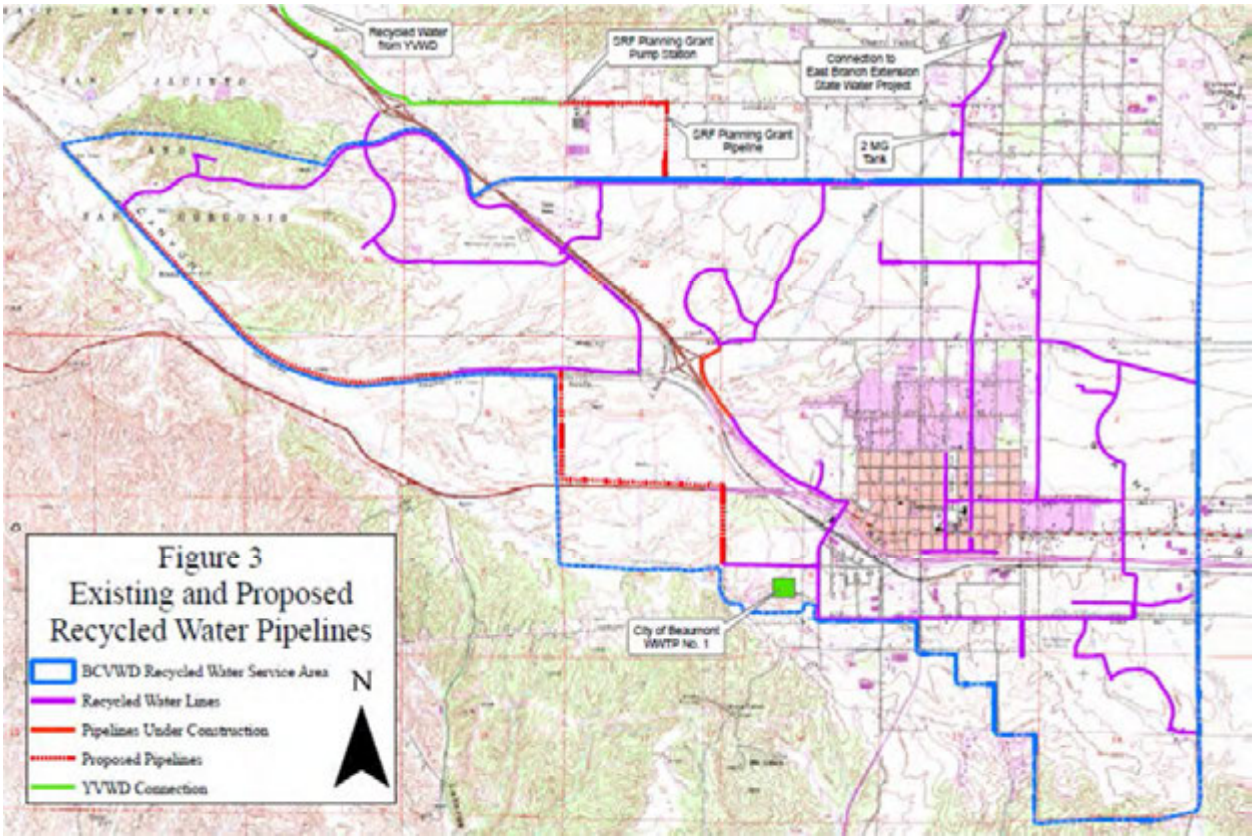
The non-potable water system consists of 3 (potentially 4 in the future) pressure zones: 2400, 2600, 2800, and 3000. The 3000 Non-potable Zone will likely not be operational for several years (if ever) as most of the current demand is in the other zones; the District is in the process of analyzing the feasibility of a 3000 pressure zone. The 2400 and 2600 Non-potable Zones are south of I-10. These pressure zones are currently supplied with potable water from the 2650 Potable Water Zone through two (2) interconnections. These zones have a current non-potable water demand of about 400 AFY.

The 2800 Non-potable Zone is supplied from the 2 MG 2800 Zone Non-potable Water Tank located at BCVWD's groundwater recharge site. The 2800 Non-potable Zone has a current average (2015 – 2020) demand of about 1,411 AFY. This is by far the highest demand zone. Since September 2015, the 2800 Non-potable Zone has been supplied with water (non-potable) from Well 26 supplemented with potable water through an air gap at the 2800 Zone Tank. Well 26 will provide supplemental water when the amount of recycled water is not sufficient to meet demand.

The non-potable water system is designed so that any surplus recycled/non-potable water could be recharged into the percolation basins at BCVWD's groundwater recharge facility to recharge the BSU. However, additional treatment and monitoring would likely be required and recharge with recycled water is not planned for several years. Figure 6-13 shows the location of the anticipated connection to the City of Beaumont Wastewater Treatment Plant. The City is in the process of repurposing two secondary clarifiers to serve as recycled water storage. A pump

station is planned to be constructed by BCVWD adjacent to the City of Beaumont Wastewater Treatment Plant site to boost recycled water into the 2800 Zone non-potable system.

Figure 6-13 – BCVWD Non-potable Water Transmission System



6.6.5 Recycled Water Beneficial Uses

> ***CWC 10633***
>
> *(Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*
>
> ***CWC 10633***
>
> *(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 pursuant to this subdivision.*

BCVWD's non-potable (recycled) water system principal beneficial use is landscape irrigation of parks, playgrounds, common areas, street and highway medians and athletic complexes in residential, commercial and industrial areas. As new developments construct, their landscape facilities are connected (separate metered connections) to the non-potable water system. Once recycled water is available, additional existing facilities (schools, parks, cemeteries, etc.) will be added to the system. There is one concrete ready-mix supplier that is close to the non-potable

water system. BCVWD has an agreement with the company to connect to the non-potable water system when recycled water is available.

Table 6-18 (DWR Table 6-4) shows the projected demands of recycled water for various beneficial uses from year 2020 to 2045. The quantities were determined from month-to-month analysis of recycled water supply and demand for each of the 5-year periods.

Surplus recycled water is available during the winter and early spring months. Tukwet Canyon Golf Course is in the 2600 Pressure Zone and could be served recycled water as soon as the connection with the City of Beaumont is completed. The Tukwet Canyon golf course can be served directly from the City of Beaumont connection through BCVWD's system. Oak Valley Golf Course is in the 2800 Non-potable Water Zone and recycled water from the City of Beaumont would have to be boosted into the 2800 Zone to serve this golf course. Alternatively, untreated SPW could be introduced into the 2800 Zone without boosting. Both Tukwet Canyon and Oak Valley Golf Courses are overlying parties in the Beaumont Basin Adjudication and have their own wells. BCVWD has existing piping and turnouts on the non-potable water system to supply both of the golf courses.

The golf courses could take recycled water during the winter and early spring and "rest" their wells. As their water demand increases during the late spring, summer, and early fall, they would use their own wells for supply. The recycled water would then be used to supply BCVWD's routine landscape demands. The benefit to BCVWD is Watermaster considers the recycled water provided to an overlying party as forbearance water and credit it to BCVWD's storage account.

Table 6-18 (DWR Table 6-4) – Current and Projected Recycled Water Direct Beneficial Uses within Service Area – City of Beaumont Recycled Water

DWR 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 Beaumont
Name of Supplier Operating the Recycled Water Distribution System:	Beaumont-Cherry Valley Water District
Supplemental Water Added in 2020 (volume) Include units	None, BCVWD did not distribute recycled water in 2020
Source of 2020 Supplemental Water	NA

Beneficial Use Type *Insert additional rows if needed.*	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) *(AF)*[1]	General Description of 2020 Uses	Level of Treatment	2020[1]	2025[1]	2030[1]	2035[1]	2040[1]	2045[1] (opt)
Agricultural irrigation			None							
Landscape irrigation (excl golf courses)			None	Advanced	0	1,751	1,939	2,224	2,358	2,424
Golf course irrigation			None	Advanced	0	471	471	471	471	471
Commercial use	Concrete mixing plant	11	None	Advanced	0	11	11	11	11	11
Industrial use			None							
Geothermal and other energy production			None							
Seawater intrusion barrier			None							
Recreational impoundment			None							
Wetlands or wildlife habitat			None							
Groundwater recharge (IPR)	Potential future project, not accounted for in this table	530	None	Advanced						
Reservoir water augmentation (IPR)			None							
Direct potable reuse			None							
Other (Description Required)			None							
				Total:	0	2,233	2,421	2,706	2,840	2,906
				2020 Internal Reuse	0					

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

NOTES: The City of Beaumont is required to discharge 1.8 mgd (2,016 AFY) to maintain habitat in Cooper's Creek. Per DWR, this is not considered a beneficial use.

BCVWD has determined there may be surplus non-potable water available from late fall to early spring to be stored locally, used as a recharge source of supply, or to supply Tukwet Canyon and Oak Valley Golf Courses to meet wintertime demands. This would amount to a maximum of 470 AFY in a wet year. Even after supplying the golf courses during the fall through the spring months, there is recycled water available which could be advance treated and recharged in BCVWD's groundwater recharge facility as indirect potable water reuse with the appropriate permits. This surplus would occur in the winter months, during which time landscape irrigation demands are lower throughout the District, see Table 6-18.

6.6.6 Planned vs. Actual Use of Recycled Water

> ***CWC 10633***
>
> *(e) (Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

BCVWD last updated its UWMP in 2015. In 2015, it was envisioned the recycled water connection to YVWD would be completed by sometime in 2015 with a projected use of approximately 1,500 AF. This did not occur because YVWD could not provide recycled water outside of their service area per the conditions in their Change Petition, and so no recycled water could be delivered. This planned connection is not moving forward, as discussed

previously in this section. Table 6-19 shows the estimated recycled water use projections of 2015 versus the actual recycled water usage in 2020.

Table 6-19 (DWR Table 6-5) – 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

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. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.

Beneficial Use Type	2015 Projection for 2020 [1]	2020 Actual Use [1]
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	1,500	0
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	1,500	0

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

NOTE: City of Beaumont is required to discharged 1.8 mgd (2,000 AFY) to maintain habitat in Cooper's Creek. Per DWR instructions, this is not considered a beneficial use.

6.6.7 Actions to Encourage and Optimize Future Recycled Water Use

CWC 10633

(Describe the) actions, including financial incentives, 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.

CWC 10633

(Provide a) plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Existing Requirements

BCVWD's Rules and Regulations §4-1.1 require each applicant for water service to prepare a written application including the legal description of the parcel, water use, e.g., domestic,

irrigation, commercial, etc., and the meter size desired. Commercial and industrial applicants will need to submit the volumes of water needed. For commercial and industrial applicants, the District then determines the feasibility for recycled water. The District applies this to schools, also.

BCVWD would prepare a “Plan of Service” to document the facilities that are needed to be constructed. The Plan of Service will state if connection to the non-potable water system is required and what non-potable water facilities are needed to be installed with the development. Generally, recycled water facilities would be required if there were significant landscaped areas such as parks, schools or common areas and the project was in the recycled water service area. If annexation to the District is required, the Plan of Service is also submitted to LAFCO.

If the water service is approved by the Board of Directors, prior to construction, the developer and the District enter into a “Water Main Extension and Facilities Construction Agreement.” This is a very detailed description of the infrastructure needed and the costs, reimbursements, and other conditions. If connection to the non-potable water system is required, it is formalized in the Main Extension Agreement. It is through this process that the current system has been constructed and landscaped areas connected. This will continue for future development in the District.

The City of Beaumont Municipal Code, Title 17, §17.06.030 D. b. 11 and §17.06.030 D. c. 5 , have specific requirements to use non-potable and recycled water for landscaping when available. Riverside County Ordinance 859.2 has similar requirements.

Methods to Expand Use of Recycled Water

BCVWD is fortunate to have a non-potable water system already installed with about 300 landscape connections, operating with non-potable well water supplemented with potable water. This system is ready to convert to recycled water when available. There is no need to “market” the use of recycled water. Future developments within the City of Beaumont will be connecting to the existing system based on the Plan of Service for the specific project. These will be new connections for new landscaped areas. This would provide an increased demand of about 640 AF demand by 2045. Existing ordinances and Rules and Regulations already require this.

Table 6-20 contains a list of existing facilities which could potentially be connected to the BCVWD non-potable water system. Many of these are in close proximity to the existing non-potable water pipelines but BCVWD does not want to connect them until more non-potable (recycled) water is available. Currently, the demand for non-potable water exceeds the supply and requires potable water make-up to the system.

Table 6-20 – Potential Future Service Connections to Non-potable Water System

Facility	Estimated Amount of Recycled Water, AFY	Estimated Year of Connection
2400 Pressure Zone		
Nicklaus Park Conversion to Turfed Athletic Fields	24.6	2025
2800 Pressure Zone		
Rangle Park	2	2035
Viele St. Park (7th and Viele St.)	0.6	2035
California and 7th Park	0.8	2035
Beaumont Sports Park	51	2030
San Gorgonio Middle School & Beaumont Adult School (1591 Cherry)	24.4	2040
Noble Creek Park	57.3	2035
Mountain View Cemetery (Summit Cemetery District), 7.1 acres	17.7	2040
Brookside Elementary School	23.8	2035
Beaumont Park and Rec 650 Oak Valley Pkwy; Oak Valley Parkway Landscaping	4.3	2045
Solera HOA, 1615 Fairway Dr, Community Center and Pool	0.6	2030
City of Beaumont Street Landscaping, Cougar Way @ Palm Ave @ 1605 Palm Ct.	0.2	2030
City of Beaumont Street Landscaping, Cougar Way @ Quail Summit	0.4	2030
City of Beaumont Street Landscaping, Brookside Ave @ Howard Way	0.6	2030
Beaumont Sports Park	0.7	2030
City of Beaumont, 10th St at Orange, Park, W of Pool, Stewart Park	3.9	2035
City of Beaumont, on Orange N/o 10th St Stewart Park	8.2	2035
Rcoe-Beaumont Head Start, 600 E 8th St.	3.5	2035
Palm Elementary School Ath Field; Orange Ave, S/o 8th St	4.3	2035
SCE Maraschino Sub Sta, 4th & Viele St	2.6	2040
Sundance Community Assn, 1317 Mistletoe Dr, Walkway Easement	0.2	2045
City of Beaumont, 70 Seneca Springs Pkwy, Park at Potrero & Senseca Sprgs Pkwy	0.1	2045
M&R Beaumont Partners, Oak Valley Towne Center, 1400 Beaumont Ave.	1.5	2045
Sundance Community Association, 1107 Periwinkle Ln, Walkway Park	2.6	2045
3 Rings Ranch Entrance, end of 8th St.	10	2030
Rancho Ready Mix	11	2025
Highland Academy Charter School	5	2035
Total Existing Non-Potable Demand to be Converted to Recycled Water	261.9	

(1) Source: BCVWD Non-Potable Master Plan (in progress)

BCVWD could provide Tukwet Canyon and Oak Valley Golf Courses with recycled water during times of the year when recycled water is available. They are already included in the non-potable water demand forecast tables (Tables 6-20 and 6-21).

Table 6-21 (DWR Table 6-6) lists several projects to expand future recycled water use. Although the current non-potable water demand is about 1,647 AFY and will increase when the facilities in Table 6-20 are connected, additional non-potable water supply will be needed to meet peak demands. Furthermore, non-potable water demand will increase gradually as major developments continue to be constructed within BCVWD's service area, however the recycled water demands will decrease with increased use of water efficient landscaping requirements. These developments are residential, for the most part, and will include park and school facilities, common areas, club houses, etc. which will be connected to the non-potable water system. These will occur and BCVWD will need to increase the supply of non-potable water. Refer to Section 3 for further discussion of proposed developments in BCVWD's SOI.

The projects listed in Table 6-22 will increase the supply by about 3,300 AFY, initially. The amount from the City of Beaumont and YVWD connections will likely increase over time as more homes are connected to the wastewater system.

6.7 Desalinated Water Opportunities

> ***CWC 10631***
>
> *(h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.*

As stated above, there are opportunities to participate in desalting projects particularly for groundwater in other regions and exchange the water for State Project Water. However, installing desalting facilities within the Beaumont Basin would not be very practical since the existing groundwater water quality is excellent. The TDS is only about 250-275 mg/L. Generally, to make desalting practical, the TDS should be in the range of 1500 mg/L or greater. It is probable that desalting will be required on the recycled water available from the City of Beaumont to conform to the maximum benefit commitments. But, this would only be partial demineralization to reduce the TDS to the maximum benefit objective of 330 mg/L.

Table 6-21 (DWR Table 6-6) – Methods to Expand Future Recycled Water Use

DWR 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			
Construction of City of Beaumont Connection	Construct pumping station at City Treatment Plant.	2022	1,346
Edgar Canyon Nitrate Wells	Install extraction wells at mouth of Edgar Canyon to extract high nitrate groundwater for non-potable water system.	2030	300
San Timoteo Groundwater Capture	Install extraction wells in San Timoteo Canyon to extract wastewater which percolates from 1.8 mgd habitat mitigation flow.	2030	1,000
		Total	2,646
**Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: These projects will increase the non-potable water supply which allows BCVWD to serve more non-potable water.			

6.8 Exchanges or Transfers

> ***CWC10631***
>
> *(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

6.8.1 Transfers from South Mesa Water Company

BCVWD had an agreement with South Mesa Water Company (SMWC) to transfer unused rights from SMWC to BCVWD's groundwater storage account in the Beaumont Basin. The transfers first began in 2007 and totaled 13,000 AF. During the period of 1994 through 2014, the Beaumont Basin appropriators had access to a temporary surplus, established through the Adjudication, to create storage space in the basin for conjunctive use and water banking. During this time, SMWC had excess water in storage and did not need that water to meet its normal demands. They transferred this water to BCVWD to allow BCVWD to build up its own storage account. After 2014, the temporary surplus is no longer available. BCVWD has since stopped making transfers with SMWC.

6.8.2 Participation in Other Agency Water Supply Projects

BCVWD could participate in a joint project with another Southern California water agency. These projects could include groundwater treatment and desalination. But at this point, BCVWD believes this participation should be by SGPWA to increase their water supply.

Many of the groundwater basins in Southern California are impacted by excessive nitrates, high total dissolved solids, and, in some cases, volatile organic chemicals (VOCs) and perchlorate. There are a number of agencies constructing or planning to construct desalters and VOC, nitrate and perchlorate removal facilities in the area including the Santa Ana Watershed Project Authority, the Chino Basin Desalting Authority, Eastern Municipal Water District and others. BCVWD sees transfers and exchanges as very viable solution to providing long term water supplies.

6.8.3 Emergency Interties

BCVWD already has a 12-in diameter emergency intertie with the City of Banning at Highland Springs Ave. and Sun Lakes Blvd. (First St.) since the 1990s. The City of Banning's water system pressure zones closely match BCVWD's and mutual exchanges are possible.

6.9 Future Water Projects

> ***CWC 10631***
>
> *(g) …The urban water supplier shall include a detailed description of expected future projects and programs…that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*

Table 6-22 (DWR Table 6-7) presents a list of potential future projects which BCVWD could construct to increase the available water supply.

Plans for the Beaumont MDP Line 16 Project, a joint project with the Riverside County Flood Control and Water Conservation District, have been approved and construction is expected to begin late summer or early fall 2021.

These projects, when all are implemented, would yield about 3,900 AFY initially and about 6,100 AFY by year 2040. The large growth is due to increases in recycled water from the City of Beaumont as a result of development and population growth in the City of Beaumont.

6.10 Summary of Existing and Planned Sources of Water

> ***CWC 10631***
>
> *(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision 10631(a).*
>
> *(4) (Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*

Table 6-23 (DWR Table 6-8) summarizes BCVWD's water supply for the year 2020. Table 6-24, (DWR Table 6-9), summarizes BCVWD's projected water supply for the years 2025, 2030, 2035, 2040, and 2045.

Table 6-22 (DWR Table 6-7) – Expected Future Water Supply Projects or Programs

DWR 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, Supplier Name*				
Add additional rows as needed						
Beaumont MDP Line 16	Yes	RCFC & WCD	Const. of SD to divert water into BCVWD Recharge Facility.	2022	All Year Types	185
Connection to City of Beaumont for Recycled Water	Yes	City of Beaumont	Install storage tank, booster pumping station and interconnecting pipelines.	2022	All Year Types	1,346
Advanced Treated Recycled Water	Yes	City of Beaumont	Construct Advanced Treatment Facility and Brine Line.	2030-2035	All Year Types	300-660 (530 avg)
Misc. Urban Runoff Capture	Yes	City of Beaumont	Various recharge basin enhancements.	2030	All Year Types	200-545
Lower Edgar Canyon Non-Potable Groundwater	No		Install extraction wells for high nitrate groundwater for non-potable water system.	2030	All Year Types	300
San Timoteo GW Extraction	Yes	City of Beaumont	Install series of wells to recapture percolated wastewater used for	2030	All Year Types	400-800 (600 avg)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Yield from the City of Beaumont Recycled Water Connection will increase to 2,915 AFY by 2045 due to increases in wastewater flows over time. Expected increase in water supply for Advanced Treated Wastewater is based on 80% recovery in the membrane						

Table 6-23 (DWR Table 6-8) – BCVWD Water Supplies – Actual Year 2020

DWR Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
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		Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Groundwater (not desalinated)	Little San Gorgonio (Edgar Canyon)	1,279	Drinking Water	2,200
Groundwater (not desalinated)	Beaumont Basin	1,962	Drinking Water	
Purchased or Imported Water	SGPWA Purchased Replacement Water	11,005	Drinking Water	
Transfers	To Banked Storage	-427		
	Total	13,819		2,200
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES: (1) BCVWD typically receives reallocated unused Overlying Party Rights, forbearance water for supplying potable or non-potable water to Overlying Parties, and return flow credits for importing SPW, groundwater, or recycled water per the Beaumont Basin Watermaster. This varies from year to year. (2) Does not include the 340 AF pumped for the City of Banning.				

Table 6-24 (DWR Table 6-9) – BCVWD Water Supplies – Projected

DWR 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											
Groundwater (not desalinated)	Little San Gorgonio Canyon	2,070	2,200	2,070	2,200	2,070	2,200	2,070	2,200	2,070	2,200
Groundwater (not desalinated)	Beaumont Basin (Reallocated unused overlier rights)	1,322		1,286		1,165		1,099		1,099	
Groundwater (not desalinated)	Beaumont Basin total forbearance water	471		547		1,387		1,542		1,542	
Groundwater (not desalinated)	Return flows	280		514		868		922		1,155	
Stormwater Use	Beaumont MDP Line 16	185		185		185		185		185	
Stormwater Use	Misc. Stormwater	0		350		350		350		350	
Purchased or Imported Water	From SGPWA for Replenishment of Beaumont Basin (Potable water)	8,868		9,300		9,966		10,717		11,281	
Recycled Water	From City of Beaumont for Landscaping	2,017		2,381		2,892		2,955		2,915	
Purchased or Imported Water	To supplement Non-Potable Water Supply (Purchased for Replenishment)	276		246		0		0		0	
Groundwater (not desalinated)	Non-Potable Groundwater at Mouth of Edgar Canyon	0		0		300		300		300	
Groundwater (not desalinated)	Non-Potable Groundwater along San Timoteo Creek	0		0		600		600		600	
Purchased or Imported Water	From SGPWA for Banking	1,500		1,200		1,000		1,000		1,000	
Purchased or Imported Water	Additional Imported Water Available from SGPWA	1,572		396		2,389		2,994		3,769	
Total		18,561	2,200	18,475	2,200	23,172	2,200	24,734	2,200	26,266	2,200
Total Imported Water Required		10,644		10,746		10,966		11,717		12,281	
Total Imported Water Available to BCVWD from SGPWA (See Table 7-8)		12,216		11,142		13,355		14,711		16,050	
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*											
NOTES:											

6.11 Climate Change Impacts to Supply

Climate change, according to the USEPA[32], refers to any significant changes in temperature, precipitation or other climate patterns lasting for extended periods of time. Throughout history, locations on the earth have experienced climate change – a notable example is the ice age, which blanketed much of the Midwestern US with glaciers. These changes are continuing to occur whether impacted by mans' activities or purely a natural phenomenon. There is some evidence the earth's average temperature is rising ever so slowly and this is theorized by some experts to continue for several centuries. Places have experienced changes in rainfall, reduced snowfall, changes from snow to rain, warming of the oceans, melting of icecaps and resulting sea level rises. Even small changes in temperature can result in measurable changes in climate

[32] http://www.epa.gov/climatechange/basics/ accessed 4/2/2013

and weather. The cause is theorized to be due to increases in concentration of "greenhouse gases[33]" in the atmosphere.

A DWR White Paper published in 2008[34] on the climate change strategies for California water stated the following:

> *Climate change is already affecting California's water resources. Bold steps must be taken to reduce greenhouse gas emissions. However, even if emissions ended today, the accumulation of existing greenhouse gases will continue to impact climate for years to come. Warmer temperatures, altered patterns of precipitation and runoff, and rising sea levels are increasingly compromising the ability to effectively manage water supplies, floods and other natural resources. Adapting California's water management systems in response to climate change presents one of the most significant challenges of this century.*
>
> *While the exact conditions of future climate change remain uncertain, there is no doubt about the changes that have already happened. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. The average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage (one acre-foot of water is enough for one to two families for one year). During the same period, sea level rose seven inches along California's coast. California's temperature has risen 10F, mostly at night and during the winter, with higher elevations experiencing the highest increase. A disturbing pattern has also emerged in flood patterns; peak natural flows have increased on many of the state's rivers during the last 50 years. At the other extreme, many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record.*

The Report further goes on to state:

> *What we know:*
>
> - *Historic hydrologic patterns can no longer be solely relied upon to forecast the water future;*
> - *Precipitation and runoff patterns are changing, increasing the uncertainty for water supply and quality, flood management, and ecosystem functions;*
> - *Significant and ongoing investments must be made in monitoring, researching, and understanding the connection between a changing climate, water resources and the environment;*

[33] Water vapor, carbon dioxide, methane, nitrous oxide and other gases which reflect light and infrared radiation back to the earth's surface.

[34] State of California Department of Water Resources, (2008). Managing an Uncertain Future, Climate Change Adaptation Strategies for California Water, October.

- *Extreme climatic events will become more frequent, necessitating improvements in flood protection, drought preparedness and emergency response;*

These changes will bring challenges to water supply agencies like BCVWD and impact BCVWD in both its imported water supply and its local supply – snow fall and rainfall runoff.

6.12 Climate Change Impacts on BCVWD Imported Water Supply

The DWR 2019 Delivery Capability Report took climate change into consideration, but there are some specific issues that should be mentioned.

- Reduction in Sierra snow pack
- Rising sea levels on levee integrity

6.12.1 Reduction in Sierra Snowpack

The Sierra snowpack is California's best and least expensive reservoir. The precipitation falls as snow in the winter in the mountains building up a large "on the surface" water reservoir. During the spring and early summer, this begins to melt gradually, trickling water into surface reservoirs. These reservoirs are able to capture the water and move it downstream to users maintaining flow releases that do not threaten levees or cause flooding. The peak of the runoff period is late spring or early summer.

In 1989, the USEPA issued a report on what would happen to global temperatures with a two-fold increase in the carbon dioxide concentration in the atmosphere. The report indicated a 1.5 to 4.5°C (2.7 to 8.1°F) increase over the next 100 years if fossil fuel usage continued at the rate at the time. DWR made some very approximate estimates of what that would do to the snowpack based on a rise of 1500 ft elevation in the historical winter snowline. Assuming no change in the amount of precipitation, DWR estimated that spring snowmelt runoff would decrease by 1/3, with more occurring in the northern Sierra versus the southern Sierra where the mountains are higher in elevation and capture more high elevation snow.[35] These are certainly dire predictions; whether this will actually occur is uncertain.

DWR did plot the April to July runoff in both the Sacramento River and San Joaquin River, reflecting the northern and southern Sierras respectively as a percent of the water year runoff. The April to July runoff would represent the snowmelt runoff. These are shown in Figure 6-14 and Figure 6-15.

[35] Department of Water Resources, State of California, Roos, Maury, Chief Hydrologist. (2012). Snowpack and Snowmelt Changes, January 3.

Figure 6-14 – Sacramento River Runoff (1906-2010), April-July

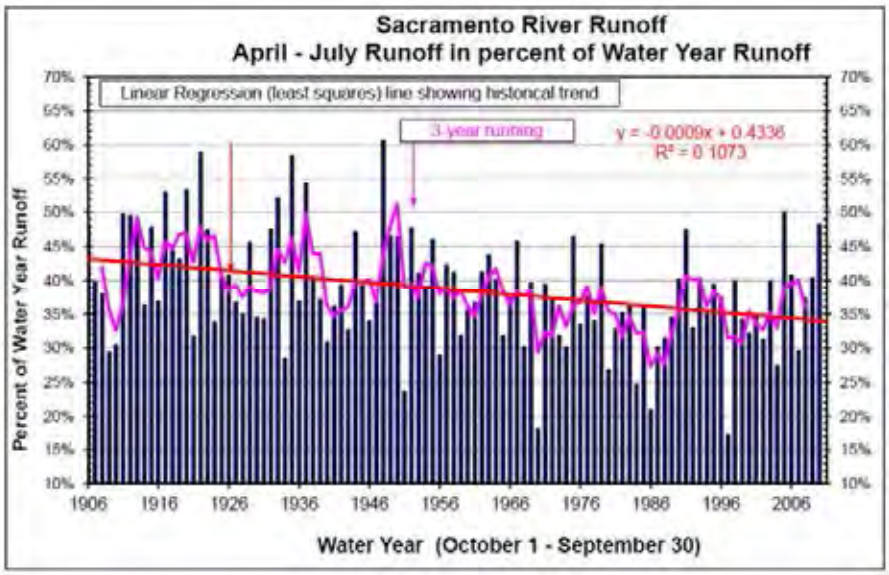
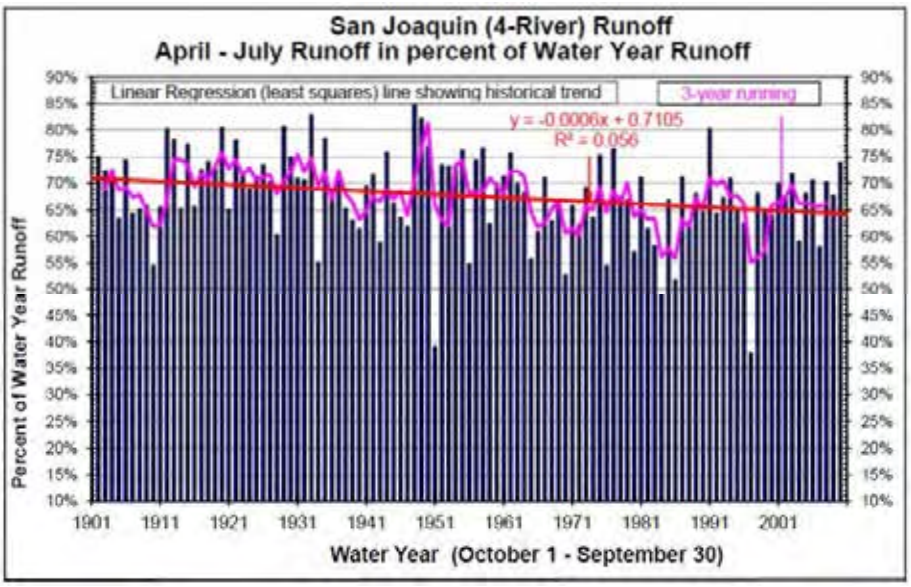


Figure 6-15 – San Joaquin River Runoff (1901-2010), April-July



There is a downward trend evident with a steeper slope in the Sacramento River validating at least the general hypothesis determined in 1989.[36] From DWR's data, there appears to be solid evidence that at least some changes are occurring. Maybe these are cyclical; maybe more long term; maybe very long term.

[36] Ibid

With global warming, things will be different. Precipitation will be principally in the form of rain. This will runoff rapidly, quickly filling the surface reservoirs DWR counts on to store water to supply users over the summer and fall until the next “season.” The rainfall runoff occurs rapidly and in large quantities bringing with it significant sediment which will eventually silt up the storage reservoirs. The reservoirs will fill up and spill, releasing the high flows into the rivers leading to the Delta, straining levees which are already unstable. This water, which previously was captured as snowfall, will be lost to the ocean. The SWP does not have the storage or conveyance facility capacity to manage all of these high flows and put them to beneficial use or convey the flows to groundwater recharge facilities for storage.

There are many legislators and members of the public opposed to surface storage. This is unfortunate because without additional surface storage, the impacts of climate change will be felt by all of the water users in the State and the Delta ecosystem.

It is likely there will be less Table A water and more Article 21 water available as the reservoirs are quickly filled with rainfall runoff. If this Article 21 can be conveyed to the Pass Area, BCVWD is in a good position to recharge this water with the expanded recharge facility. Perhaps this is sufficient to overcome the reduction in Table A water.

6.12.2 Sea Level Impact on Levees

Climate change reportedly will result in sea level rise. The higher sea level will result in greater forces on the existing levees in the Delta. The islands that comprise the Delta are now well below sea level. Levees have broken in the past due to a wide variety of reasons. They are threatened by spring floods and seismic activity. Failure of a levee is akin to a dam break. Water from the Delta rivers will rush in to flood the islands. This brings about a corresponding inflow of saline water from San Francisco Bay into the Delta contaminating the imported water flowing through the Delta with salt degrading its quality and making it potentially unusable for extended periods of time.

The levees in the Delta are weak. They were constructed over a century ago with the construction and compaction techniques of the time. They are certainly not up to today’s standards and are vulnerable. Higher sea levels and higher spring flows due to the lack of snowpack will exacerbate the problems with the levees. Seismic activity during saturated condition could be devastating.

Because BCVWD can rely on the Beaumont Basin for groundwater, the District should be able to weather any short- to medium-term interruptions of imported water supply. But it will be important to make sure the storage account has adequate water.

6.13 Climate Change Impacts on BCVWD's Local Supply

Locally climate change will have similar effects.

- Reduced snow pack and higher runoff
- Increased wildfire risk
- Water demand increase

Warmer temperatures from climate change will reduce the local snowpack, but not to the degree described above for the Sierra Nevada mountains. The local snowpack is not a major supply source for BCVWD, though it does provide some gradual recharge, particularly the wells in Edgar Canyon. Higher rates of runoff can be expected with more intense storms. This could bring down substantial amounts of sediment. At this point, BCVWD is in a good position to deal with the sediment having constructed additional desilting basins at the mouth of Edgar Canyon to supplement the numerous percolation ponds and basins along the length of Edgar Canyon.

Warmer temperatures will bring an increased risk of wildfires in the watershed. Although some may consider wildfires an ecological benefit, there are some devastating consequences to water suppliers such as BCVWD. A burned watershed will result in enormous amounts of sediment moved down into the canyon streams, which could cause flooding in the canyon and flood out some of the District's well pumps. Wildfires recently burned a majority of the watershed in the near BCWWD, but to date, BCVWD has been able to minimize the impacts. The District has installed a water tank at the 3900 foot elevation between Edgar and Wallace Canyons and a fire protection piping loop in the vicinity of the "middle houses" to respond to brush fires in the canyon.

Water demand is expected to increase due to hotter days and nights. Irrigation water needs will increase due to potential reduction in precipitation and warmer days.

6.14 Mitigation

One of the best ways of mitigating climate change is by reducing energy consumption, particularly energy produced by fossil fuels and becoming more energy efficient. Although consumers have no control over the use of energy and fossil fuels by BCVWD directly, consumers can assist BCVWD by reducing water consumption. Supplying water to customers in the District's service area takes energy to pump the water out of the ground and pressurize it for use. The bulk of the District's supply is from the Beaumont Basin where the groundwater table is 500 or more feet below the ground surface. To boost the pressure for consumers' use requires another 200 ft or so of pumping. A substantial amount of energy is expended pumping this water. Saving water at home means saving energy; saving energy reduces greenhouse gas emissions. District energy use is discussed further in Section 6.15.

6.15 Energy Use

CWC 10631.2 (a)

In addition to the requirements of Section 10621, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies

(2) An estimate of the amount of energy to convey water supplies to the water treatment plants or distribution systems

(3) An estimate of the amount of energy used to treat water supplies

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate

As a new requirement for 2020 UWMPs, water suppliers are now required to report energy usage and related information associated with water supply extraction/diversion, distribution, conveyance, and/or treatment which can be used to calculate energy intensity. Energy intensity is defined as the amount of energy utilized in kilowatt – hours (kWh) per unit volume of water moved (i.e. extraction, conveyance). For previous UWMP updates, energy reporting was optional. DWR Table O-1C (Table 6-25 below) was used to calculate the District's energy intensity for 2020.

Table 6-25 (DWR Table 0-1C) – BCVWD Energy Intensity

Urban Water Supplier: Beaumont Cherry Valley Water District

Table O-1C: Recommended Energy Reporting - Multiple Water Delivery Products

Enter Start Date for Reporting Period: 1/1/2020
End Date: 12/31/2020

☐ Is upstream embedded in the values reported?

		Urban Water Supplier Operational Control					
		Water Management Process				Non-Consequential Hydropower (if applicable)	
		Extract and Divert	Place into Storage	Distribution	Total Utility	Hydropower	Net Utility
Water Volume Units	Total Volume of Water Entering Process (volume units)	14182.22		2129.89	N/A		N/A
AF	Retail Potable Deliveries (%)	75%		100%			
	Retail Non-Potable Deliveries (%)	12%					
	Agricultural Deliveries (%)	0.4%					
	Environmental Deliveries (%)	0%					
	Other (%)	13%					
	Total Percentage (must equal 100%)	100%	0%	100%	N/A	0%	N/A
	Energy Consumed (kWh)	13782417		828496	14621813		14621913
	Energy Intensity (kWh/AF)	971.8	-	389.1	N/A	#DIV/0!	N/A

Water Delivery Type		Production Volume (volume units defined above)	Total Utility (kWh/volume)	Net Utility (kWh/volume)
Retail Potable Deliveries		12790	875.6	875.6
Retail Non-Potable Deliveries		1645	971.8	971.8
Agricultural Deliveries		50	971.8	971.8
Environmental Deliveries		0	0.0	0.0
Other		1801	971.8	971.8
All Water Delivery Types		16290.99	898.0	898.0

Quantity of Self-Generated Renewable Energy
0 kWh

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

Data Quality Narrative:
Data gathered from metered District pump stations, wells, and metered energy charges. Deliveries derived from actual 2020 meter data.

As discussed previously in Section 3, the District's potable system consists of 11 pressure zones, 24 wells, and 14 reservoirs. Said reservoirs provide gravity supply to their respective pressure zones. The system also consists of booster pumps to pump water from lower to higher pressure zones, if necessary.

The District's preferred supply source is located in Edgar Canyon; these wells are inexpensive to operate, however they are not able to meet average day demands. As such, the bulk of the District's supply is obtained from the Beaumont Basin, which results in higher energy use due to the high powered pumps used to extract water from the deep aquifers.

Table 6-26 below provides a breakdown of the District's energy use in 2020:

Table 6-26 – BCVWD 2020 Energy Use Information

	Volume Produced/Conveyed, AF	Cost of Electricity	kWh Totals	Energy Intensity (kWh/AF)
Edgar Canyon Wells	1278.60	$ 76,493.37	604876	473.08
Beaumont Basin Wells[1]	12903.63	$ 1,889,333.29	13177541	1021.23
Booster Pumps	2129.89	$ 118,000.70	839496	394.15

(1) Based on total metered production data. Approximately 340 AF was pumped on behalf of City of Banning by the District. The District was reimbursed for the pumping costs.

The District has the potential for energy savings through various projects in the near future. As discussed previously in this Section, the District will be introducing recycled water from the City of Beaumont into its non-potable system. With the recycled water system on-line, the need to supplement the non-potable system with potable water from the District's Well 26 will decrease drastically. For reference, from the District's supply projections in Table 6-24, an average of about 270 AFY of potable water will be required to supplement the non-potable system during peak demand periods (summer months) until at least 2045. In comparison, in 2020 Well 26 produced 1,376 AF into the non-potable system.

The subsequent energy savings that will occur are due to the fact that required pump head to feed the non-potable system will decrease, once the District constructs its planned recycled water booster station in the vicinity of the City of Beaumont's waste water treatment plant. Table 6-27 quantifies and summarizes the projected energy use savings described herein.

Table 6-27 – Potential Energy Use Savings

	Production (AF)	Energy Cost	Cost/AF	Energy Use (kWh)	Required Pump Head, ft	Energy Intensity (kWh/AF)
Current Conditions (2020)						
Well 26	1,377	$ 153,769.09	$ 111.69	1,348,371	600	979.41
Energy Intensity for Non-Potable Water (2020)						**979.41**
Future Conditions						
Well 26	270	$ 30,157.05	$ 111.69	3,468	600	12.84
Recycled Water Booster (2045)[1]	2,017	$ 131,105.00	$ 65.00	819,406	265	406.25
Total Projected Energy Intensity for Non-Potable Water (2045) [(2)]						**394.20**

(1) Based on an average cost of $65/AF and $0.16/kWh for the District's existing booster pump operation.
(2) Energy intensity is a weighted average based on the percentage of each well/pump in relation to overall pumping and the energy used to deliver the produced quantity of water.

Further energy savings could occur in the future with advanced screening and direct distribution of SPW into the non-potable system.

Section 7 – Water Supply Reliability and Drought Risk Assessment

CWC 10631

(b)(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

CWC 10635

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) 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 five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) 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.

7.1. Constraints on Water Sources

A detailed description of BCVWD's current and future water sources are described previously in Section 6. Table 7-1, below shows a summary of BCVWD's current and future water sources and identifies the factor(s) that affect the specific source's consistency of supply. Climate affects the amount of water available from most of the sources; there are some legal constraints on the Beaumont Groundwater Basin Source due to the Adjudication and contractual and environmental constraints on the imported SPW. BCVWD's sources are not affected by water quality per se, although a case could be made for the imported SPW supply and Delta water quality impacts on pumping.

Table 7-1 – Factors Resulting in Inconsistency of Supply

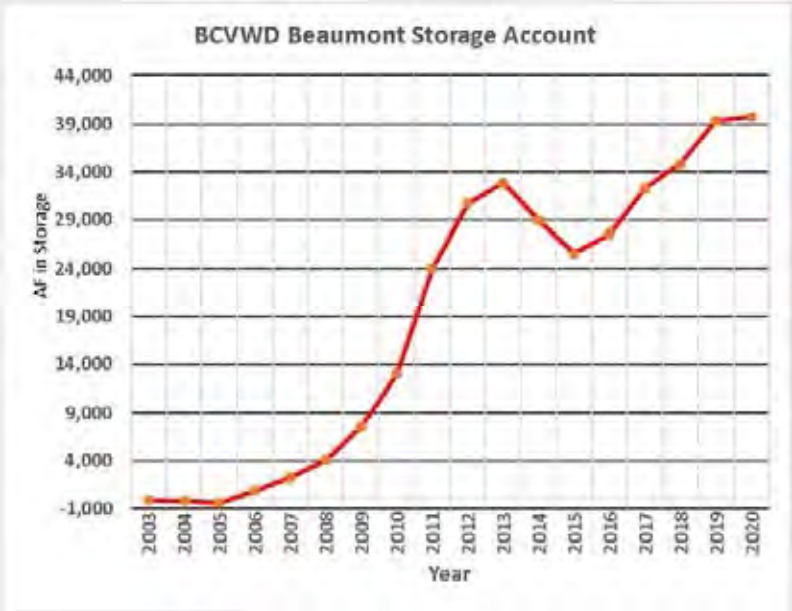
Water Supply Source	Cause of Inconsistent Supply				Additional Information
	Legal	Environmental	Water Quality	Climate	
Edgar Canyon Groundwater				X	
Beaumont Basin Groundwater Appropriator Rights	X				(1)
Beaumont Basin Groundwater Unused Overlier Rights	X			X	(2)
Imported State Project Water	X	X		X	(3)
Recycled Water				X	(4)
Stormwater Capture and Percolation				X	
Urban Runoff Capture and Percolation				X	
Nitrate-contaminated Groundwater from mouth of Edgar Canyon				X	

(1) After 2014, the Appropriator production rights are zero per Adjudication
(2) Reallocation of Overlier pumping rights are variable. Estimated to drop to 200 AFY by 2045.
(3) SWP reliability discussed in text. 10% of Table A is available 100% of the time; adjusted per draft allocation agreement.
(4) Recycled water is not subject to any significant variations; but some drought period reductions in flow are experienced – maybe 10%. Domestic water restrictions typically have the greatest impact on outdoor water use.

In DWR's Guidebook for Urban Water Suppliers Preparing 2020 UWMP Updates, there are several standard tables that are to be completed. BCVWD believes these standard tables, if presented in the text of this Section, will be very confusing to the readers. It would be difficult for the reader to follow how the information on water supplies for various durations of dry years was developed. In lieu of the standard tables, BCVWD presents its methodology using similar tables, but not identical tables, which better explain the water source reliability and demonstrate the assessment of impacts of a single dry year and multiple dry years on BCVWD's water supply. DWR's standard tables were completed using the information from BCVWD's tables in this section and are presented along with the other DWR standard tables in Appendix D.

As background for the discussion on water supply reliability, BCVWD enjoys the benefits of a groundwater basin (Beaumont Basin) with very large storage capacity. BCVWD and its neighboring agencies in the San Gorgonio Pass Area can take advantage of this by banking imported water during wet years for use during extended droughts. Complementing the large storage capacity is the fact that percolation and recharge occur at relatively high rates. It is very easy to "bank" water in the Beaumont Basin. It is retained in the Basin due to well-managed groundwater levels, and the ample storage capacity. Figure 7-1 shows the amount of water BCVWD has accumulated in its storage account since 2003. Imported water began to be spread in 2006.

Figure 7-1 – BCVWD's Beaumont Basin Storage Account



With the ability to bank water and the large "underground" reservoir, BCVWD and its neighboring agencies can withstand extended periods of drought without severe restrictions.

At the end of 2020, for example, BCVWD had 39,750 AF in storage[1]. This amount in BCVWD's storage account has seen an increase of about 14,182 AF since 2015. BCVWD can store up to 80,000 AF in the Beaumont Basin managed by the Watermaster.

In Section 6, Table 6-24 (DWR Table 6-9), a quantity of BCVWD-purchased imported water was identified as "From SGPWA for Banking." This varied from 1,000 AFY to 1,500 AFY and is over and above the amount of imported water needed to meet demands. The purpose of this "banking water" is to build up BCVWD's Beaumont Basin Groundwater Storage Account to be used as reserve for drought periods when adequate (as projected in Table 6-24) SPW is not available.

[1] Beaumont Basin Watermaster (2021). 2020 Annual Report Draft, Alda, Inc., Thomas Harder and Company, April

SGPWA is to supply the imported water requested in Table 6-24 (DWR Table 6-9) to meet BCVWD's needs plus the anticipated SPW for banking. If, in any year(s), either of these quantities cannot be supplied for any reason, the accumulated shortfall is expected to be delivered to BCVWD by SGPWA as soon as possible once imported water is available. In this way, BCVWD will be able to keep adequate water in storage for current (2020) needs and accommodate growth in BCVWD's service area. Looking at the quantities in Table 6-24, BCVWD anticipates banking around 28,500 AF of water over the next 25 years, which would bring BCVWD's storage account to about 68,250 AF. This is over 3 years of SPW requirements to meet demand (see Section 4 Table 4-4 (DWR Submittal Table 4-2) for 2045 projected demand). In other words, BCVWD would be able to meet year 2045 demands with no SPW for over 3.5 years. The following subsections quantify the variability in BCVWD's water sources.

7.2. Regional Supply Reliability

> ***CWC 10620***
>
> *(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

BCVWD has a very diverse water portfolio that allows it to maintain a reliable water supply to its current and future customers. The existing sources include:

- Unadjudicated groundwater from Little San Gorgonio Creek (Edgar Canyon)
- Adjudicated groundwater from the Beaumont Basin
- Stormwater capture in Edgar Canyon (Little San Gorgonio Creek) and recharge in percolation ponds in Upper and Middle Canyon and at the Canyon mouth in recently added desilting and recharge basins
- Non-potable groundwater supplying the existing non-potable water system
- Imported State Project Water from SGPWA
- AVEK-Nickel Water leased through SGPWA
- Yuba Accord water purchased through SGPWA

Potential Future Sources described in this 2020 UWMP include:

- Recycled water from the City of Beaumont for landscape irrigation and with advanced treatment for indirect potable reuse (groundwater recharge)
- Improved recharge of captured urban runoff from Sundance development
- Non-potable groundwater from the mouth of Edgar Canyon
- Non-potable groundwater from San Timoteo Creek
- Stormwater capture and recharge via the MDP Line 16 Storm Drain (cost shared with RCFC&WCD, SAWPA grant and preparing for construction)
- Stormwater capture from Noble and Marshall Creek
- Additional urban runoff capture and recharge from developing areas

These potential sources have been described in Section 6 of this 2020 UWMP.

BCVWD's water management strategy since its formation has always been to maximize local water resources including local groundwater and capture and percolate surface flows in Little San Gorgonio Creek for subsequent extraction in the District's Edgar Canyon wells. With the development that occurred starting about year 2000, BCVWD began installation of a non-potable water system with the intent of using recycled water from the City of Beaumont. Currently (2020), the water demand in the non-potable system is about 12% of the total water demand. This demand is being partially met by non-potable groundwater. When recycled water becomes available, the District's non-potable demand will be primarily met with recycled water. Any additional non-potable demands will be met with non-potable groundwater.

As discussed above, BCVWD has an 80,000 AF storage account in the Beaumont Basin to purchase and store imported water when available in ample supply during wet years. In addition to SGPWA's Table A amount, there are two other sources of imported water over and that are available:

- Article 21 Water
- Turn-back Pool Water

7.2.1. SWP Article 21 Water

Article 21 Water refers to a provision in each State Water Contractor's Contract with DWR that allows each Contractor, like SGPWA, to take advantage of excess water flowing through the Delta. The individual Contractor must take the water on short notice and store it within the Contractor's facilities and the delivery of the water cannot interfere with the delivery of Table A allocations, SWP deliveries or operations. DWR has estimated that 57% of the time, the amount of Article 21 Water available will be 20,000 AF[2]. Comparatively, in 2017 it was estimated that the 20,000 AF of Article 21 water would be available 84% of the time. For the period 2009 through 2018, average amount of Article 21 Water available was approximately 73,900 AF with a median amount of 2,500 AF.

There is generally a significant "competition" for Article 21 Water. Generally, there are greater demands from the Contractors than there is Article 21 Water available. When this happens, the available Article 21 Water is proportioned according to the Table A allocations of the interested Contractors. Based on the Contractors who typically took delivery of Article 21 Water from 2001 through 2018, the SGPWA would only get about 0.5% of the available Article 21 Water, i.e., about 12.5 AF of the median amount. During very wet years, it could be over 3,000 AF; 75% of the time, the SGPWA would receive less than 1,900 AFY of Article 21 Water based on a statistical analysis performed by BCVWD. Nevertheless, whenever Article 21 Water is available,

[2] State Water Project Final Delivery Capability Report 2019 (2021). Department of Water Resources, (June)

SGPWA should request as much as can be accommodated in the EBX conveyance system (64 cfs or 3,800 AF/month).

7.2.2. Turn-back Pool Water

Turn-back Pool Water is Table A water that other Contractors requested that they are unable to take delivery of. This is offered for sale at a set price.

For the period 2009 through 2018, the median and average Turn-back Pool amounts were 9,500 and 18,200 AF, respectively. This source could yield 48 AF assuming the same competition as for Article 21 Water. SGPWA should be looking at purchasing Turn-back Pool water whenever it is available.

7.2.3. Other Sources

SGPWA should be purchasing water from Valley District on a year-by-year or longer basis. Valley District does not currently need all of their Table A and it is believed that some of this is available for purchase. BCVWD may be interested in purchasing some of this for BCVWD's storage account; SGPWA should purchase any that is available. This water would be purchased by BCVWD, YVWD or the City of Banning for storage in their respective Beaumont Basin storage accounts.

7.2.4. Financing of Water Resource Needs

BCVWD has the financing in place and is collecting fees from each new residential unit or "equivalent dwelling unit" for commercial/industrial/institutional facility for new infrastructure, (transmission mains, wells, storage, treatment, local water resource development, and non-potable water facilities). BCVWD's commodity rate structure includes funding for purchase of imported SPW.

BCVWD's 2016 Potable Water Master Plan Update identifies the infrastructure needs and funding requirements to replace existing facilities which have reached the end of their useful life and construct new facilities to meet anticipated growth in the service area.

7.3. Water Service Reliability – Year Type Characterization

CWC 10631

(c)(1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

A. an average water year,

B. a single dry water year,

C. multiple dry water years.

The water supply quantities from BCVWD's sources for the average year were presented in Section 6. This Section will quantify the availability during various drought scenarios over the planning period:

- Normal Year – the average range of years that most closely represent the average water supply
- Single dry year -- the lowest water supply available to BCVWD, a worst case condition
- Five consecutive dry year drought – the lowest average available water supply over a 5-year period
- Six Consecutive dry years -- the lowest average available water supply over a 6-year period

7.4. Water Service Reliability Assessment

7.4.1. Groundwater

Beaumont Basin

The Beaumont Basin is managed by the Beaumont Basin Watermaster. A discussion of the principles of the Adjudication was presented previously in Section 6.

In any given year, BCVWD can pump out its stored (banked) water. The storage is replenished, at least partially, every year by forbearance water, reallocated unused Overlying Party pumping rights, return flows, and imported water, when available. The amount of imported water that can be recharged in any year depends on DWR's SWP allocation. This varies from year to year. See Figures 6-2, 6-3, and 6-4, presented previously.

Table 6-9, presented previously, showed the amount Watermaster credits to BCVWD's Beaumont Basin Storage Account annually. The amount of unused Overlying Party rights is based on a 5-year moving average and could decrease slightly during drought periods as the Overlying Parties use more well water to compensate for the lack of rainfall. The forbearance water and return flows will decrease during dry periods as users reduce water consumption.

Table 7-2 shows the estimated amount of water credited to BCVWD by Watermaster for a single or multiple dry year analysis. For the dry year analysis, it was estimated that there would be a 15% conservation effect; in other words, for dry year analysis, only 85% of average annual forbearance, reallocated Overlying Party rights, etc. would be available. In Table 7-2, the 15% reduction factor is also applied to the recycled forbearance water to account for a potential reduction in treated wastewater due to water conservation effects. This is believed to be conservative.

Return flow credits, included in Table 7-2 below, were estimated previously in Section 6. The 15% reduction factor as described above was not applied to return flow credits; return flows are dependent upon the conservation factors in effect during the year for which credits are given. See Section 6 for further discussion regarding return flows.

Table 7-2 – Summary of BCVWD's Beaumont Storage Credits

Item	2025	2030	2035	2040	2045
Total Return Flow Credits, Reallocated Unused Overlier Rights, and Forbearance Water from Table 6-10, AFY	2,073	2,346	2,820	2,963	3,196
Expected Ground Water Available for Dry Year Analysis, AFY	1,804	2,065	2,483	2,583	2,816

Edgar Canyon

Groundwater from Edgar Canyon is affected to some degree by climate change as can be seen from the statistics in Table 6-8, presented previously. The average annual extraction from Edgar Canyon is 2,073 AFY based on records from 1983-2020. During that period of time, the minimum extracted was 1,117 AFY, which occurred in 1991. This can be considered the "Single Dry Year Water Available." The 2-year, 3-year, 4-year, 5-year and 6-year moving averages for the extractions from 1983 -20 were determined and are presented in Table 7-3 along with the Base Period for moving averages.

Table 7-3 – Groundwater Available from Edgar Canyon for Single and Multiple Dry Year Analysis

Drought Condition (Base Years)	Average Available over the Drought Period, AFY
Single Dry Year (1991)	1,117
2 Consecutive Dry Years (1990 – 91)	1,173
3 Consecutive Dry Years (1989 – 91)	1,230
4 Consecutive Dry Years (1989 – 92)	1,267
5 Consecutive Dry Years (1988 – 92)	1,305
6 Consecutive Dry Years (1987 – 92)	1,367

7.4.2. Imported Water

The amount of imported water available from the SGPWA via the State Water Project is very climate dependent. A spreadsheet was developed using the 2019 DWR Delivery Capability Report simulation data (1922 to 2003) for SGPWA to develop an estimate of the delivery capability for the single dry year and multiple dry year reliability analysis. The 2-, 3-, 4-, 5-and 6-year moving averages of annual estimated delivery allocations were determined for the period 1922-2003. A summary of the Table A delivery percentages is shown in Table 7-4.

Table 7-4 – SGPWA SWP Delivery Capability as Percent of Table A

(2019 DWR SWP Delivery Capability Report Table 5-6)

Year	Long-term Average		Single Dry Year (1977)		Dry Periods							
					2-Year Drought (1976-1977)		4-Year Drought (1931-1934)		6-Year Drought (1987-1992)		6-Year Drought (1929-1934)	
2017 Report	2,571	62%	336	8%	1,206	29%	1,397	34%	1,203	29%	1,408	34%
2019 Report	2,414	58%	288	7%	1,311	32%	1,228	30%	1,058	26%	1,158	28%

The percentages in Table 7-4 were compared to actual SWP delivery allocations for the period 1922 to 2020. The allocations found in BCVWD's analysis of available data are indicated below:

Minimum year	5% (2015, 2020)
Minimum 2 consecutive years	12.5% (2014 - 2015)
Minimum 3 consecutive years	18% (1990 – 1992)
Minimum 4 consecutive years	26% (1988 – 1991)
Minimum 5 consecutive years	24% (1988 – 1992)
Minimum 6 consecutive years	25% (1987 – 1992)

As can be seen, the actual minimum single dry year and minimum 2 consecutive dry years are less than those from the 2019 DWR SWP Delivery Capability Report. For the reliability analysis in this 2020 UWMP, the allocation percentages in Table 7-5 will be used.

Table 7-5 – SGPWA SWP Delivery Capability as Percent of Table A

(Used for Reliability Analysis)

Dry Year(s)	Single	2-Year	3-Year	4-Year	5-Year	6-Year
Table A Annual Delivery Average Over the Drought Period, %	5	12.5	18	26	24	25

For the reliability analysis, the percentages in Table 7-5 will be applied to BCVWD's estimated available imported water supplies for any particular dry year period(see Table 6-24 for BCVWD's projected imported water requirements). The results of the reliability analysis are shown herein in Tables 7-11 through 7-16.

Section 6 described the role of the SGPWA in supplying SWP to BCVWD. By Resolution 2015-05, the SGPWA Board of Directors established an obligation to meet the future water supply needs of the region, including BCVWD, and recognizes the current allotment of Table A

capacity is fully subscribed to current users. BCVWD can rely on the SGPWA to secure and deliver the imported water needed to meet BCVWD's current and future demands as set forth in this 2020 UWMP and subsequent UWMP updates in concert with DWR's Delivery Capability Reports.

7.4.3. Recycled Water

Recycled water is consistently available; although during droughts, consumers are more aware of water conservation and reduce their indoor water consumption somewhat. They are more aware of the need to do only full loads of laundry, full loads for the dishwasher etc. Agencies, including the City of Beaumont, have observed a reduction in wastewater flows during the current drought.

BCVWD is counting on one source of recycled water: the City of Beaumont. For a single dry year, an estimate of 90% of the normal, average recycled water will be available. As the drought becomes more pervasive, the amount of recycled water is estimated to reduce further to 85% of normal. Table 7-6 provides an estimate of the available recycled water during extended dry periods. The amount of recycled water under normal conditions is derived from Tables 6-15 and 6-18, presented previously.

Table 7-6 – Estimated Recycled Water Available During Extended Dry Periods

		Year				
		2025	2030	2035	2040	2045
City of Beaumont Recycled Water Available (AFY)	% Available	2017	2381	2892	2955	2915
Single Dry Year	90%	1820	2150	2610	2660	2630
2-Years	85%	1720	2030	2460	2520	2480
3-Years	85%	1720	2030	2460	2520	2480
4-Years	85%	1720	2030	2460	2520	2480
5-Years	85%	1720	2030	2460	2520	2480
6-Years	85%	1720	2030	2460	2520	2480

7.4.4. Storm Water and Urban Runoff Reliability (Potential Projects)

Storm water and Urban Runoff quantities are very dependent on rainfall. Review of the rainfall record at Beaumont for the period 1888 – 2006 resulted in the data shown in Table 7-7. To determine the multiple dry year rainfall as a percent of the average rainfall, the 2-, 3-, 4-, 5- and 6-year moving averages of the annual rainfall was determined. Table 7-7 also lists the storm water capture projects and their estimated annual "new water" captured from Table 6-13, presented previously.

Table 7-7 – Ratio of Dry Period Precipitation to Average Precipitation at Beaumont and Estimated New Water from Storm Water Capture Projects

Dry Year (s)	Normal	Single	2 - Year	3 - Year	4 - Year	5 - Year	6 - Year
% of Annual Average		36%	45%	52%	52%	61%	63%
Facility	Estimated Average Annual Stormwater Capture, AFY						
MDP Line 16	185	66	83	96	96	113	117
Misc. Urban Runoff Basins	350	126	158	182	182	213	222
Total Stormwater Capture	535	192	241	279	278	325	339

The data from Tables 7-2 through 7-7 will be used in the Drought Risk Assessment to follow.

7.5. Water Service Reliability – Supply and Demand Comparison

CWC 10635

(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier.

Section 6 presented the Water Supply Assessment for an average or "normal" year (Table 6-24). For the normal year, there is more than enough supply to meet the demand and BCVWD can bank water in the Beaumont Basin, which will be needed during dry periods. A summary of the Water Supply Assessment for an average year is indicated below in Table 7-8:

Table 7-8 – Water Supply Assessment for Normal Year Conditions

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Drought Proofing, AFY	1,500	1,200	1,000	1,000	1,000
Supplemental Water to Non-Potable System, AFY	276	246	-	-	-
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	**16,929**	**17,873**	**18,869**	**19,846**	**20,660**
LOCAL SUPPLY					
Potable Groundwater					
Edgar Canyon, AFY	2,073	2,073	2,073	2,073	2,073
Beaumont Basin Groundwater Available					
Overlier Potable Forebearance, AFY	-	67	264	384	384
Overlier Non-Potable Forebearance, AFY	471	480	1,123	1,158	1,158
Reallocation of Unused Overlier Rights, AFY	1,322	1,286	1,165	1,099	1,099
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	185	535	535	535	535
Non-Potable Groundwater					
Mouth of Edgar Canyon, AFY	-	-	300	300	300
San Timoteo Creek, AFY	-	-	600	600	600
Recycled Water Available, AFY	2,017	2,381	2,892	2,955	2,915
Subtotal Local Supply, AFY	**6,348**	**7,335**	**9,820**	**10,027**	**10,220**
BCVWD's Share of Imported Supply					
Table A Allocation (58%), AFY	7,877	7,184	6,653	5,860	5,248
Yuba Accord, AFY	182	166	154	135	121
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	2,368	2,159	2,000	1,761	1,577
Sites Reservoir, AFY	-	-	3,037	5,623	7,911
Additional SWP Transfers/Exchanges, AFY	455	415	385	339	303
Subtotal Imported Supply (Normal Conditions), AFY	**12,216**	**11,142**	**13,355**	**14,711**	**16,050**
Total Supply, AFY	**18,565**	**18,478**	**23,175**	**24,738**	**26,270**
From (To) Banked Beaumont Basin Storage, AF	(1,636)	(605)	(4,306)	(4,892)	(5,610)

As noted in Table 7-8 above, demand totals include BCVWD's need include banking imported water to ground water storage for drought proofing. Any additional supply available after all demands have been satisfied would be recharged and added to BCVWD's storage account. However, it should be noted that the supplies as indicated in Table 6-12 previously are an estimate based on an average range of supplies available from various sources (i.e. urban runoff storm water capture, MDP Line 16) and are subject to increase or decrease dependent upon local climate conditions. Supplies also include return flow credits from the Beaumont Basin Watermaster; please see Section 6 for further discussion on return flow credits. BCVWD believes the supply estimates presented in Table 7-8 and Table 6-12 are reasonable estimates.

7.6. Drought Risk Assessment

A conservative approach was taken when considering the amount of imported supply BCVWD could expect in future conditions. BCVWD has included in its anticipated imported water supplies the anticipated Table A Allocation available (using percentages described previously in Table 7-5), as well as additional potential sources of imported water identified in SGPWA's 2020 UWMP (June 2021). In any given year, when the demand for imported water exceeds the available supply, it is reasonable to assume that the imported water will be allocated by SGPWA in proportion to each member agency's fraction of the total imported water demand without banking. A summary of the expected allocation percentages for each agency is indicated in Table 7-9, below. Percentages as indicated were determined based on a series of White Papers (White Papers No. 1 through 7) that evaluated water supply and demand for the major retailers in the SGPWA service area.

Table 7-9 – Member Agency's Percent of Available Imported Water When Demand Exceed Supply

Agency	Year				
	2025	2030	2035	2040	2045
City of Banning	0.0%	0.0%	0.0%	5.6%	5.6%
YVWD/Calimesa	7.0%	7.3%	7.9%	8.1%	8.5%
BCVWD	78.5%	71.6%	66.3%	58.4%	52.3%
Other Member Agencies	14.5%	21.1%	25.8%	27.9%	33.6%
Total	100%	100%	100%	100%	100%

In the future, other SGPWA water retailers will require greater supplies of imported water to meet growing demands. As a result, the allocation percentages described above will continue to change. BCVWD expects to update these percentages after the adoption of the 2020 UWMP updates for the other member agencies in the SGPWA service area.

For the Single Dry Year, potable and non-potable water demands in Table 7-11 did not reflect any conservation. For 2 consecutive dry years through 6 consecutive dry years, demand reductions for potable and non-potable water were included. The estimated demand reductions (as percent) that could be seen during various multiple dry years are indicated below in Table 7-10.

Table 7-10 – Estimated Demand Reductions During Various Dry Year Periods

Dry Year Analysis Period	Demand Reductions
Single Dry Year	0%
2 Consecutive Dry Years	10%
3 Consecutive Dry Years	20%
4 Consecutive Dry Years	25%
5 Consecutive Dry Years	30%
6 Consecutive Dry Years	40%

This is a reasonable assumption since there would be adequate time to implement the potential water use restrictions identified in Section 8 for a dry period lasting longer than a single year.

Tables 7-11 through 7-16 present the water service reliability assessment for:

- Single Dry Year (Table 7-11)
- 2 Consecutive Dry Years (Table 7-12)
- 3 Consecutive Dry Years (Table 7-13)
- 4 Consecutive Dry Years (Table 7-14)
- 5 Consecutive Dry Years (Table 7-15)
- 6 Consecutive Dry Years (Table 7-16)

Table 7-11 – Water Service Reliability Assessment for Single Dry Year

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	**15,429**	**16,673**	**18,097**	**19,124**	**19,988**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,117	1,117	1,117	1,117	1,117
Beaumont Basin Groundwater Available					
Overlier Potable Forebearance, AFY	-	67	264	384	384
Overlier Non-Potable Forebearance, AFY	471	480	523	558	558
Reallocation of Unused Overlier Rights, AFY	1,322	1,286	1,165	1,099	1,099
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	66	192	192	192	192
Recycled Water Available, AFY	1,820	2,150	2,610	2,660	2,630
Subtotal Local Supply, AFY	**5,076**	**5,805**	**6,739**	**6,932**	**7,135**
BCVWD's Share of Imported Supply					
Table A Allocation (5%), AFY	679	619	573	505	452
Yuba Accord, AFY	16	14	13	12	10
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	204	186	172	152	136
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	39	36	33	29	26
Subtotal Imported Supply, AFY	**2,273**	**2,073**	**2,205**	**2,262**	**2,657**
Total Supply, AFY	**7,349**	**7,878**	**8,944**	**9,195**	**9,792**
From Banked Beaumont Basin Storage, AF	8,080	8,795	9,153	9,929	10,196

Table 7-12 – Water Service Reliability Assessment for 2 Consecutive Dry Years

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	15,429	16,673	18,097	19,124	19,988
Total Water Demand (10% Demand Reduction), AFY	**13,886**	**15,006**	**16,287**	**17,212**	**17,989**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,173	1,173	1,173	1,173	1,173
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	60	237	346	346
Overlier Non-Potable Forebearance, AFY	424	432	471	502	502
Reallocation of Unused Overlier Rights, AFY	1,190	1,157	1,049	989	989
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	241	241	241	241	241
Recycled Water, AFY	1,720	2,030	2,460	2,520	2,480
Subtotal Local Supply , AFY	**5,028**	**5,607**	**6,499**	**6,693**	**6,886**
BCVWD's Share of Imported Supply					
Table A Allocation (12.5%), AFY	1,698	1,548	1,434	1,263	1,131
Yuba Accord, AFY	39	36	33	29	26
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	510	465	431	380	340
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	98	90	83	73	65
Subtotal Imported Supply, AFY	**3,680**	**3,356**	**3,394**	**3,309**	**3,594**
Total Supply, AFY	**8,708**	**8,963**	**9,893**	**10,002**	**10,481**
From Banked Beaumont Basin Storage, AF	5,178	6,042	6,395	7,209	7,508
Total Withdrawn from Storage during Dry Period, AF	10,357	12,084	12,790	14,419	15,017

Table 7-13 – Water Service Reliability Assessment for 3 Consecutive Dry Years

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	15,429	16,673	18,097	19,124	19,988
Total Water Demand (20% Demand Reduction), AFY	**12,343**	**13,338**	**14,478**	**15,299**	**15,990**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,230	1,230	1,230	1,230	1,230
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	54	211	308	308
Overlier Non-Potable Forebearance, AFY	377	384	418	446	446
Reallocation of Unused Overlier Rights, AFY	1,058	1,028	932	880	880
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	241	241	241	241	241
Recycled Water, AFY	1,720	2,030	2,460	2,520	2,480
Subtotal Local Supply , AFY	**4,906**	**5,481**	**6,361**	**6,546**	**6,739**
BCVWD's Share of Imported Supply					
Table A Allocation (18%), AFY	2,444	2,230	2,065	1,819	1,629
Yuba Accord, AFY	57	52	48	42	38
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	735	670	621	547	490
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	141	129	119	105	94
Subtotal Imported Supply, AFY	**4,712**	**4,297**	**4,265**	**4,077**	**4,282**
Total Supply, AFY	**9,617**	**9,778**	**10,626**	**10,623**	**11,021**
From Banked Beaumont Basin Storage, AF	2,726	3,560	3,852	4,676	4,969
Total Withdrawn from Storage during Dry Period, AF	8,178	10,680	11,555	14,029	14,908

Table 7-14 – Water Service Reliability Assessment for 4 Consecutive Dry Years

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	15,429	16,673	18,097	19,124	19,988
Total Water Demand (25% Demand Reduction), AFY	**11,572**	**12,505**	**13,573**	**14,343**	**14,991**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,267	1,267	1,267	1,267	1,267
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	50	198	288	288
Overlier Non-Potable Forebearance, AFY	353	360	392	418	418
Reallocation of Unused Overlier Rights, AFY	992	964	874	825	825
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	241	241	241	241	241
Recycled Water, AFY	1,720	2,030	2,460	2,520	2,480
Subtotal Local Supply , AFY	**4,853**	**5,426**	**6,300**	**6,481**	**6,674**
BCVWD's Share of Imported Supply					
Table A Allocation (26%), AFY	3,531	3,221	2,982	2,627	2,352
Yuba Accord, AFY	82	74	69	61	54
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	1,061	968	896	790	707
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	204	186	172	152	136
Subtotal Imported Supply, AFY	**6,212**	**5,666**	**5,533**	**5,193**	**5,282**
Total Supply, AFY	**11,066**	**11,093**	**11,833**	**11,674**	**11,956**
From Banked Beaumont Basin Storage, AF	506	1,412	1,740	2,669	3,035
Total Withdrawn from Storage during Dry Period, AF	2,025	5,648	6,960	10,675	12,140

Table 7-15 – Water Service Reliability Assessment for 5 Consecutive Dry Years

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	15,429	16,673	18,097	19,124	19,988
Total Water Demand (30% Demand Reduction), AFY	**10,800**	**11,671**	**12,668**	**13,387**	**13,992**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,305	1,305	1,305	1,305	1,305
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	47	185	269	269
Overlier Non-Potable Forebearance, AFY	330	336	366	390	390
Reallocation of Unused Overlier Rights, AFY	926	900	816	770	770
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	241	241	241	241	241
Recycled Water, AFY	1,720	2,030	2,460	2,520	2,480
Subtotal Local Supply , AFY	**4,801**	**5,373**	**6,241**	**6,417**	**6,610**
BCVWD's Share of Imported Supply					
Table A Allocation (24%), AFY	3,259	2,973	2,753	2,425	2,171
Yuba Accord, AFY	75	69	64	56	50
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	980	894	827	729	653
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	188	172	159	140	126
Subtotal Imported Supply, AFY	**5,837**	**5,324**	**5,216**	**4,914**	**5,032**
Total Supply, AFY	**10,639**	**10,697**	**11,456**	**11,331**	**11,642**
From Banked Beaumont Basin Storage, AF	162	974	1,212	2,056	2,350
Total Withdrawn from Storage during Dry Period, AF	808	4,871	6,058	10,279	11,748

Table 7-16 – Water Service Reliability Assessment for 6 Consecutive Dry Years

	YEAR				
	2025	**2030**	**2035**	**2040**	**2045**
DEMAND					
Potable Water Demand, AFY	13,196	14,252	15,391	16,285	17,082
Supplemental Water to Non-Potable System, AFY	276	246	228	278	328
Non-Potable Water Demand, AFY	1,957	2,175	2,478	2,561	2,578
Total Water Demand, AFY	15,429	16,673	18,097	19,124	19,988
Total Water Demand (40% Demand Reduction), AFY	**9,257**	**10,004**	**10,858**	**11,474**	**11,993**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,367	1,367	1,367	1,367	1,367
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	40	158	231	231
Overlier Non-Potable Forebearance, AFY	283	288	314	335	335
Reallocation of Unused Overlier Rights, AFY	793	771	699	660	660
Return Flow Credits, AFY	280	514	868	922	1,155
Storm Water, AFY	241	241	241	241	241
Recycled Water, AFY	1,720	2,030	2,460	2,520	2,480
Subtotal Local Supply , AFY	**4,684**	**5,251**	**6,107**	**6,275**	**6,468**
BCVWD's Share of Imported Supply					
Table A Allocation (25%), AFY	3,395	3,097	2,867	2,526	2,262
Yuba Accord, AFY	79	72	66	58	52
AVEK Nickel, AFY	1,335	1,217	1,127	993	889
SGPWA Carryover Water, AFY	1,021	931	862	759	680
Sites Reservoir, AFY	-	-	286	571	1,143
Additional SWP Transfers/Exchanges, AFY	196	179	166	146	131
Subtotal Imported Supply, AFY	**6,025**	**5,495**	**5,374**	**5,054**	**5,157**
Total Supply, AFY	**10,709**	**10,747**	**11,482**	**11,329**	**11,625**
From Banked Beaumont Basin Storage, AF	(1,452)	(743)	(623)	146	368
Total Withdrawn from Storage during Dry Period, AF	(8,709)	(4,458)	(3,740)	875	2,208

In all of the assessments, water must be extracted from BCVWD's Beaumont Basin Storage Account. Tables 7-11 through 7-16 clearly indicate the importance of maintaining substantial amounts of water in the storage account. Based on the assessment, BCVWD should keep about 22,000 AF in the storage account in order to maintain a 5-year supply as mandated by BCVWD Resolution 2015-05, if conservation measures are in effect. The total amount required to be withdrawn from banked storage will increase if conservation measures and restrictions described in Section 8 cannot be achieved. If no conservation occurs (worst case, conservative), BCVWD

will need to maintain about 52,000 AF in its storage account to meet the demands during a 5 consecutive year dry period.

A summary of the available supplies expected during a 5-year drought, beginning in 2020 are summarized in Table 7-17 below (in lieu of DWR submittal Table 7-5):

Table 7-17 – 5-Year Drought Risk Assessment

	YEAR				
	2021	**2022**	**2023**	**2024**	**2025**
DEMAND					
Potable Water Demand, AFY	12,412	12,604	12,787	12,952	13,472
Non-Potable Water Demand, AFY	1,642	1,664	1,686	1,696	1,957
Total Water Demand, AFY	14,054	14,268	14,473	14,648	15,429
Demand Reduction (%)	0%	10%	20%	25%	30%
Total Water Demand (Including Reductions), AFY	**14,054**	**12,841**	**11,578**	**10,986**	**10,800**
LOCAL SUPPLY					
Groundwater					
Edgar Canyon, AFY	1,117	1,173	1,232	1,267	1,305
Beaumont Basin Available, AFY					
Overlier Potable Forebearance, AFY	-	-	-	-	-
Overlier Non-Potable Forebearance, AFY	-	-	-	-	330
Reallocation of Unused Overlier Rights, AFY	2,025	1,826	1,827	2,017	926
Return Flow Credits, AFY	235	246	258	269	280
Storm Water, AFY	-	185	185	185	241
Recycled Water, AFY		1,520	1,580	1,650	1,720
Subtotal Local Supply , AFY	**3,377**	**4,950**	**5,082**	**5,388**	**4,802**
BCVWD's Share of Imported Supply					
Table A Allocation (%), AFY	5%	12.5%	18%	26%	24%
Table A Allocation , AFY	679	1,698	2,444	3,531	3,259
Yuba Accord, AFY	16	39	57	82	75
AVEK Nickel, AFY	1,335	1,335	1,335	1,335	1,335
SGPWA Carryover Water, AFY	204	510	735	1,061	980
Sites Reservoir, AFY	-	-	-	-	-
Additional SWP Transfers/Exchanges, AFY	39	98	141	204	188
Subtotal Imported Supply, AFY	**2,273**	**3,680**	**4,712**	**6,212**	**5,837**
Total Supply, AFY	**5,650**	**8,630**	**9,794**	**11,600**	**10,639**
From Banked Beaumont Basin Storage, AF	8,404	4,212	1,785	(614)	161
Total Withdrawn from Storage during Dry Period, AF	8,404	12,616	14,401	13,786	13,947

The results of the Drought Risk Assessment above assume that the demand reduction and conservation measures described in Section 8 are achieved.

Section 8 – Water Shortage Contingency Plan

Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. Good planning and preparation can help maintain reliable supplies and reduce the impacts of supply interruptions.

This section describes BCVWD's water shortage contingency planning. The planning includes staged (six stages) responses to a water shortage, such as a drought, that occurs over a period of time, as well catastrophic supply interruptions, which occur suddenly.

The District's Water Shortage Contingency Plan (WSCP, see Appendix E) can be created separately from the UWMP and amended as needed without amending the corresponding UWMP. However, the most current version of the WSCP must be included as part of the UWMP when the UWMP is submitted to DWR.

8.1 Water Supply Reliability Analysis

> ***CWC 10632***
>
> *(a) (1) The analysis of water supply reliability conducted pursuant to Section 10635.*

Previously discussed in Sections 6 and 7, the District currently obtains its potable and non-potable water supply from multiple sources: Edgar Canyon, groundwater from the Beaumont Basin, and purchased imported water from the SWP and other water transfers/exchanges with other retailers/agencies. In the future, the District plans to utilize recycled water from the City of Beaumont to meet most of the landscape irrigation demands, which are currently served with potable water. The District also intends to supplement its supply with captured and recharged stormwater, through various projects within the District as well as a joint project with RCFC&WCD (MDP Line 16). On average, imported water makes up 70 - 80% of the District's total water supply, with the rest coming from Edgar Canyon, and reallocated unused overlier rights from the adjudicated Beaumont Basin.

Due to the variability of the SWP's available supplies, the District typically recharges imported water to its storage account in the Beaumont Basin during periods when supply exceeds the demands in the SGPWA service area. BCVWD's storage account allows storage of up to 80,000 AF. At the end of 2020, BCVWD had 39,750 AF in its storage account.

An analysis of the reliability of the above-described sources during normal (average) and extended dry periods was presented in depth in Section 7. The results of the water supply reliability analysis demonstrate that the District can sufficiently meet the projected demands in the case of the drought or other emergency.

8.2 Annual Water Supply and Demand Assessment Procedures

Each water supplier is now required to submit an Annual Water Supply and Demand Assessment (Annual Assessment) starting July 1, 2022.

> ***CWC 10632***
>
> *(a)(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*
>
> *(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.*
>
> *(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:*
>
> *(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.*
>
> *(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*
>
> *(iii) Existing infrastructure capabilities and plausible constraints.*
>
> *(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.*
>
> *(v) A description and quantification of each source of water supply.*
>
> *CWC 10632.1.*
>
> *An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.*

8.2.1 Decision-Making Process

The Annual Assessment that is to be submitted to DWR every year would be brought to the BCVWD Board of Directors (the Board) prior to submittal for DWR consideration. BCVWD will assess each year's imported and local supplies as well as potable and non-potable demands based on its final SWP allocation, additional available imported water exchanges or transfers through SGPWA, climate, and local groundwater conditions, as determined by the Beaumont Basin Watermaster.

Based on the foregoing, BCVWD will assess the water shortage level for that year and determine the most appropriate response action(s) to encourage water conservation among its customers. BCVWD will ensure that the Annual Assessment will be submitted to the Board to allow adequate time for review and comment prior to the required DWR submittal date of July 1st (or 14 days after notification of final SWP Allocation, whichever is later), for the assessment.

8.2.2 Data Inputs and Methodologies

As required by the Water Code, the District will evaluate its available water supply reliability assuming current conditions for that year, as well as a single dry year. The data inputs and methodologies which will be used to formulate a recommendation regarding the District's supply reliability and any necessary response actions are included below:

- Water Supply: The District will analyze groundwater production records and final SWP allocations available for the current year, and compare projected supplies to historical averages.
- Unconstrained Demands: The District will analyze consumption data for the current year, and based on supply assess whether any or which shortage response action(s) are appropriate to encourage water conservation. For the upcoming year the District will utilize data from the 2020 UWMP update, as well as any newly available data regarding water consumption and population growth to project anticipated unconstrained demands.
- Single Dry Year Demands: Similarly, the District will compare current year consumption data with historical demand data for a single dry year, and project demands for the upcoming year.
- Infrastructure: The District will assess the current operating conditions of its wells and booster pumps, and recharge facilities and determine whether any maintenance will be scheduled or would likely be scheduled for the upcoming year. The District would coordinate any findings from analysis for available supplies with potential shortfalls in groundwater production if maintenance is required.

8.3 Six Standard Water Shortage Stages

> ***CWC 10632 (a)(3)***
>
> *(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.*
>
> *(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.*

The District proposes a six-stage plan of action in the event of an extended drought condition or loss of supply. The action levels for each stage are presented in the subsections that follow, and the water supply reduction stages are provided in Table 8-1. These stages could be implemented as a result of BCVWD water shortages, including reduction in imported water allocation and associated water placed previously in storage by BCVWD (i.e. conjunctive use

drought and emergency water supply), or mandatory water conservation targets by the Governor's office.

Table 8-1 (DWR Submittal Table 8-1) – Water Shortage Contingency Plan Levels

DWR Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (*Narrative description*)
1	Up to 10%	Up to 10% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes voluntary public demand reduction of 10%, and community outreach encouraging conservation.
2	Up to 20%	Up to 20% reduction in normal, "long term" water supply (including conjuntive use water in storage); includes any actions from Shortage Level 1. Response actions include mandatory 10% reduction - Increased public outreach, restaurants serve water upon request, lodging must offer opt out of linen services
3	Up to 30%	Up to 30% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 and 2. Response actions include mandatory 20% reduction - limit landscape irrigation to certain number of days per week
4	Up to 40%	Up to 40% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1, 2 and 3. Response actions include mandatory 25% reduction - limit irrigation of lawns to once a week except for lawns and turf irrigate with recycled water, restrict water use for decorative water features, limit filling of pools only to cases where appropriate cover is in place
5	Up to 50%	Up to 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 4. Response actions include mandatory 30% reduction - prohibit filling of swimming pools, washing of automobiles only limited to facilities using recycled water, prohibit potable water use for construction activities,industrial water users required to reduce water use (food processing, concrete mixing plant)
6	>50%	Greater than 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 5. Response actions include mandatory 30% reduction - prohibit landscape irrigation except for irrigation with use of recycled water, industrial water users required to further reduce water use (food processing, concrete mixing plant)
NOTES:		

These stages and the percent reductions in demand are based on BCVWD's experience during the state mandated water conservation program targets comparing 2020 with a similar period in 2015, where BCVWD was able to reduce consumption by 24.3% for the period May 2015 through April 2016. This was done through the restrictions in Board of Directors Resolution 2015-05, which limited watering to two days per week due to mandatory reductions in the District's demands of 36% (when compared to 2013 water usages).

In establishing the "Stages," BCVWD has the advantage of the Beaumont Basin, its large storage capacity for banked water, and BCVWD's 80,000 AF storage account. BCVWD currently has 39,750 AF in storage, despite an average SWP allocation of only 43% for the period 2017 through 2020 (approximately 15% difference from normal, "long-term" supply). BCVWD's plan is to purchase additional imported water (when available in advance of annual need (i.e., conjunctive use purchases)) over the amount needed to meet annual demands to add to the storage account balance each year, including making up for any shortfall(s) that may occur during dry years. This results in a conjunctive use activity and hence the averaged annual water supply approach outlined herein and as identified in Table 8-1, above.

8.4 Shortage Response Actions

CWC 10632

(a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

8.4.1 Shortage Level 1 (Potential Shortage – Voluntary Reduction)

Shortage Level 1 occurs when:

- Up to a 10% reduction in normal (average), "long-term" averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages approximately 48% of regional annual supply requirements (water orders) over a two-year (or longer) period

The District declares a water shortage and imposes voluntary water conservation. In this shortage level, the District shall notify all its customers that water use reduction is highly encouraged. The District will recommend a voluntary 10% water use reduction based on an established base year to be determined by the District at the time Stage 1 is implemented. At the same time, the District shall implement its own public awareness program to encourage the

efficient use of water. This will be accomplished by bill stuffers, website information, and social media postings.

8.4.2 Shortage Level 2 (Minor Shortage – Mandatory Reduction)

Shortage Level 2 occurs when:

- Up to a 20% reduction in normal (average), “long-term” averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 38% up to 48% over a three-year (or longer) period.

During Stage 2, all efforts to encourage conservation would remain in effect, however a 10% reduction in demand would be mandatory. Public outreach continues to occur, however an increase in public awareness is achieved through coordination with the City of Beaumont, Riverside County, and SGPWA. In addition, restaurants are required to only serve water to patrons upon request, and lodging facilities must allow guests to opt out of linen services.

8.4.3 Shortage Level 3 (Moderate Shortage – Mandatory Reduction)

Shortage Level 3 occurs when:

- Up to a 30% reduction in normal (average), “long-term” averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 28% up to a 38% over a three-year (or longer) period

Restrictions up to Shortage Level 3 will still be mandatory. At this point, the District will initiate water restrictions similar to Resolution 2015-05 and require a 20% reduction in demand from an established base year. In this stage, the District will impose restrictions similar to Resolution 2015-05: but limit lawn watering to two times per week (assigned days based on street address) and no filling of new swimming pools. Topping off swimming pools is permitted. No new construction meters will be approved. Use of recycled or non-potable water for construction activities will be encouraged. The District may adopt financial incentives to encourage efficient water use. Public awareness programs will expand to schools.

8.4.4 Shortage Level 4 (Severe Shortage – Mandatory Reduction)

Shortage Level 4 occurs when:

- Up to a 40% reduction in normal (average), “long-term” averaged supply occurs
  Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 18% and 28%, over a three-year (or longer) period

Restrictions up to Shortage Level 4 will still be mandatory. In this shortage level, the District will impose restrictions similar to Resolution 2015-05 to require a 25% reduction in demand, but make more stringent including limiting lawn watering to once a week except for lawns and turf irrigated with recycled or non-potable water. No filling of swimming pools; topping off swimming

pools may be permitted. Hand watering of plantings is permitted two days per week if using a hose with a shut-off nozzle. Restrict water use for decorative water features. The District may adopt financial incentives to encourage efficient water use. Stricter enforcement penalties will be developed. At this Stage, the District will appoint a Water Conservation Advisory Committee. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to reduce water use.

8.4.5 Shortage Level 5 (Critical Shortage – Mandatory Reduction)

Shortage Level 5 occurs when:

- Up to a 50% reduction in normal (average), “long-term” averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 8% up to 18%, over a four-year (or longer) period, or

Restrictions up to Shortage Level 5 will still be mandatory. In this shortage, the District will impose restrictions similar to Resolution 2015-05 but prohibit lawn watering except for lawns and turf irrigated with recycled or non-potable water. No filling of swimming pools; topping off only permitted on covered pools. Hand watering of plantings is permitted one day per week, if using a hose with a shut-off nozzle. Washing of automobiles limited only to facilities using recycled water. Use of potable water for construction will be prohibited; only recycled or non-potable water may be used for construction activities, as determined by the Board of Directors. Trucking recycled water may be necessary for grading and construction activities. The District will adopt financial incentives to encourage efficient water use. Stricter enforcement penalties will be developed. The Water Conservation Advisory Committee will continue to function. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to reduce water use.

8.4.6 Shortage Level 6 (Extreme Shortage – Mandatory Reduction)

Shortage Level 6 occurs when:

- A greater than 50% reduction in normal (average), “long-term” averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages less than 8%, over a four-year (or longer) period, or

Restrictions up to Shortage Level 6 will still be mandatory. In this shortage level, the District will impose restrictions similar to Resolution 2015-05. No topping off swimming pools. Use of potable water for construction will be prohibited; only recycled or non-potable water may be used for construction activities, as determined by the Board of Directors. Trucking recycled water may be necessary for grading and construction activities. “Will serve” letters or annexations will not be approved by the Board of Directors. The District will adopt financial

incentives to encourage efficient water use. Stricter enforcement penalties will be developed. The Water Conservation Advisory Committee will continue to function. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to further reduce water use.

8.5 Impacts of Shortage Level Response Actions

Table 8-2 below quantifies the percent of demand reduction for each shortage response action in relation to its associated shortage taken.

Table 8-2 (DWR Submittal Table 8-2) – Demand Reduction Actions

DWR Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
All	Improve Customer Billing	1%	Continue to provide customers with detailed breakdowns of water use and encourage water use efficiency	No
All	Expand Public Information Campaign	1%		
All	Landscape - Restrict or prohibit runoff from landscape irrigation	2-5%	Part of BCVWD's Water Waste Provisions	No
All	Other - Prohibit use of potable water for washing hard surfaces	2-5%	Part of BCVWD's Water Waste Provisions - prohibits watering of concrete	No
All	Other - Require automatic shut of hoses	2-5%		No
2	CII - Lodging establishment must offer opt out of linen service	2-5%		No
2	CII - Restaurants may only serve water upon request	2-5%		No
2	Water Features - Restrict water use for decorative water features, such as fountains	1-3%		No
3	Landscape - Limit landscape irrigation to specific days	10-15%	2 days per week	Yes
3	Other	5%	Public awareness programs expanded to schools	No
4	Landscape - Limit landscape irrigation to specific days	5-10%	1 day per week, addition 5-10% reduction in shortage gap	Yes
5	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	1-2%	Topping off existing pools with cover	No
5	Water Features - Restrict water use for decorative water features, such as fountains	1-2%		No
5	Other - Prohibit use of potable water for construction and dust control	5-15%	Dependent upon size of construction operations and duration of construction	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	10-15%		Yes
5	CII - Other CII restriction or prohibition	10-15%	Work with high demand commercial/industrial water users to reduce water use	Yes
6	Moratorium or Net Zero Demand Increase on New Connections	10-20%	Dependent upon development conditions, Board of Directors to suspend approval of "Will Serve Letters"	Yes
NOTES:				

8.5.1 Supply Augmentation

Table 8-3 (DWR Submittal Table 8-3) – Supply Augmentation

DWR Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
All	Expand Public Information Campaign	1-5%	
All	Improve Customer Billing	1-5%	
All	Other Actions (describe)	5-10%	Continue to work with to install drought tolerant, low water using plantings
2 - 6	Stored Emergency Supply	25-50%	BCVWD has the ability to withdraw groundwater from its storage account in the Beaumont Basin.
4	Other Purchases	5-10%	Work with SGPWA to obtain additional imported water supply
NOTES:			

Table 8-3 presents some consumption reduction methods, separate from the restrictions and prohibitions, presented previously.

- **Expand Public Information** – BCVWD should work with SGPWA and the other retailers in the San Gorgonio Pass to develop a consistent, region-wide message that could include regular articles in the local newspapers, displays at major events, low water using garden workshops, etc. Expand into the schools and service clubs. Work with the high-volume water users in the commercial/retail/industrial area to determine if there are water reduction opportunities.
- **Improved Customer Billing** – Continue providing customers with their historic usage for the past year in graphical format (bar charts) with target levels for water conservation. Provide data on other typical customers in the District's service area.
- **Rebates for Irrigation Efficiency Improvements** – BCVWD should work with SGPWA to provide rebates to improve irrigation efficiency including drip systems and smart controllers. Replacement of spray nozzles with rotating nozzles reduces water consumption significantly and prevents overspray.
- **Rebates for Turf Replacement** – BCVWD should work with SGPWA to provide rebates to convert turf areas to low water using drought tolerant plantings.

- **Other Methods Not on DWR's List:**
    - Work further with the City of Beaumont, County of Riverside, and developers to install drought tolerant, low water using plantings in common areas and street medians. Reduce turf and planted areas in new home construction.
    - Work with the City and HOA's to evaluate the potential for converting existing street median and common area turf areas to drought tolerant, low water using plantings.
    - Begin using recycled water for landscape irrigation. This method has the greatest potential for reducing potable water use in the BCVWD service area.
    - Restrict construction water use to non-potable water.
    - Implement more tiers in the rate structure to reflect the cost for purchase of imported water as a result of higher use.

8.6 Operational Changes

One of the water conservation measures that can be used to reduce water loss is implementing automatic meter readings. With the use of automatic meters, water leaks would be easy to locate as the water meter would continuously run throughout the night. This knowledge would allow District staff to inform the residents of the situation and further actions could then be taken to fix the leak and ultimately, conserve water. Currently (2020), BCVWD is working through a Capital Improvement Project which includes installing automatic meters throughout the service area, but has not been fully converted.

The District currently does not perform extensive main flushing or any hydrant flow testing; there is minimal need to adjust District operations to conserve unmetered water.

8.7 Emergency Response Plan

The most recently published Emergency Response Plan (ERP) is from 2011. Currently (2020), District staff is in the process of updating this ERP to define procedures for modern emergencies, as well as assessing the District's plan for responding to catastrophic water supply interruption. The 2011 ERP defines the procedures that District staff is to complete in the case of various emergencies including, but not limited to:

- Medical Emergencies
- Flooding
- Snow/Ice Damage
- Earthquakes
- Hurricanes/Tornados

The District performs routine maintenance and assessment of the operating conditions off all its facilities, in order to ensure minimal opportunities for supply shortages or supply interruptions. As the District continues to grow, it will continue to refine its maintenance procedures to continue to provide reliable supplies to its customers.

8.8 Seismic Risk Assessment and Mitigation Plan

CWC 10632.5

(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

8.8.1 BCVWD Facilities

The center of the District's service area is located approximately 8 to 10 miles south of the San Andreas Fault. If a major earthquake were to occur along the San Andreas Fault in the Pass area, many of the BCVWD's facilities could be affected.

In order to minimize possible damage due to a significant earthquake, the District's Cherry Tanks, Upper Edgar Tank, Taylor Tank, the Vineland Tanks and the Hannon Tank are all equipped with flexible connectors (EBBA Iron Flex-tends) for movement during an earthquake. Upper Edgar, Cherry Tank III, Vineland II and III, and Taylor Tank are all anchored to their ring wall foundation and have been designed to resist seismic shaking. These are all relatively new tanks constructed since the year 2000 and designed and constructed to recent AWWA standards. These tanks should be capable of resisting significant earthquake shaking. BCVWD's other tanks were designed according to AWWA standards in effect at the time they were constructed; but over time the design standards have improved and become more stringent. The greatest vulnerability will be with the older steel tanks located in the northern part of the District's service area in Cherry Valley.

Experience with other earthquakes, e.g., Landers, magnitude 7.3 (1992), has shown steel water tanks survive but do suffer some minor structural damage. Observations of some of the water tanks showed the inlet/outlet piping sheared off and some "elephant footing" of the side wall occurred but the tanks remained intact. This is what would be expected with BCVWD's older tanks. The newer tanks should survive with little or no damage. The older tanks should be able to be put back into service within a week, if not sooner.

Wells and well pumps could be damaged during a very severe earthquake, but they should be able to be returned to service within a month depending on the availability of replacement parts and equipment to repair the pumps.

Piping breaks could be expected to occur, but these can be repaired quickly. BCVWD has an inventory of repair clamps, fittings and pipe as well as staff and equipment to make these repairs.

BCVWD has also constructed emergency "interties" at various locations along Highland Springs Road so that water can be supplied in either direction between the City of Banning and BCVWD.

8.9 Communication Protocols

> ***CWC 10632 (a)(5)***
>
> *Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:*
>
> *(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.*
>
> *(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.*
>
> *(C) Any other relevant communication*

The communication protocol procedure currently relies in the 2011 ERP. After BCVWD has completely assessed the situation and determined that further actions are to be put into effect, coordinating with the public and other entities are the next steps to be taken. In the near future, BCVWD will use the Annual Assessment that is to be reported to DWR as a tool to address each year's supplies and demands to help determine the appropriate response. In the most recent drought, each BCVWD resident was mailed letters informing them of the issues and the steps that need to be taken to conserve water. For future emergencies, the residents will be emailed the water conservation letters along with their bill to reduce costs. The public information that is to be sent out will be a notice informing them of the situation (e.g. the shortage level the District is currently in), the steps that BCVWD is taking to conserve water, and the steps that each resident should follow to do their part in reducing the water demand.

The District is also actively providing information on its website for public consumption to inform customers of ways to reduce consumption, as well as to update them in the case of an emergency as determined by the State or by the Board of Directors.

8.10 Compliance and Enforcement

> ***CWC 10632 (a)(6)***
>
> *For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

BCVWD does not have a standard enforcement procedure during "normal" supply years, however, does have a plan that adjusts rates during drought declarations and also for enforcing water conservation measures during the periods of a drought. BCVWD is currently in the process of converting over standard water meters to automatic meters. This would allow District staff to determine what residents may have water leaks and address the issues in a timely manner. It would also allow District staff to enforce the demand reduction actions that require residents to only water on certain days of the week. The severity of the enforcement would increase as the Shortage Levels increase. Many of the water reduction actions such as requiring customers repair leaks in a timely manner and restricting water use for decorative fountains would require further actions by the District to enforce. Discussions on how to enforce demand reduction actions such as these are still in discussion to determine the most efficient method. The repercussions that are to take place are listed below under Legal Authorities for first-, second-, and third-time offenders.

8.11 Legal Authorities

> ***CWC 10632 (a)(7)***
>
> *(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.*
>
> *(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]*
>
> *(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code. Water Code Section 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.*

BCVWD has provisions within its Rules and Regulations to establish charges for excessive water use. Currently, the District has a 3-tiered rate structure. For single family residences the tier structure ranges from 0 – 16 HCF (Tier 1), 17-34 HCF (Tier 2) and greater than 34 HCF (Tier 3). The unit price for water use increases with each tier. For multi-family residential, the unit price is a single set rate with no tier structure. BCVWD could increase these charges, initiate consumption surcharges for excessive use to cover the additional cost of imported replacement water, and/or provide for additional tiers upon proper notification and following the

procedures established by Proposition 218. This is not something that can be done on short notice, however.

BCVWD has “water waster” provisions in Part 15 of its Rules and Regulations.

> “15-1 PROHIBITION OF WATER WASTER – No person, firm, or corporation shall use, deliver, or apply waters received from this District in any manner that causes the loss, waste, or the applications of water for unbeneficial purposes. Within the meaning of this Regulation, any waters that are allowed to escape, flow, and run into areas which do not make reasonable beneficial use of such water, including but not limited to streets, gutters, drains, channels, and uncultivated lands, shall be presumed to be wasted contrary to the prohibitions of these Rules and Regulations.
>
> 1) Upon the first failure of any person, firm, or corporation to comply, this District shall serve or mail a warning notice upon any person determined to be in violation of these Rules and Regulations.
>
> 2) Upon the second failure of any person, firm, or corporation to so comply, the water charges of any such consumer shall be doubled until full compliance with these Rules or Regulations has been established to the satisfaction of the Board of Directors of the District.
>
> 3) Upon the third failure of any person, firm, or corporation to so comply, the District shall terminate water service to any connection through which waters delivered by the District are wasted in violation of these Rules and Regulations.”

In Resolution 2016-05, there was a list of financial penalties for violation of the water restrictions in the Resolution.

- Upon the first failure of any person, firm, or corporation to comply, the District shall serve or mail a warning notice upon any person determined to be in violation of the District’s Rules and Regulations.
- Upon the second failure of any person, firm, or corporation to so comply, the water charges of any such customer shall be doubled until full compliance with the District’s Rules and Regulations has been established to the satisfaction of the Board of Directors of the District.
- Upon the third failure of any person, firm, or corporation to so comply, the District shall terminate water service to any connection through which waters delivered by the District are wasted in violation of the District’s Rules and Regulations.

8.12 Water Shortage Contingency Resolution

Resolution No._____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT (DISTRICT) ADOPTING WATER USE RESTRICTIONS TO PROTECT THE WATER SYSTEM AND RATEPAYERS OF BEAUMONT-CHERRY VALLEY WATER DISTRICT

WHEREAS, the District's Operations Policies and Procedures Manual, Part III, Section 1.E., District Emergency Declaration allows the General Manager, in consultation with the Board of Directors President, the ability to declare a "District Emergency" with ratification by the Board of Directors within fourteen days (14) at a regular, special or emergency Board meeting; and

WHEREAS, the District is experiencing water shortages of significant impact which results in a District emergency relating to water supply, therefore;

NOW THEREFORE, BE IT RESOLVED by the Board of Directors that full support is given to the General Manager to make the appropriate recommendations which may include increased restrictions on watering days and hours, restrictions on washing vehicles, etc., restrictions on large water users, restrictions on flushing of water lines, restrictions on the filling of swimming pools, and increases in the current penalties for not complying with water conservation restrictions for the duration of the emergency, and urge full support and cooperation from the ratepayers of the District.

ADOPTED this ___ day of _____, _____, by the following vote:

Ayes:

Noes:

Abstain:

Absent:

_____	_____
Director , President of the Board of Directors of Beaumont-Cherry Valley Water District	Director , Secretary to the Board of Directors of Beaumont-Cherry Valley Water District

8.13 Financial Consequences of WSCP

CWC 10632 (a)(8)

A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1. [retail urban suppliers only]

Rather than identify the financial impacts of each prohibition on BCVWD's financial position, the impacts will be assessed on a "percent reduction in water demand" basis.

The District's current water rate structure includes a service (meter) charge (bimonthly, regardless of how much water is used), and a 3-tiered commodity. For single family residences the tier structure ranges from 0 – 16 HCF (Tier 1), 17-34 HCF (Tier 2) and greater than 34 HCF (Tier 3). The unit price for water use increases with each tier. For multi-family residential, the unit price is a single set rate with no tier structure. This accounts for the generally lower family incomes in multi-family residences. In addition, there is a power surcharge and an imported water surcharge per 100 cu ft of water used.

During times of drought, the revenue from the commodity charge and the power and imported water surcharges would be reduced by an amount equal to the water conservation effort. The meter charge would not be affected. But, the reduction in water consumption will also reduce the power consumption needed to pump and produce water and reduce the need for imported water, essentially balancing out the reduction in imported water surcharge revenue.

To further offset any revenue losses, the District also has a drought surcharge policy in place. Please see Figure 8-1 below:

Figure 8-1 – BCVWD Drought Surcharge Policy

5-1.4 DROUGHT SURCHARGES

In the event that the District activates water supply drought rates, customers will be notified in advance of the below surcharges. Drought rates are generally triggered by the declaration of a specific water shortage by the California Department of Water Resources, or alternatively, by the District's Board of Directors.

The Surcharge Rate below is additive to the current Commodity Rate, per unit of water, at the date of presentation. The Surcharge Rate in effect is dependent on the drought stage declared.

	Stage 1	Stage 2	Stage 3	Stage 4
Reduction in Use	10%	20%	30%	40%
Surcharge	$0.17	$0.36	$0.60	$0.92

Although the District is proposing 6 Shortage Levels as part of the WSCP, the existing drought surcharges can still be applied. For example, “Stage 1” in the District’s drought surcharges policy correlates to a 10% reduction in use; the drought surcharge identified would be applied to Shortage Level 1 previously described in this section.

For 2020, the adopted budget estimated $3.4 million in fixed meter (service) charges and $5.2 million in water sales revenue including agricultural water sales and construction water sales (commodity charge). Water importation surcharges were budgeted at $3.5 million and SCE power surcharge at $1.6 million. So total “variable” revenue would be approximately $13.68 million. The fixed meter (service) charges would not be affected by a reduction in water sales. All the other revenues and expenses would be.

Assuming a water reduction of 25% is required for a 2-month long-term interruption, the annual reduction would be (2/12) * 25% or 4.2%. The resultant loss in water sales revenue would be $575,000, i. e, 0.042 *$13.68 million; the reduction, electricity and imported water purchase would be $215,000. The net would be an annual loss of revenue of $360,000.

A 50% reduction in water demand for a period of 1 month would result in a similar net annual revenue loss of $360,000.

The costs above do not include additional staff overtime that may be required providing notifications, production, publication, and mailing of notices, updates, water conservation messages, inspection, and enforcement. An estimate of $25,000 for each “event” is reasonable to cover these costs. The total annual impact could be in the $225,000 to $250,000 range.

The BCVWD audited Financial Report for 2020 showed BCVWD with over $176.4 million in net assets of which $29.1 million was in unrestricted funds. The impact of a net $175,000 loss due to a water reduction of 25% over a 2-month period (or 50% for a 1-month period), or even another 10% reduction on an annual basis will not affect BCVWD’s operation. The $476,000 is less than 4% of the District’s unrestricted cash assets. As a result, no special action is needed.

8.14 Monitoring, Reporting, and WSCP Refinement Procedures

CWC 10632 (a)(9)

For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

CWC 10632 (a)(10)

Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

When the higher Shortage levels are declared, the demand will be closely monitored by District staff on a month-to-month basis to compare the projected water reduction with the actual values. If the District staff finds that the demand reduction actions are not meeting the projected

volumes, it will be reassessed and brought to the Board to determine if a higher Shortage Level should be put into effect. There will need to be a few months in between announcing the different shortage levels as it is expected to take some time before the results are shown, however, District staff will be monitoring it closely.

8.15 Special Water Feature Distinction

> ***CWC 10632 (b)***
>
> *For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.*

In Table 8-2, swimming pools are separate and distinct from "water features." Water features include decorative ponds, water hazards on golf courses, artificial waterfalls, and fountains. Golf course water hazard ponds that serve as irrigation reservoirs or balancing ponds, supplied with private wells are not covered by BCVWD's water restrictions. BCVWD water restrictions do not apply to water features supplied by private wells.

Stock ponds for animal watering are not covered under the swimming pool or water feature restrictions. Recycled and non-potable water may be used without restriction in water features and ponds if approved for use.

8.16 Plan Adoption, Submittal and Availability

> ***CWC 10632 (c)***
>
> *The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

The District's WSCP will be adopted following the same process as the District's 2020 UWMP update. Both the WSCP and the UWMP will be adopted by the Board of Directors, submitted to DWR for review, and implemented.

The District has scheduled a public hearing for review of the 2020 UWMP, which includes the WSCP, on July 22, 2021. At such time, the Board of Directors may direct District staff to make appropriate changes and/or corrections based on public comment, or make a motion to adopt the UWMP and the WSCP. The District will make the adopted WSCP available to the public on the District's website no later than 30 days after it is adopted.

The District will notify the public of any amendments made to the WSCP after it has been formally adopted by the Board.

DRAFT

RESOLUTION _____

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE BEAUMONT CHERRY VALLEY WATER DISTRICT
WATER SHORTAGE CONTINGENCY REGULATIONS**

The Board of Directors of the Beaumont Cherry Valley Water District (District) does hereby resolve:

WHEREAS, the Urban Water Management Plan (UWMP), 2020 Update, adopted by the Board contains provisions relating to water shortages and contingencies due to catastrophic outage of state, regional and District supply facilities, hydrologic conditions resulting in lower-than-normal water supply or other factors which prevent the District from providing as much water as is customary; and

WHEREAS, the District endeavors to supply water in sufficient quantities to protect public health; and

WHEREAS, the District has established five stages of action in the UWMP 2020 Update which impose both voluntary and mandatory reductions in water use depending on the severity of the shortage,

NOW THEREFORE, BE IT RESOLVED, by the Board of Directors of the District as follows:

1. The General Manager is hereby authorized to declare a Water Shortage according to the Water Shortage Contingency Plan in the UWMP 2020 Update
2. The General Manager is hereby authorized and directed to implement the various stages identified in the UWMP 2020 Update
3. The General Manager shall monitor water use and recommend to the Board of Directors additional measures as may be required to conserve water resources and ensure public health.

ADOPTED this ___ day of _____, _____, by the following vote:

Ayes:

Noes:

Abstain:

Absent:

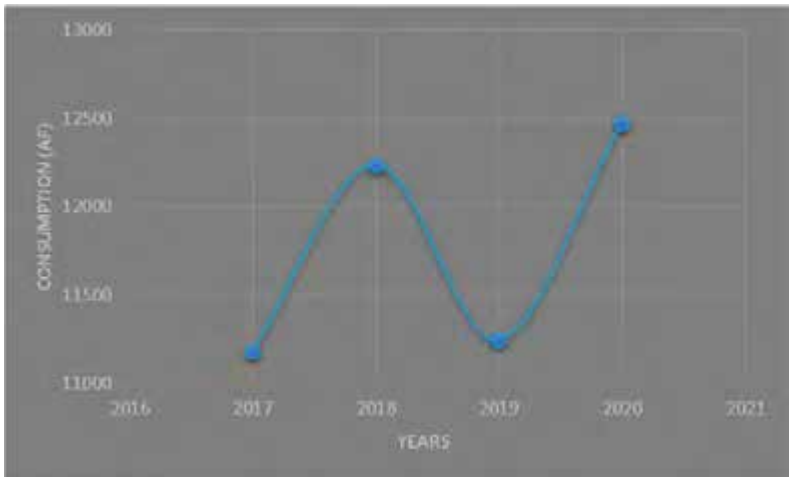
Director , President
of the Board of Directors of Beaumont-Cherry Valley Water District

Director , Secretary
to the Board of Directors of Beaumont-Cherry Valley Water District

Section 9 – Demand Management Measures

The goal of this Demand Management Measures (DMM) section is to provide a comprehensive description of the water conservation programs that BCVWD has implemented, is currently implementing, or plans to implement in order to ensure its customers use water wisely and the District meets its urban water use targets. During the period 2017 through 2020, the total consumption of BCVWD has been fluctuating around 11,000 AFY to 12,500 AFY, however, no water conservation measures were implemented during this time period.

Figure 9-1 – Total Consumption from 2017 to 2020



The section in the CWC addressing DMMs was significantly modified in 2014 to simplify, clarify and update the DMM reporting requirements. This was done by reducing the 14 specific measures in previous UWMPs to 6 more general requirements plus an “other” category.

9.1 Demand Management Measures for Retail Agencies

CWC 10631

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

9.1.1 Water Waste Prevention Ordinances

Section 9.6a. of the District's Rules Governing Water Service states the following:

It is a violation of these Regulations:

3) To cause or permit the waste of water from the water system or to maintain or cause or permit to be maintained any leaky outlets, apparatus or plumbing fixtures through which water is permitted to waste;

4) To use water for washing sidewalks and driveways in a manner that prevents the usual and customary use of public streets and sidewalks by others;

5) To permit water sprinklers to spray onto sidewalks and streets or to permit water to run from the consumer's property onto public sidewalks and streets to cause risk and/or damage to the public or to public and private property;

Section 15-1 of the District's Rules Governing Water Service states the following:

No person, firm or corporation shall use, deliver, or apply waters received from this District in any manner that causes the loss, waste, or the application of water for unbeneficial purposes. Within the meaning of this Regulation, any waters that are allowed to escape, flow, and run into areas which do not make reasonable beneficial use of such waters, including but not limited to streets, gutters, drains, channels, and uncultivated lands, shall be presumed to be wasted contrary to the prohibitions of these Rules and Regulations.

The Regulations for Water Service have a series of warnings/penalties. The first notice is a written warning; the second offense results in a doubling of the water charges until full compliance is attained. After the third offense, the District can terminate water service to the customer.

BCVWD Board of Directors adopted Resolution No. 2016-05 implementing water use restrictions. The resolution prohibits, among others:

- Use of potable water on driveways and sidewalks
- No washing of cars unless the hose has a shutoff valve
- Serving of water to restaurant guests unless specifically requested
- No irrigation within a rain event or 48 hours afterwards
- Giving hotel/motel guests the option of reusing their own towels
- No fountain use except recirculating type

In addition, the District set up a "water waster hotline" which would accept anonymous calls. Customer Service Representatives would respond to these calls and request one of the District's operations staff to investigate. Calls were taken for leaks, water running in gutters, etc.

Implementation: The District had adopted this resolution and to date, has not rescinded it. Additionally, recycled water shall be used wherever available.

9.1.2 Metering

CWC 526

Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract... shall do both of the following:

On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings... located within its service area.

CWC 527

An urban water supplier that is not subject to Section 526 shall do both the following:

Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

All of BCVWD's services are metered. This includes all residential, commercial/retail, industrial, institutional and landscape irrigation connections. In addition, BCVWD meters construction water taken from hydrants and street sweeping and vactor truck water. On-site fire services are metered to prevent theft. BCVWD has a regular program of replacing meters. Meters are read every other month; landscape and other high-volume users are read monthly.

BCVWD had some Automatic Meter Reading (AMR) systems installed when they first came available. These are now in the process of being replaced as part of an automatic meter reading/ automatic meter infrastructure (AMI) project over the next two years with newer, more

effective AMR devices and an associated AMI system. These can be very effective at identifying leaks at the customer service side and reduce meter reading time.

Implementation: The District is currently working through a Capital Replacement Project to convert all meters with AMR/AMI technology.

9.1.3 Conservation Pricing

BCVWD has recently adopted an updated rate schedule (effective 3/1/2020) that includes the following:

- Service (meter) charge which depends on the size of the meter. The larger the meter, the larger the bi-monthly service charge
- Commodity charge which is three tiered. For single family residences from 0 – 16 HCF (Tier 1), 17-34 HCF (Tier 2) and greater than 34 HCF (Tier 3). The unit price for water use increases with each tier. For multi-family residential, the unit price is a single set rate with no tier structure. This accounts for the generally lower family incomes in multi-family residences.
- SCE Power Charge per HCF is a pass-through cost as incurred from SCE to cover the cost of pumping power. This pass-through cost is applied to all water sold.
- State Project Water Charge per HCF is a pass-through cost as incurred from SGPWA to cover the cost of importing SPW.
- Drought Pricing increases based upon commodity usage to UWMP to promote conservation goals set forth in this UWMP during drought conditions.

Implementation: BCVWD performed a Water Financial Plan and Utility Rate Study in 2019, which became effective March 1, 2020. The Rate Study adjusted pricing tiers and further considers the costs associated with providing service to each ratepayer based on their respective usage of the District's system.

9.1.4 Public Education and Outreach

BCVWD provides water conservation literature in the lobby where customers pay their bills or enter for District Board Meetings. The District's website https://bcvwd.org/water-conservation-tips/ has over one hundred water conservation tips.

All new customers requesting water service are provided information about water conservation and water restrictions by the Customer Service Representatives.

The District presently does not make a special effort to promote water conservation at local schools as the local area water wholesaler (SGPWA) provides for these activities. District staff are available on an "as requested" basis to explain the benefits of water conservation and its importance on the community.

Implementation: The public information programs are on-going, and information is provided as needed. District staff may consider coordinating with School District staff, events where information packets on water conservation and water savings techniques can be distributed to students. Once recycled water is available and provided to the schools, BCVWD will be much more active with the schools as part of the on-site inspections and working with the school's on-site recycled water site supervisor. This could evolve into a regular presentation to all entering freshmen and transfer students to educate them in the recycled water system and the need for water conservation programs.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

Much of the BCVWD water system is new having been installed within the last 20 years or so with the housing boom. Older leak-prone lines are being replaced as part of a Facilities Replacement activity. BCVWD has developed and funded a Capital Facilities Replacement Program to replace aging and leaking pipes over the next 5 to 19 years. Water distribution lines are routinely checked and/or tested for leaks; when leaks are found they are promptly repaired.

BCVWD annually performs a distribution system water audit comparing the amount of water produced from wells to the amount of water used by consumers (as reported by metering readings). The District meters construction water and private fire systems. Very little water is unmetered. After allowing for authorized unmetered uses such as firefighting, main flushing, and public use; it can be assumed that the remaining unmetered water is explained by inaccurate meter readings, malfunctioning valves and leakage, and theft. The District has very little unaccounted-for or non-revenue water.

To save water, the District does not perform hydrant flow testing. Fire flow verification is performed on the District's calibrated computer model.

Implementation: The District has an ongoing schedule to inspect facilities and periodically calibrate master water meters. The District has already implemented leak detection measures. Water system audits are generally done at least once a year.

9.1.6 Water Conservation Program Coordination and Staffing Support

The District presently does not have a designated conservation coordinator. All conservation and water use restriction information is provided by the District's Customer Service Representatives. BCVWD has been operating at reduced staff levels to keep expenditures to a minimum so that water rates are maintained at a low rate. It is very difficult to justify such a position when BCVWD staff has been reduced to a minimum.

Implementation: The District is a small agency and funding a full-time water conservation coordinator would have significant financial impacts – perhaps as much as $5 per household per year for just salary and benefits. The District identifies opportunities regionally are currently being supported through the SGPWA.

9.2 Other Demand Management Measures

9.2.1 Conversion to Recycled Water

Currently, there are about 300 landscape irrigation connections connected to the District's non-potable water system. The District has installed over 30 miles of non-potable water transmission mains and a 2 MG reservoir for non-potable water. The system is separated such that one part (larger part) is currently served by non-potable water Well No. 26, supplemented as needed by potable water discharged from the District's domestic water system through an air gap into the 2 MG reservoir.

The portion of the system which is south of I-10 is currently pressurized with potable water from the Hannon (2650 Zone Potable Water Tank). However, this will be converted to non-potable water system supplies within the next two years via installation of two or more non-potable water pressure reducing stations.

Negotiations are on-going with the City of Beaumont for delivery and receipt of recycled water from their treatment plant. Any recycled water which is introduced into the system will offset the existing potable water demand on a gallon for gallon basis. Currently, about 1,800 acre-ft/yr (measured through the irrigation meters) is supplied to the landscape irrigation services. The potable demand will be reduced once recycled water is available.

9.2.2 Implementation or Scheduled Implementation

Recycled water will most likely be introduced into the non-potable water system by 2025.

9.3 Reporting Implementation

9.3.1 Implementation Over the Past Five Years

> ***CWC 10631***
>
> *(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:*
>
> *(1)(A) For an urban retail water supplier,…a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years.*

Beaumont is one of the fastest growing cities in Riverside County. Over the past five years, BCVWD has worked cooperatively with many developers to implement water efficient homes. More homes are now being built with artificial turf and/or drought tolerant irrigation systems to reduce irrigation and the overall demand of water. Several meters have also been converted over to AMR to assist the District in monitoring water leaks. All commercial customers are in the process of being converted over to AMR/AMI as they require much higher demand than residential customers. Over the past five years, BCVWD has not made extended efforts to promote water conservation in local schools, however, is has provided outreach presentations to the local schools when requested.

9.3.2 Implementation to Achieve Water Use Targets

> ***CWC 10631***
>
> *(e)(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*

To achieve the SB X7-7 water use targets in Section 5, BCVWD intends to continue and expand implementation of DMM reporting, presented above. In the future, the District may look to partnering and possibly cost sharing with SGPWA for rebate programs. Large and small wholesalers have provided and managed rebate programs on behalf of their member retailers. Both parties benefit.

Within BCVWD's service area, about 75 percent of the housing units have been built since 1990; so they have reduced water use plumbing fixtures. In Cherry Valley, the residences have on-site wastewater disposal systems; those homeowners tend to be older (average age of approximately 46±) which provides for lower indoor water use due to fewer people in the residences and said owners having adult children. Consequently, low flush toilet rebate programs would not be effective.

With over 70 percent of the housing stock in Beaumont constructed since 2000, there is likely not much opportunity for replacement of dishwashers or washing machines with more water efficient machines. Most of the developers are very conscious of water use and are installing these highly efficient devices in their new models.

There may be opportunity for replacement of dishwashers and washing machines in Cherry Valley where the housing stock is older, and the residences are on septic tanks however, said dishwasher and washing machine flow to septic tanks are considered 100-year return flow to the groundwater basins, therefore said water is already provided for as part of the various groundwater basins safe yield calculators.

The implementation of new landscape ordinances at the state and local level will help reduce outdoor water use. Requirements for smart irrigation controllers on new housing will go a long way to reduce outdoor water use. BCVWD believes the greatest opportunity for water savings is conversion of street medians and common area turf areas to more drought tolerant planting materials and converting these irrigated areas to recycled water. The use of recycled water for landscape irrigation is key to BCVWD meeting the water use target.

Section 10 – Plan Adoption, Submittal and Implementation

This section describes the public notification, plan adoption, submittal and implementation of BCVWD's 2020 UWMP.

The Draft 2020 UWMP was completed on July 9, 2021 and was available for a 10-day public review prior to the public hearing. Copies of the Draft 2020 UWMP were available at the BCVWD District Office, 560 Magnolia Avenue, Beaumont, CA 92223 during regular business hours and was posted on BCVWD's website http://www.bcvwd.org/.

A public hearing will be held on July 22, 2021, at BCVWD's Board Room, 560 Magnolia Avenue, Beaumont, CA 92223. Board member and public comments and testimony will be taken, and staff will consider all comments and revise the 2020 UWMP, as necessary. The final UWMP may be adopted by the Board of Directors through a resolution at a meeting at the BCVWD office held on July 22, 2021. The Final 2020 UWMP will be submitted to DWR within 30 days of Board approval. The final adopted 2020 UWMP will be available to the public and posted on the District's website within 60 days of submission to DWR.

The 2020 UWMP is intended to serve as a general, flexible, open-ended document that periodically can be updated to reflect changes in service area growth and demands, available water supply and conservation policies and practices. The plan will guide the Board and staff through the year 2025 when the UWMP is required to be updated again.

10.1 Inclusion of All 2020 Data

BCVWD's 2020 UMWP includes all water use and planning data from calendar year 2020.

10.2 Notice of Public Hearing

BCVWD will hold a public hearing on July 22, 2021, prior to having the Board of Directors adopt the Plan. The public hearing will provide an opportunity for the public to provide input to the plan before it is adopted. The Board of Directors considers all public input. The hearing was noticed to the nearby cities, the County of Riverside, the County of San Bernardino, and public. Copies of the notification letters are in Appendix G.

10.2.1 Notice of Cities and Counties

> ***CWC 10621***
>
> *(b) Every urban water supplier required to prepare a plan shall… at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*
>
> ***CWC 10642***
>
> *…The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area…*

Table 10-1 is a checklist for the notification of cities and counties required by DWR; Table 10-2 is a summary of agencies and notifications.

Table 10-1 – Notification to Cities and Counties

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Beaumont	Yes	Yes
Banning	Yes	Yes
Yucaipa	Yes	Yes
Calimesa	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Riverside County	Yes	Yes
San Bernardino County	Yes	Yes
NOTES:		

The 60-day Notification was sent out March 30, 2021, more than 60 days prior to the public hearing. A copy of the Notification Letter is included in Appendix G. A public hearing for written and oral comments on the 2020 UWMP will be held on July 22, 2021. Notice of the hearing followed Government Code 6066.

Table 10-2 – Coordination with Appropriate Agencies, Groups and Organizations

Agency, Group or Organization	Notice of Intent to Update	Sent Public Hearing and Intention to Adopt UWMP	Sent copy of draft UWMP Update	Attended public meetings	Commented on the draft UWMP Update	Sent Final UWMP Update
City of Beaumont	●	Published in the Record-Gazette	On District Website (www.bcvwd.org)			
City of Banning	●					
City of Yucaipa	●					
City of Calimesa	●					
YVWD	●					
South Mesa WC	●					
County of Riverside Flood Control	●					
Riverside County LAFCO	●					
Eastern MWD	●					
SAWPA	●					
SGPWA	●					
San Bernardino County LAFCO	●					
Beaumont Unified School District	●					
Beaumont Cherry Valley Parks and Recreation	●					
CVAN	●					
Riverside BIA	●					
General Public						

10.2.2 Notice to the Public

> ***CWC 10642***
>
> *…Prior to adopting either [the plan or water shortage contingency plan], the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code [see below]. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies.*
>
> ***Government Code section 6066***
>
> *Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.*

Copies of the Public Hearing Notice and dates of publication are included in Appendix G. The Public Hearing will be held on July 22, 2021 at the BCVWD District Office, Board Room, 560 Magnolia Avenue, Beaumont CA 92223. Copies of the 2020 UWMP were available at the office during regular business hours. It was also published on BCVWD's website http://www.bcvwd.org/ .

10.3 Public Hearing and Adoption

> ***CWC 10642***
>
> *…Prior to adopting either, the [plan or water shortage contingency plan], the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon.*
>
> ***CWC 10608.26***
>
> *(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:*
>
> *(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.*
>
> *(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.*
>
> *(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.*

BCVWD provided information on their baseline water use targets and implementation plan required in the Urban Water Conservation Act of 2009.

The public hearing will be held on July 22, 2021.

Both oral and written comments will be taken by District staff; Mark Swanson PE, senior engineer with BCVWD will present the findings of the 2020 UWMP. When the public hearing has closed, the Board will give direction to staff to consider all comments and make revisions to the 2020 UWMP Update as required or make a motion to adopt the 2020 UWMP.

In the case that there are comments, the 2020 UWMP will be revised by staff to incorporate comments from the public hearing. The revised UWMP will be made available at the District Office and posted on the District's website prior to the date of adoption.

10.4 Plan Submittal

> ***CWC 10621***
>
> *(e) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021…*
>
> ***CWC 10644***
>
> *(a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.*
>
> ***CWC 10635***
>
> *(c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.*

BCVWD's 2020 UWMP will be submitted to DWR within 30 days of adoption and as close to July 1, 2021, as practical. The submittal will be electronic using DWR's WUE data submittal tool.

A hard copy or CD will be submitted to the California State Library within 30 days of adoption. The addresses are:

California State Library Government Publications Section
P.O. Box 942837 Sacramento, CA 94237-0001
Attention: Coordinator, Urban Water Management Plans

Or if hand carried --

California State Library Government Publications Section
914 Capitol Mall
Sacramento, CA 95814

10.5 Public Availability

> ***CWC 10645***
>
> *(a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*
>
> *(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*

BCVWD will, within 30 days of filing with DWR, make the plan available to the public at the District's office at 560 Magnolia St., Beaumont, CA 92223 during normal business hours. It will also be posted on the District's website in pdf form for reading/downloading by the public.

10.6 Amending an Adopted UWMP

CWC 10621

(d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

CWC 10644

(a)(1) Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

CWC 10644 (b)

If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared…no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

If the 2020 UWMP or the 2020 WSCP require an amendment, any amendments or changes will be adopted and filed as described above.

Appendix A
California Water Code
Urban Water Management Planning

California Water Code Division 6, Part 2.6.

CHAPTER 1. General Declaration and Policy
Section 10610 - 10610.4

10610.

This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2.

(a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4.

The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to achieve the efficient use of available supplies and strengthen local drought planning.

CHAPTER 2. Definitions
Section 10611 - 10618

10611.

Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.3.

“Customer” means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10611.5.

“Demand management” means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612.

“Drought risk assessment” means a method that examines water shortage risks based on the driest five-year historic sequence for the agency’s water supply, as described in subdivision (b) of Section 10635.

10613.

“Efficient use” means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614.

“Person” means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615.

“Plan” means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area’s characteristics and its capabilities to efficiently use and conserve

water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616.

"Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5.

"Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617.

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

10617.5.

"Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

10618.

"Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

CHAPTER 3. Urban Water Management Plans
Article 1 – General Provisions
Section 10620 – 10621

10620.

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(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.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

(2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.

(3) Each urban water supplier shall 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.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

(a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

(d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

(e) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

ARTICLE 2. – Contents of Plans
Section 10630 – 10634

10630.

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

10630.5.

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

10631.

A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific

authorization for groundwater management for basins underlying the urban water supplier's service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

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

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

(4) (A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph

(1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

10631.1.

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

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.2.

(a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

(c)The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

10632.

(a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

(1) The analysis of water supply reliability conducted pursuant to Section 10635.

(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decisionmaking process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in

subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

10632.1.

An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

10632.2.

An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

10632.3.

It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

10632.5.

(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan

to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

10633.

The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) 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 pursuant to this subdivision.

(f) A description of actions, including financial incentives, 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.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634.

The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

ARTICLE 2.5. – Water Service Reliability
Section 10635 – 10635

10635.

(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) 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 five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) 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.

(c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(e) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

ARTICLE 3. – Adoption and Implementation of Plans
Section 10640 – 10645

10640.

(a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641.

An urban water supplier required to prepare a plan or a water shortage contingency plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642.

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

10643.

An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644.

(a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

(c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

(2) A report to be submitted pursuant to subparagraph (A) of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645.

(a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

CHAPTER 4. Miscellaneous Provisions

Section 10650 – 10657

10650.

Any actions or proceedings, other than actions by the board, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

10651.

In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652.

The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653.

The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654.

An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and

its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

10655.

If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656.

An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

10657.

The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

Appendix B
Adoption Resolution

Appendix C
2020 Urban Water Management Plan Checklist

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
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	Section 1.1
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	
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 2.4.2
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 2.4.2 Table 2-5
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	
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 source.	System Supplies	Section 2.4.1
x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.2
x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.1 Table 3-1
x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.5
x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.1 Table 3-1
x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.8
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
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
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	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
x	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
x	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 4.3
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 4.4
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	
x	Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	
	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	
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	
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	
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	
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	
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	
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	
x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	
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	
x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	
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	
x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	
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	
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	
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	
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	
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	
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)	
x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	
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)	
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)	
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)	
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)	
x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	
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)	
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	
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	

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
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	
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	
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	
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	
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	
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	
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	
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	
x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	
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	
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	
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	
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	
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	
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	
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	
x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	
x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	
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	
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	
x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	
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	
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	
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	
x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	
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	
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 emergency.	Water Shortage Contingency Planning	
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	
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	
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	
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	
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	
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	
x	Section 8.12	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	
	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 supplier assistance program.	Demand Management Measures	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	

Appendix D
DWR Data Tables

California Department of Water Resources Submittal Data Tables

DWR 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 *
Add additional rows as needed			
3310002	Beaumont-Cherry Valley Water District	19,635	12,492
	TOTAL	19,635	12,492
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Total Volume of Water Supplied includes both Potable and Non-Potable Water			

DWR Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**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: BCVWD is a member of the San Gorgonio Pass Regional Water Alliance, which was formed in 2014; SGRPWA did not prepare a 2020 Integrated Regional Water Management			

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

DWR 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 Gorgonio Pass Water Agency
NOTES:

DWR Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	59,258	66,149	73,739	81,906	88,532	94,556
NOTES:						

DWR Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
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	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume (AF)
Add additional rows as needed			
Single Family		Drinking Water	8,580
Multi-Family		Drinking Water	339
Commercial	Estimated	Drinking Water	197
Industrial		Drinking Water	172
Institutional/Governmental	Estimated	Drinking Water	1,020
Landscape	Potable water only	Drinking Water	193
Landscape	Non-potable water only	Other Non-Potable Water	1,647
Agricultural irrigation		Drinking Water	51
Losses	Estimated	Drinking Water	1,326
Sales/Transfers/Exchanges to other Suppliers	(2) Production on behalf of City of Banning	Drinking Water	364
Other	Metered construction, street sweeping, etc.	Drinking Water	293
		TOTAL	13,818
[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: (1) Total does not include additional imported water for banking to storage. (2) 364 AF was pumped on behalf of the City of Banning			

DWR Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use (AF) *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)
Add additional rows as needed						
Single Family		9,302	10,047	10,849	11,479	12,041
Multi-Family		367	397	429	454	476
Commercial		214	231	249	264	276
Industrial		186	201	217	230	241
Institutional/Governmental		1,106	1,194	1,290	1,365	1,431
Agricultural irrigation		55	60	64	68	72
Landscape	Potable Water	209	226	244	258	271
Other	Metered construction and street sweeping water etc.	318	343	370	392	411
Other Non-Potable	Raw water to supplement non-potable water system (used for irrigation)	276	246	0	0	0
Groundwater recharge	Imported raw water banked for future extractions during dry periods. Does NOT include imported water to meet Adjudication replacement obligations.	1,500	1,200	1,000	1,000	1,000
Losses	Estimated	1,439	1,553	1,679	1,775	1,863
	TOTAL	14,972	15,698	16,391	17,285	18,082

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*

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

NOTES: (1) Projected water use by sector based off of water demand distribution by sector for 2020. (2)Groundwater recharge quantities are planned quantities to build and maintain 5-year supply per BCVWD Resolution No. 2014-05; landscape demand will be met with recycled water and supplemented with other non-potable water as needed.

DWR Table 4-3 Retail: Total Water Use (Potable and Non-Potable) - In Units of AF						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	13,818	14,972	15,698	16,391	17,285	18,082
Recycled Water Demand[1] *From Table 6-4*	0	1,957	2,175	2,478	2,561	2,578
TOTAL WATER USE	13,818	16,929	17,873	18,869	19,846	20,660

[1] Recycled water demand fields will be blank until Table 6-4 is complete

*[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES: (1) The recycled water demand includes the forecast amount used on landscaping irrigated by the non-potable water system. Source of recycled water is the City of Beaumont. Also includes golf course irrigation demands. (2) Total includes additional imported water for banking to storage. (3) Total includes estimated losses.

DWR Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (AF) [1,2]
01/2020	1326(1)
01/2019	992 (2)
01/2018	1236 (2)
01/2017	872 (2)
01/2016	913 (3)
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES: (1) Estimated for 2020 (2) Computed utilizing the American Water Works Association Method (3) Estimated	

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

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form
Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*302*	*242*
5 Year	*2004*	*2008*	*291*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

DWR Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
188	*0*	*188*	*242*	*Yes*

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

DWR 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 *Drop Down List* *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Little San Gorgonio Creek	1,493	1,271	1,436	1,308	1,279
Alluvial Basin	Beaumont Basin	9,123	10,183	12,329	11,202	12,904
	TOTAL	10,616	11,454	13,765	12,510	14,183

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

NOTES: Little San Gorgonio Creek, also known as Edgar Canyon, is a mix of shallow aluvial deposits and fractured rock aquifer.

DWR 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.
13	Percentage of 2020 service area covered by wastewater collection system *(optional)*
87	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? *Drop Down List*	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? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
City of Beaumont	Metered	4,032	City of Beaumont	Plant No. 1	Yes	Yes
Total Wastewater Collected from Service Area in 2020:		4,032				

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

NOTES: (1) Wastewater volume is based on monthly reports to RWQCB. Except for Highland Springs Village which is sewered by the City of Beaumont, the remainder of Cherry Valley is unsewered. (2) 2,020 AF must be discharged for environmental mitigation leaving 2,012 AF available for recycling.

DWR 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) [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 Volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
City of Beaumont	DP-001	Cooper's Creek	8330101001	River or creek outfall	No	Tertiary	4,032	4,032	0	0	0
City of Beaumont	DP-007	Trib of Marshal Creek	8330101001	Bay or estuary outfall	No	Tertiary	0	0	0	0	0
City of Beaumont	R-001	Tukwet GC	8330101001	Other	No	Tertiary	0	0	0	0	0
City of Beaumont	R-002	Oak Valley GC	8330101001	Other	No	Tertiary	0	0	0	0	0
City of Beaumont	R-003	BCVWD RW	8330101001	Other	No	Tertiary	0	0	0	0	0
						Total	4,032	4,032	0	0	0

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

[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: (1)City of Beaumont claims that a portion of the effluent discharged at DP-001 and DP-007 incidently recharge the Beaumont Groundwater Basin. Watermaster is still awaiting proof. The effluent does not comply with planned groundwater recharge regulations. (2) Partial reverse osmosis treatment was under construction in 2020.

DWR 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 Beaumont
Name of Supplier Operating the Recycled Water Distribution System:	Beaumont-Cherry Valley Water District
Supplemental Water Added in 2020 (volume) *Include units*	None, BCVWD did not distribute recycled water in 2020
Source of 2020 Supplemental Water	NA

Beneficial Use Type *Insert additional rows if needed*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *(AF)*[1]	General Description of 2020 Uses	Level of Treatment *(drop down list)*	2020[1]	2025[1]	2030[1]	2035[1]	2040[1]	2045[1] (opt)
Agricultural irrigation			None							
Landscape irrigation (excl golf courses)			None	Advanced	0	1,475	1,693	1,996	2,079	2,096
Golf course irrigation			None	Advanced	0	471	471	471	471	471
Commercial use	Concrete mixing plant	11	None	Advanced	0	11	11	11	11	11
Industrial use			None							
Geothermal and other energy production			None							
Seawater intrusion barrier			None							
Recreational impoundment			None							
Wetlands or wildlife habitat			None							
Groundwater recharge (IPR)	Potential future project, not accounted for in this table	530	None	Advanced						
Reservoir water augmentation (IPR)			None							
Direct potable reuse			None							
Other (Description Required)			None							
				Total:	0	1,957	2,175	2,478	2,561	2,578
				2020 Internal Reuse	0					

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

NOTES: The City of Beaumont is required to discharge 1.8 mgd (2,016 AFY) to maintain habitat in Cooper's Creek. Per DWR, this is not considered a beneficial use.

DWR 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. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.

Beneficial Use Type	2015 Projection for 2020 [1]	2020 Actual Use [1]
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	1,500	0
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	1,500	0

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

NOTE: City of Beaumont is required to discharged 1.8 mgd (2,000 AFY) to maintain habitat in Cooper's Creek. Per DWR instructions, this is not considered a beneficial use.

DWR 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			
Construction of City of Beaumont Connection	Construct pumping station at City Treatment Plant.	2022	1,346
Edgar Canyon Nitrate Wells	Install extraction wells at mouth of Edgar Canyon to extract high nitrate groundwater for non-potable water system.	2030	300
San Timoteo Groundwater Capture	Install extraction wells in San Timoteo Canyon to extract wastewater which percolates from 1.8 mgd habitat mitigation flow.	2030	600
		Total	2,246

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

NOTES: These projects will increase the non-potable water supply which allows BCVWD to serve more non-potable water.

DWR 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, Supplier Name*				
Add additional rows as needed						
Beaumont MDP Line 16	Yes	RCFC & WCD	Const. of SD to divert water into BCVWD Recharge Facility.	2022	All Year Types	185
Connection to City of Beaumont for Recycled Water	Yes	City of Beaumont	Install storage tank, booster pumping station and interconnecting pipelines.	2022	All Year Types	1,346
Advanced Treated Recycled Water	Yes	City of Beaumont	Construct Advanced Treatment Facility and Brine Line.	2030-2035	All Year Types	300-660 (530 avg)
Misc. Urban Runoff Capture	Yes	City of Beaumont	Various recharge basin enhancements.	2030	All Year Types	200-545
Lower Edgar Canyon Non-Potable Groundwater	No		Install extraction wells for high nitrate groundwater for non-potable water	2030	All Year Types	300
San Timoteo GW Extraction	Yes	City of Beaumont	Install series of wells to recapture percolated wastewater used for	2030	All Year Types	400-800 (600 avg)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3*						
NOTES: Yield from the City of Beaumont Recycled Water Connection will increase to 2,915 AFY by 2045 due to increases in wastewater flows over time. Expected increase in water supply for Advanced Treated Wastewater is based on 80% recovery in the membrane						

DWR Table 6-8 Retail: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2020		
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		Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Groundwater (not desalinated)	Little San Gorgonio (Edgar Canyon)	1,279	Drinking Water	2,200
Groundwater (not desalinated)	Beaumont Basin	1,962	Drinking Water	
Purchased or Imported Water	SGPWA Purchased Replacement Water	11,005	Drinking Water	
Transfers	To Banked Storage	-427		
	Total	13,819		2,200

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

NOTES: (1) BCVWD typically receives reallocated unused Overlying Party Rights, forbearance water for supplying potable or non-potable water to Overlying Parties, and return flow credits for importing SPW, groundwater, or recycled water per the Beaumont Basin Watermaster. This varies from year to year. (2) Does not include the 340 AF pumped for the City of Banning.

DWR Table 6-9 Retail: Water Supplies — Projected											
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	Additional Detail on Water Supply	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											
Groundwater (not desalinated)	Little San Gorgonio Canyon	2,070	2,200	2,070	2,200	2,070	2,200	2,070	2,200	2,070	2,200
Groundwater (not desalinated)	Beaumont Basin (Reallocated unused overlier rights)	1,322		1,286		1,165		1,099		1,099	
Groundwater (not desalinated)	Beaumont Basin total forbearance water	471		547		1,387		1,542		1,542	
Groundwater (not desalinated)	Return flows	280		514		868		922		1,155	
Stormwater Use	Beaumont MDP Line 16	185		185		185		185		185	
Stormwater Use	Misc. Stormwater	0		350		350		350		350	
Purchased or Imported Water	From SGPWA for Replenishment of Beaumont Basin (Potable water)	8,868		9,300		9,966		10,717		11,281	
Recycled Water	From City of Beaumont for Landscaping	2,017		2,381		2,892		2,955		2,915	
Purchased or Imported Water	To supplement Non-Potable Water Supply (Purchased for Replenishment)	276		246		0		0		0	
Groundwater (not desalinated)	Non-Potable Groundwater at Mouth of Edgar Canyon	0		0		300		300		300	
Groundwater (not desalinated)	Non-Potable Groundwater along San Timoteo Creek	0		0		600		600		600	
Purchased or Imported Water	From SGPWA for Banking	1,500		1,200		1,000		1,000		1,000	
Purchased or Imported Water	Additional Imported Water Available from SGPWA	1,572		396		2,389		2,994		3,769	
Total		18,561	2,200	18,475	2,200	23,172	2,200	24,734	2,200	26,266	2,200
Total Imported Water Required		10,644		10,746		10,966		11,717		12,281	
Total Imported Water Available to BCVWD from SGPWA (See Table 7-8)		12,216		11,142		13,355		14,711		16,050	
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*											
NOTES:											

DWR Table 7-1A 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		2073	100%
Single-Dry Year	1991	1117	54%
Consecutive Dry Years 2nd Year	1990	1173	57%
Consecutive Dry Years 3rd Year	1989	1230	59%
Consecutive Dry Years 4th Year	1989	1267	61%
Consecutive Dry Years 5th Year	1988	1305	63%
Consecutive Dry Years 5th Year	1987	1367	66%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and

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

NOTES: Multiple versions of Table 7-1 are used. This version indicates supplies from Edgar Canyon.

DWR Table 7-1B 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		10034	100%
Single-Dry Year	2014	865	9%
Consecutive Dry Years 2nd Year	2014	2163	22%
Consecutive Dry Years 3rd Year	1990	3114	31%
Consecutive Dry Years 4th Year	1988	4498	45%
Consecutive Dry Years 5th Year	1988	4152	41%
Consecutive Dry Years 6th Year	1987	4325	43%

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and

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

NOTES: Multiple versions of Table 7-1 are used. This version indicates SGPWA's available supplies from the State Water Project.

DWR Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	18,561	18,475	23,172	24,734	26,266
Demand totals *(autofill from Table 4-3)*	16,929	17,873	18,869	19,846	20,660
Difference	1,632	602	4,303	4,888	5,606
NOTES: (1) Demand totals includes all potable and non-potable demand, plus any recycled water demand from golf courses. Totals also include imported water supplies (demands) for additional groundwater banking. See Section 4 for more detail.					

DWR Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	7,349	7,878	8,944	9,195	9,792
Demand totals*	15,429	16,673	18,097	19,124	19,988
Difference	(8,080)	(8,795)	(9,153)	(9,929)	(10,196)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: (1)The difference between the Supply and Demand will be supplemented with water from the Beaumont Basin. (2) Demand totals do not include additional groundwater banking as described in Table 4-3					

DWR Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	7,349	7,878	8,944	9,195	9,792
	Demand totals	15,429	16,673	18,097	19,124	19,988
	Difference	(8,080)	(8,795)	(9,153)	(9,929)	(10,196)
Second year	Supply totals	8,708	8,963	9,893	1,002	10,481
	Demand totals	13,886	15,006	16,287	17,212	17,989
	Difference	(5,178)	(6,043)	(6,394)	(16,210)	(7,508)
Third year	Supply totals	9,617	9,778	10,626	10,623	11,021
	Demand totals	12,343	13,338	14,478	15,299	15,990
	Difference	(2,726)	(3,560)	(3,852)	(4,676)	(4,969)
Fourth year	Supply totals	11,006	11,093	11,833	11,674	11,956
	Demand totals	11,572	12,505	13,573	14,343	14,991
	Difference	(566)	(1,412)	(1,740)	(2,669)	(3,035)
Fifth year	Supply totals	10,639	10,697	11,456	11,331	11,642
	Demand totals	10,800	11,671	12,668	13,387	13,992
	Difference	(161)	(974)	(1,212)	(2,056)	(2,350)
Sixth year *(optional)*	Supply totals	10,709	10,747	11,482	11,329	11,625
	Demand totals	9,257	10,004	10,858	11,474	11,993
	Difference	1,452	743	624	(145)	(368)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: The difference between the Supply and Demand will be supplemented with water from the Beaumont Basin.						

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

2021	Total
Total Water Use	14,054
Total Supplies	5,650
Surplus/Shortfall w/o WSCP Action	(8,404)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	8404
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	14,268
Total Supplies	8,630
Surplus/Shortfall w/o WSCP Action	(5,638)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	4211
WSCP - use reduction savings benefit	1,427
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	10%

2023	Total
Total Water Use	14,473
Total Supplies	9,794
Surplus/Shortfall w/o WSCP Action	(4,679)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	1785
WSCP - use reduction savings benefit	2,895
Revised Surplus/(shortfall)	1
Resulting % Use Reduction from WSCP action	20%

2024	Total
Total Water Use	14,648
Total Supplies	11,600
Surplus/Shortfall w/o WSCP Action	(3,048)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	3,662
Revised Surplus/(shortfall)	614
Resulting % Use Reduction from WSCP action	25%

2025	Total
Total Water Use	15,429
Total Supplies	10,639
Surplus/Shortfall w/o WSCP Action	(4,790)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	161
WSCP - use reduction savings benefit	4,629
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	30%

DWR Table 8-1
Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)
1	Up to 10%	Up to 10% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes voluntary public demand reduction of 10%, and community outreach encouraging conservation.
2	Up to 20%	Up to 20% reduction in normal, "long term" water supply (including conjuntive use water in storage); includes any actions from Shortage Level 1. Response actions include mandatory 10% reduction - Increased public outreach, restaurants serve water upon request, lodging must offer opt out of linen services
3	Up to 30%	Up to 30% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 and 2. Response actions include mandatory 20% reduction - limit landscape irrigation to certain number of days per week
4	Up to 40%	Up to 40% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1, 2 and 3. Response actions include mandatory 25% reduction - limit irrigation of lawns to once a week except for lawns and turf irrigate with recycled water, restrict water use for decorative water features, limit filling of pools only to cases where appropriate cover is in place
5	Up to 50%	Up to 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 4. Response actions include mandatory 30% reduction - prohibit filling of swimming pools, washing of automobiles only limited to facilities using recycled water, prohibit potable water use for construction activities,industrial water users required to reduce water use (food processing, concrete mixing plant)
6	>50%	Greater than 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 5. Response actions include mandatory 30% reduction - prohibit landscape irrigation except for irrigation with use of recycled water, industrial water users required to further reduce water use (food processing, concrete mixing plant)
NOTES:		

DWR Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
All	Improve Customer Billing	1%	Continue to provide customers with detailed breakdowns of water use and encourage water use efficiency	No
All	Expand Public Information Campaign	1%		
All	Landscape - Restrict or prohibit runoff from landscape irrigation	2-5%	Part of BCVWD's Water Waste Provisions	No
All	Other - Prohibit use of potable water for washing hard surfaces	2-5%	Part of BCVWD's Water Waste Provisions - prohibits watering of concrete	No
All	Other - Require automatic shut of hoses	2-5%		No
2	CII - Lodging establishment must offer opt out of linen service	2-5%		No
2	CII - Restaurants may only serve water upon request	2-5%		No
2	Water Features - Restrict water use for decorative water features, such as fountains	1-3%		No
3	Landscape - Limit landscape irrigation to specific days	10-15%	2 days per week	Yes
3	Other	5%	Public awareness programs expanded to schools	No
4	Landscape - Limit landscape irrigation to specific days	5-10%	1 day per week, addition 5-10% reduction in shortage gap	Yes
5	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	1-2%	Topping off existing pools with cover	No
5	Water Features - Restrict water use for decorative water features, such as fountains	1-2%		No
5	Other - Prohibit use of potable water for construction and dust control	5-15%	Dependent upon size of construction operations and duration of construction	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	10-15%		Yes
5	CII - Other CII restriction or prohibition	10-15%	Work with high demand commercial/industrial water users to reduce water use	Yes
6	Moratorium or Net Zero Demand Increase on New Connections	10-20%	Dependent upon development conditions, Board of Directors to suspend approval of "Will Serve Letters"	Yes
NOTES:				

DWR Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
All	Expand Public Information Campaign	1-5%	
All	Improve Customer Billing	1-5%	
All	Other Actions (describe)	5-10%	Continue to work with to install drought tolerant, low water using plantings
2 - 6	Stored Emergency Supply	25-50%	BCVWD has the ability to withdraw groundwater from its storage account in the Beaumont Basin.
4	Other Purchases	5-10%	Work with SGPWA to obtain additional imported water supply
NOTES:			

DWR Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Beaumont	Yes	Yes
Banning	Yes	Yes
Yucaipa	Yes	Yes
Calimesa	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Riverside County	Yes	Yes
San Bernardino County	Yes	Yes
NOTES:		

California Department of Water Resources SB X7-7 Forms

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	59,258
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.*	
	12,492			-		-	**12,492**
*** 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 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**
12,492	59,258	**188**
NOTES:		

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
188	-	-	-	-	188	242	**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:

Appendix E
BCVWD 2020 Water Shortage Contingency Plan

Water Shortage Contingency Plan

Beaumont-Cherry Valley Water District

July 2021

Table of Contents

Water Shortage Contingency Plan

Overview

The Beaumont Cherry Valley Water District (BCVWD or District) has prepared this Water Shortage Contingency Plan (WSCP) in order to prepare for and respond to potential water supply shortages and constraints in accordance with recent changes to the California Water Code's (CWC) Urban Water Management Planning Act. Good planning and preparation can help maintain reliable supplies and reduce the impacts of supply interruptions.

This Plan describes BCVWD's water shortage contingency planning, and replaces the WSCP which was adopted with BCVWD's 2015 UWMP update on January 11, 2017. The planning includes staged (six stages or shortage levels) responses to a water shortage, such as a drought, that occurs over a period of time, as well catastrophic supply interruptions, which occur suddenly.

1 Water Supply Reliability Analysis

> ***CWC 10632***
>
> *(a) (1) The analysis of water supply reliability conducted pursuant to Section 10635.*

1.1 BCVWD Water Supply Portfolio

BCVWD's overall water supply portfolio includes imported State Project Water (SPW) (recharged and/or taken from banked storage), groundwater from Little San Gorgonio Creek (Edgar Canyon) and the Beaumont Basin, and non-potable groundwater from the Beaumont Basin. The District has a total of 24 wells (1 well is a standby). One of the wells, Well 26, can pump into either the potable water or the non-potable water system. Currently, it is pumping into the non-potable water system. The Beaumont Basin is adjudicated and managed by the Beaumont Basin Watermaster. BCVWD augments its groundwater supply with imported SPW (or other sources) from the San Gorgonio Pass Water Agency (SGPWA) which is recharged at BCVWD's recharge facility.

The wells in Edgar Canyon provide about 15-20% percent of the total annual supply; the rest is pumped from wells in the Beaumont Basin supplemented by recharged imported water. BCVWD's total well capacity (Edgar Canyon and Beaumont Basin) is about 27.5 mgd with the largest well out of service, which is greater than the current 21.6 mgd maximum day demand (2020).

With the majority of the District's water supply sourced from the SPW (or other sources), the District's supply is subject to varying reliability dependent upon climate conditions in the State. As indicated above, the District purchases imported water from the SGPWA. One of the State's water contractors, SGPWA has a contract with DWR for a maximum total volume of 17,300

acre-feet per year (AFY). Typically, SGPWA can rely on an allocation from the SWP of about 58% of its max contract amount, or 10,034 AF. Of this amount, BCVWD may purchase its share, which is based on the proportion of SPW purchased by other retailers in the SGPWA's service area. The SGPWA is also actively seeking additional opportunities for water transfers or exchanges from other agencies which have a surplus in supply. Any supply secured by SGPWA additional to its Table A Allocation would also be able to be purchased by BCVWD based on the proportion of volume purchased by other retailers in the area.

In the future, the District plans to utilize recycled water from the City of Beaumont to meet most of the landscape irrigation demands, which are currently served with potable water. The District also intends to supplement its supply with captured and recharged stormwater, through various projects within the District as well as a joint project with RCFC&WCD (MDP Line 16).

1.2 Past, Current, and Projected Demand

The District provides potable and non-potable water to a total of approximately 19,215 residential, commercial, industrial, institutional and agricultural accounts in the City of Beaumont and the unincorporated community of Cherry Valley in Riverside and San Bernardino Counties. The bulk of the District's total demand is residential demand (in 2020, single family residential water demand made up approximately 70% of the total demand). Approximately 11% of the District's demand for 2020 was from commercial, industrial, and institutional accounts (CII). Non-potable landscape irrigation demands made up approximately 12% of the District's total demand. In 2020, the District's total water demand (potable and non-potable) was 13,818 AF. This demand includes metered data only and miscellaneous losses.

The current estimated population served by the District is 59,000. The City of Beaumont is currently experiencing rapid growth and is expected to nearly double in population by 2045. Cherry Valley, however, is not anticipated to be subject to substantial growth. Based on the projected populations in the District's service area, it is estimated that the total (potable, non-potable and recycled) water demands will increase to about 20,660 AFY by 2045 (including estimated losses). This results in an increase in demand of about 30% over the next 25 years.

1.3 Normal and Dry Year Reliability Analysis

As part of the District's 2020 UWMP update, an analysis was performed to asses the potential water supplies available over the next 25 years under normal conditions, as well as the condition of a single and multiple dry years. The single and five consecutive dry year analysis was based primarily on historical SPW deliveries to BCVWD, as imported water makes up the majority of the District's supply. The District also considered how single or five consecutive dry years would affect projected stormwater capture efforts, as well as the availability of recycled water. Please see Section 8 of the District's 2020 UWMP for the methodologies used to prepare this assessment.

Table 1 below indicates the District's projected supplies and demands over the next 25 years under normal (average) conditions.

Table 1 – Normal Year Supply and Demand Comparison

Table 1: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045
Supply totals, AF	18,561	18,475	23,172	24,734	26,266
Demand total, AF	16,929	17,873	18,869	19,846	20,660
Surplus (shortfall), AF	1,632	602	4,303	4,888	5,606
NOTES: (1) Demand totals includes all potable and non-potable demand, plus any recycled water demand from golf courses. Totals also include imported water supplies (demands) for additional groundwater banking.					

As can be seen in Table 1, the District can anticipate a surplus in supply over the next 25 years. It is noted that included in the demand totals is the District's need for additional imported water for drought proofing. Any additional surplus would also be added to the District's storage account in the Beaumont Basin.

Table 2 below indicates the District's projected supplies and demands over the next 25 years under single dry year conditions.

Table 2 – Single Dry Year Supply and Demand Comparison

Table 2: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045
Supply totals, AF	7,349	7,878	8,944	9,195	9,792
Demand totals, AF	15,429	16,673	18,097	19,124	19,988
Surplus (shortfall), AF	(8,080)	(8,795)	(9,153)	(9,929)	(10,196)
NOTES: (1)The difference between the Supply and Demand will be supplemented with water from the Beaumont Basin. (2) Demand totals do not include additional groundwater banking.					

During single dry year conditions, it is expected that the District's supply will need to be supplemented with water from the storage account in the Beaumont Basin. It is noted that there will be no additional demands for groundwater banking during dry years.

In the analysis of the District's water service reliability, the projected supplies and demands were for multiple dry years were also considered. Please see Table 3 below.

Table 3 – Multiple Dry Years Supply and Demand Comparison

Table 3: Multiple Dry Years Supply and Demand Comparison						
		2025	2030	2035	2040	2045
First year	Supply totals	7,349	7,878	8,944	9,195	9,792
	Demand totals	15,429	16,673	18,097	19,124	19,988
	Difference	**(8,080)**	**(8,795)**	**(9,153)**	**(9,929)**	**(10,196)**
Second year	Supply totals	8,099	8,409	9,093	8,978	8,933
	Demand totals	13,886	15,006	16,287	17,212	17,989
	Difference	**(5,787)**	**(6,597)**	**(7,194)**	**(8,234)**	**(9,056)**
Third year	Supply totals	8,741	8,979	9,600	9,400	9,295
	Demand totals	12,343	13,338	14,478	15,299	15,990
	Difference	**(3,602)**	**(4,359)**	**(4,878)**	**(5,899)**	**(6,695)**
Fourth year	Supply totals	9,800	9,939	10,478	10,161	9,970
	Demand totals	11,572	12,505	13,573	14,343	14,991
	Difference	**(1,772)**	**(2,566)**	**(3,095)**	**(4,182)**	**(5,021)**
Fifth year	Supply totals	9,471	9,631	10,184	9,891	9,721
	Demand totals	10,800	11,671	12,668	13,387	13,992
	Difference	**(1,329)**	**(2,040)**	**(2,484)**	**(3,496)**	**(4,271)**
NOTES: The difference between the Supply and Demand will be supplemented with water from the Beaumont Basin.						

During single dry year conditions, it is expected that the District's supply will need to be supplemented with water from the storage account in the Beaumont Basin. It is noted that there will be no additional demands for groundwater banking during dry years.

In the analysis of the District's water service reliability, the projected supplies and demands were for multiple dry years were also considered. Please see Table 3 below.

In Section 8 of the 2020 UWMP, the District also prepared a Drought Risk Assessment, which analyzes the supplies and demands over the next 5 years, assuming that 2021 is the first year of a five consecutive year drought. In the Drought Risk Assessment supply augmentation

benefits and the reduction savings benefits outlined in this WSCP hereon are assumed. Please see Table 4 below:

Table 4 – Drought Risk Assessment

Drought Risk Assessment Water Use/Supplies	Demand and Supplies (AFY)				
	2021	2022	2023	2024	2025
Total Water Use	14,054	14,268	14,473	14,648	15,429
Total Supplies	5,650	8,630	9,794	11,600	10,639
Surplus (shortfall) w/o WSCP Action	(8,404)	(5,638)	(4,679)	(3,048)	(4,790)
Planned WSCP Actions					
WSCP - supply augmentation benefit	8404	4211	1784	0	161
WSCP - use reduction savings benefit	0	1,427	2,895	3,662	4,629
Revised Surplus	0	0	0	614	0
Resulting % Use Reduction from WSCP Action	0%	10%	20%	25%	30%

2 Annual Water Supply and Demand Assessment Procedures

Each water supplier is now required to submit an Annual Water Supply and Demand Assessment (Annual Assessment) starting July 1, 2022.

> *CWC 10632*
>
> *(a)(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*
>
> *(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.*
>
> *(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:*
>
> *(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.*
>
> *(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*
>
> *(iii) Existing infrastructure capabilities and plausible constraints.*
>
> *(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.*
>
> *(v) A description and quantification of each source of water supply.*
>
> *CWC 10632.1.*
>
> *An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.*

2.1 Decision-Making Process

The Annual Assessment that is to be submitted to DWR every year would be brought to the BCVWD Board of Directors (Board) prior to submittal for DWR consideration. BCVWD will assess each year's imported and local supplies as well as potable and non-potable demands based on its final SWP allocation, additional available imported water exchanges or transfers through SGPWA, climate, and local groundwater conditions, as determined by the Beaumont Basin Watermaster.

Based on the foregoing, BCVWD will assess the water shortage level for that year and determine the most appropriate response action(s) to encourage water conservation among its customers. BCVWD will ensure that the Annual Assessment will be submitted to the Board to allow adequate time for review and comment prior to the required DWR submittal date of July 1st (or 14 days after notification of final SWP Allocation, whichever is later), for the assessment.

A summary of the District's proposed decision-making process for preparing and adopting the Annual Assessment is indicated in Table 5 below:

Table 5 – Annual Water Supply and Demand Assessment Decision Making Process

	Activity
December - April	Annual water supply and demand review
April - May	Prepare Annual Water Supply and Demand Assessment based on findings of supply and demand review. Present Assessment to General Manager for review.
May	Public notification of the intent to adopt Annual Water Supply and Demand Assessment at the June Board of Directors meeting.
June	Presentation of findings in the Annual Water Supply and Demand Assessment and necessary shortage response actions to the Board of Directors for Approval by Resolution.
July 1st (or 14 days from Notification of Final Allocation, whichever is later)	Submittal of final adopted Annual Water Supply and Demand Assessment to the State of California Department of Water Resources.

2.2 Data Inputs and Methodologies

As required by the Water Code, the District will evaluate its available water supply reliability assuming current conditions for that year, as well as a single dry year. The data inputs and methodologies which will be used to formulate a recommendation regarding the District's supply reliability and any necessary response actions are included below:

- Water Supply: The District will analyze groundwater production records and final SWP allocations available for the current year, and compare projected supplies to historical averages.
- Unconstrained Demands: The District will analyze consumption data for the current year, and based on supply assess whether any or which shortage response action(s) are appropriate to encourage water conservation. For the upcoming year the District will utilize data from the 2020 UWMP update, as well as any newly available data regarding water consumption and population growth to project anticipated unconstrained demands.
- Single Dry Year Demands: Similarly, the District will compare current year consumption data with historical demand data for a single dry year, and project demands for the upcoming year.

- Infrastructure: The District will assess the current operating conditions of its wells and booster pumps, and recharge facilities and determine whether any maintenance will be scheduled or would likely be scheduled for the upcoming year. The District would coordinate any findings from analysis for available supplies with potential shortfalls in groundwater production if maintenance is required.

3 Six Standard Water Shortage Stages

CWC 10632 (a)(3)

(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

The District proposes a six-stage plan of action in the event of an extended drought condition or loss of supply. The action levels for each stage are presented in the subsections that follow (summarized in Table 6), and the water supply reduction stages are provided in Table 8-1. These stages could be implemented as a result of BCVWD water shortages, including reduction in imported water allocation, or mandatory water conservation targets by the Governor's office.

Table 6 (DWR Submittal Table 8-1) – Water Shortage Contingency Plan Levels

DWR Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (*Narrative description*)
1	Up to 10%	Up to 10% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes voluntary public demand reduction of 10%, and community outreach encouraging conservation.
2	Up to 20%	Up to 20% reduction in normal, "long term" water supply (including conjuntive use water in storage); includes any actions from Shortage Level 1. Response actions include mandatory 10% reduction - Increased public outreach, restaurants serve water upon request, lodging must offer opt out of linen services
3	Up to 30%	Up to 30% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 and 2. Response actions include mandatory 20% reduction - limit landscape irrigation to certain number of days per week
4	Up to 40%	Up to 40% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1, 2 and 3. Response actions include mandatory 25% reduction - limit irrigation of lawns to once a week except for lawns and turf irrigate with recycled water, restrict water use for decorative water features, limit filling of pools only to cases where appropriate cover is in place
5	Up to 50%	Up to 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 4. Response actions include mandatory 30% reduction - prohibit filling of swimming pools, washing of automobiles only limited to facilities using recycled water, prohibit potable water use for construction activities,industrial water users required to reduce water use (food processing, concrete mixing plant)
6	>50%	Greater than 50% reduction in normal, "long term" water supply (including conjuntive use water in storage); response actions includes any actions from Shortage Levels 1 - 5. Response actions include mandatory 30% reduction - prohibit landscape irrigation except for irrigation with use of recycled water, industrial water users required to further reduce water use (food processing, concrete mixing plant)
NOTES:		

These stages and the percent reductions in demand are based on BCVWD's experience during the state mandated water conservation program targets comparing 2020 with a similar period in

2015, where BCVWD was able to reduce consumption by 24.3% for the period May 2015 through April 2016. This was done through the restrictions in Board of Directors Resolution 2015-05, which limited watering to two days per week due to mandatory reductions in the District's demands of 36% (when compared to 2013 water usages).

In establishing the "Stages," BCVWD has the advantage of the Beaumont Basin, its large storage capacity for banked water, and BCVWD's 80,000 AF storage account. BCVWD currently has 39,750 AF in storage, despite an average SWP allocation of only 43% for the period 2017 through 2020 (approximately 15% difference from normal, "long-term" supply). BCVWD's plan is to purchase additional imported water (when available in advance of annual need (i.e., conjunctive use purchases)) over the amount needed to meet annual demands to add to the storage account balance each year, including making up for any shortfall(s) that may occur during dry years. This results in a conjunctive use activity and hence the averaged annual water supply approach outlined herein and as identified in Table 6, above.

4 Shortage Response Actions

CWC 10632

(a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

4.1 Shortage Level 1 (Potential Shortage – Voluntary Reduction)

Shortage Level 1 occurs when:

- Up to a 10% reduction in normal (average), "long-term" averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages approximately 48% of regional annual supply requirements (water orders) over a two-year (or longer) period

The District declares a water shortage and imposes voluntary water conservation. In this shortage level, the District shall notify all its customers that water use reduction is highly encouraged. The District will recommend a voluntary 10% water use reduction based on an established base year to be determined by the District at the time Stage 1 is implemented. At the same time, the District shall implement its own public awareness program to encourage the efficient use of water. This will be accomplished by bill stuffers, website information, and social media postings.

4.2 Shortage Level 2 (Minor Shortage – Mandatory Reduction)

Shortage Level 2 occurs when:

- Up to a 20% reduction in normal (average), "long-term" averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 38% up to 48% over a three-year (or longer) period.

During Stage 2, all efforts to encourage conservation would remain in effect, however a 10% reduction in demand would be mandatory. Public outreach continues to occur, however an increase in public awareness is achieved through coordination with the City of Beaumont, Riverside County, and SGPWA. In addition, restaurants are required to only serve water to patrons upon request, and lodging facilities must allow guests to opt out of linen services.

4.3 Shortage Level 3 (Moderate Shortage – Mandatory Reduction)

Shortage Level 3 occurs when:

- Up to a 30% reduction in normal (average), "long-term" averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 28% up to a 38% over a three-year (or longer) period

Restrictions up to Shortage Level 3 will still be mandatory. At this point, the District will initiate water restrictions similar to Resolution 2015-05 and require a 20% reduction in demand from an established base year. In this stage, the District will impose restrictions similar to Resolution 2015-05: but limit lawn watering to two times per week (assigned days based on street address) and no filling of new swimming pools. Topping off swimming pools is permitted. No new construction meters will be approved. Use of recycled or non-potable water for construction activities will be encouraged. The District may adopt financial incentives to encourage efficient water use. Public awareness programs will expand to schools.

4.4 Shortage Level 4 (Severe Shortage – Mandatory Reduction)

Shortage Level 4 occurs when:

- Up to a 40% reduction in normal (average), "long-term" averaged supply occurs Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 18% and 28%, over a three-year (or longer) period

Restrictions up to Shortage Level 4 will still be mandatory. In this shortage level, the District will impose restrictions similar to Resolution 2015-05 to require a 25% reduction in demand, but make more stringent including limiting lawn watering to once a week except for lawns and turf irrigated with recycled or non-potable water. No filling of swimming pools; topping off swimming pools may be permitted. Hand watering of plantings is permitted two days per week if using a hose with a shut-off nozzle. Restrict water use for decorative water features. The District may adopt financial incentives to encourage efficient water use. Stricter enforcement penalties will be developed. At this Stage, the District will appoint a Water Conservation Advisory Committee. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to reduce water use.

4.5 Shortage Level 5 (Critical Shortage – Mandatory Reduction)

Shortage Level 5 occurs when:

- Up to a 50% reduction in normal (average), "long-term" averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages between a minimum of 8% up to 18%, over a four-year (or longer) period, or

Restrictions up to Shortage Level 5 will still be mandatory. In this shortage, the District will impose restrictions similar to Resolution 2015-05 but prohibit lawn watering except for lawns and turf irrigated with recycled or non-potable water. No filling of swimming pools; topping off only permitted on covered pools. Hand watering of plantings is permitted one day per week, if using a hose with a shut-off nozzle. Washing of automobiles limited only to facilities using recycled water. Use of potable water for construction will be prohibited; only recycled or non-potable water may be used for construction activities, as determined by the Board of Directors. Trucking recycled water may be necessary for grading and construction activities. The District will adopt financial incentives to encourage efficient water use. Stricter enforcement penalties will be developed. The Water Conservation Advisory Committee will continue to function. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to reduce water use.

4.6 Shortage Level 6 (Extreme Shortage – Mandatory Reduction)

Shortage Level 6 occurs when:

- A greater than 50% reduction in normal (average), “long-term” averaged supply occurs
- Imported water supplies (SWP allocation and other imported supplies) averages less than 8%, over a four-year (or longer) period, or

Restrictions up to Shortage Level 6 will still be mandatory. In this shortage level, the District will impose restrictions similar to Resolution 2015-05. No topping off swimming pools. Use of potable water for construction will be prohibited; only recycled or non-potable water may be used for construction activities, as determined by the Board of Directors. Trucking recycled water may be necessary for grading and construction activities. “Will serve” letters or annexations will not be approved by the Board of Directors. The District will adopt financial incentives to encourage efficient water use. Stricter enforcement penalties will be developed. The Water Conservation Advisory Committee will continue to function. This committee will comprise of officials from the District, the City of Beaumont, and the Cherry Valley community. Public awareness in schools will continue. District staff will work with high water using commercial/retail and industrial facilities to develop programs to further reduce water use.

5 Impacts of Shortage Level Response Actions

Table 7, below quantifies the percent of demand reduction for each shortage response action in relation to its associated shortage taken.

Table 7 (DWR Submittal Table 8-2) – Demand Reduction Actions

DWR Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
All	Improve Customer Billing	1%	Continue to provide customers with detailed breakdowns of water use and encourage water use efficiency	No
All	Expand Public Information Campaign	1%		
All	Landscape - Restrict or prohibit runoff from landscape irrigation	2-5%	Part of BCVWD's Water Waste Provisions	No
All	Other - Prohibit use of potable water for washing hard surfaces	2-5%	Part of BCVWD's Water Waste Provisions - prohibits watering of concrete	No
All	Other - Require automatic shut of hoses	2-5%		No
2	CII - Lodging establishment must offer opt out of linen service	2-5%		No
2	CII - Restaurants may only serve water upon request	2-5%		No
2	Water Features - Restrict water use for decorative water features, such as fountains	1-3%		No
3	Landscape - Limit landscape irrigation to specific days	10-15%	2 days per week	Yes
3	Other	5%	Public awareness programs expanded to schools	No
4	Landscape - Limit landscape irrigation to specific days	5-10%	1 day per week, addition 5-10% reduction in shortage gap	Yes
5	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	1-2%	Topping off existing pools with cover	No
5	Water Features - Restrict water use for decorative water features, such as fountains	1-2%		No
5	Other - Prohibit use of potable water for construction and dust control	5-15%	Dependent upon size of construction operations and duration of construction	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	10-15%		Yes
5	CII - Other CII restriction or prohibition	10-15%	Work with high demand commercial/industrial water users to reduce water use	Yes
6	Moratorium or Net Zero Demand Increase on New Connections	10-20%	Dependent upon development conditions, Board of Directors to suspend approval of "Will Serve Letters"	Yes
NOTES:				

5.1 Supply Augmentation

Table 8 (DWR Submittal Table 8-3) – Supply Augmentation

DWR Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
All	Expand Public Information Campaign	1-5%	
All	Improve Customer Billing	1-5%	
All	Other Actions (describe)	5-10%	Continue to work with to install drought tolerant, low water using plantings
2 - 6	Stored Emergency Supply	25-50%	BCVWD has the ability to withdraw groundwater from its storage account in the Beaumont Basin.
4	Other Purchases	5-10%	Work with SGPWA to obtain additional imported water supply
NOTES:			

Table 8 presents some consumption reduction methods, separate from the restrictions and prohibitions, presented previously.

- **Expand Public Information** – BCVWD should work with SGPWA and the other retailers in the San Gorgonio Pass to develop a consistent, region-wide message that could include regular articles in the local newspapers, displays at major events, low water using garden workshops, etc. Expand into the schools and service clubs. Work with the high-volume water users in the commercial/retail/industrial area to determine if there are water reduction opportunities.
- **Improved Customer Billing** – Continue providing customers with their historic usage for the past year in graphical format (bar charts) with target levels for water conservation. Provide data on other typical customers in the District's service area.
- **Rebates for Irrigation Efficiency Improvements** – BCVWD should work with SGPWA to provide rebates to improve irrigation efficiency including drip systems and smart controllers. Replacement of spray nozzles with rotating nozzles reduces water consumption significantly and prevents overspray.
- **Rebates for Turf Replacement** – BCVWD should work with SGPWA to provide rebates to convert turf areas to low water using drought tolerant plantings.
- **Other Methods Not on DWR's List:**
    - Work further with the City of Beaumont, County of Riverside, and developers to install drought tolerant, low water using plantings in common areas and street medians. Reduce turf and planted areas in new home construction.

- Convert existing street median and common area turf areas to drought tolerant, low water using plantings.
- Begin using recycled water for landscape irrigation. This method has the greatest potential for reducing potable water use in the BCVWD service area.
- Restrict construction water use to non-potable water.
- Implement more tiers in the rate structure to reflect the cost for purchase of imported water as a result of higher use.

6 Operational Changes

One of the water conservation measures that can be used to reduce water loss is implementing automatic meter readings. With the use of automatic meters, water leaks would be easy to locate as the water meter would continuously run throughout the night. This knowledge would allow District staff to inform the residents of the situation and further actions could then be taken to fix the leak and ultimately, conserve water. Currently (2020), BCVWD is working through a Capital Improvement Project which includes installing automatic meters throughout the service area, but has not been fully converted.

The District currently does not perform extensive main flushing or any hydrant flow testing; there is minimal need to adjust District operations to conserve water unmetered water.

7 Emergency Response Plan

The mot recently published Emergency Response Plan (ERP) is from 2011. Currently (2020), District staff is in the process of updating this ERP to define procedures for modern emergencies, as well as assessing the District's plan for responding to catastrophic water supply interruption. The 2011 ERP defines the procedures that District staff is to complete in the case of various emergencies including, but not limited to:

- Medical Emergencies
- Flooding
- Snow/Ice Damage
- Earthquakes
- Hurricanes/Tornados

The District performs routine maintenance and assessment of the operating conditions off all its facilities, in order to ensure minimal opportunities for supply shortages or supply interruptions. As the District continues to grow, it will continue to refine its maintenance procedures to continue to provide reliable supplies to its customers.

8 Seismic Risk Assessment and Mitigation Plan

CWC 10632.5

(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

8.1 BCVWD Facilities

The center of the District's service area is located approximately 8 to 10 miles south of the San Andreas Fault. If a major earthquake were to occur along the San Andreas Fault in the Pass area, many of the BCVWD's facilities could be affected.

In order to minimize possible damage due to a significant earthquake, the District's Cherry Tanks, Upper Edgar Tank, Taylor Tank, the Vineland Tanks and the Hannon Tank are all equipped with flexible connectors (EBBA Iron Flex-tends) for movement during an earthquake. Upper Edgar, Cherry Tank III, Vineland II and III, and Taylor Tank are all anchored to their ring wall foundation and have been designed to resist seismic shaking. These are all relatively new tanks constructed since the year 2000 and designed and constructed to recent AWWA standards. These tanks should be capable of resisting significant earthquake shaking. BCVWD's other tanks were designed according to AWWA standards in effect at the time they were constructed; but over time the design standards have improved and become more stringent. The greatest vulnerability will be with the older steel tanks located in the northern part of the District's service area in Cherry Valley.

Experience with other earthquakes, e.g., Landers, magnitude 7.3 (1992), has shown steel water tanks survive but do suffer some minor structural damage. Observations of some of the water tanks showed the inlet/outlet piping sheared off and some "elephant footing" of the side wall occurred but the tanks remained intact. This is what would be expected with BCVWD's older tanks. The newer tanks should survive with little or no damage. The older tanks should be able to be put back into service within a week, if not sooner.

Wells and well pumps could be damaged during a very severe earthquake but they should be able to be returned to service within a month depending on the availability of replacement parts and equipment to repair the pumps.

Piping breaks could be expected to occur, but these can be repaired quickly. BCVWD has an inventory of repair clamps, fittings and pipe as well as staff and equipment to make these repairs.

BCVWD has also constructed emergency “interties” at various locations along Highland Springs Road so that water can be supplied in either direction between the City of Banning and BCVWD.

9 Communication Protocols

> ***CWC 10632 (a)(5)***
>
> *Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:*
>
> *(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.*
>
> *(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.*
>
> *(C) Any other relevant communication*

The communication protocol procedure currently relies in the 2011 ERP. After BCVWD has completely assessed the situation and determined that further actions are to be put into effect, coordinating with the public and other entities are the next steps to be taken. In the near future, BCVWD will use the Annual Assessment that is to be reported to DWR as a tool to address each year's supplies and demands to help determine the appropriate response. In the most recent drought, each BCVWD resident was mailed letters informing them of the issues and the steps that need to be taken to conserve water. For future emergencies, the residents will be emailed the water conservation letters along with their bill to reduce costs. The public information that is to be sent out will be a notice informing them of the situation (e.g. the shortage level the District is currently in), the steps that BCVWD is taking to conserve water, and the steps that each resident should follow to do their part in reducing the water demand.

The District is also actively providing information on its website for public consumption to inform customers of ways to reduce consumption, as well as to update them in the case of an emergency as determined by the State or by the Board of Directors.

A summary of the District's communication protocols is included in Table 9 below.

Table 9 – Communication Protocols

Stage of Assessment	Summary	Communication Method
Water Shortage Announcement	District staff will notify the public, neighboring Cities/Agencies, and other interested parties of the findings in the Annual Water Supply and Demand Assessment. Notification will be presented prior to the June Board of Directors meeting during which the Assessment will be presented and adopted.	Press Release, Websites, Social Media, Water Bill Inserts
Water Shortage Level Declaration	Occurs following the adoption of the Annual Water Supply and Demand Assessment.	Press Release, Websites, Social Media, Board of Directors Meeting
Water Shortage Response Actions	Occurs continuously following the adoption of the Assessment. Response actions remain in effect until such time that it is determined that the Water Shortage Level status has changed.	Press Release, Websites, Social Media, Board of Directors Meeting

10 Compliance and Enforcement

> ***CWC 10632 (a)(6)***
>
> *For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

BCVWD does not have a standard enforcement procedure during “normal” supply years, however, does have a plan that adjusts rates during drought declarations and also for enforcing water conservation measures during the periods of a drought. BCVWD is currently in the process of converting over standard water meters to automatic meters. This would allow District staff to determine what residents may have water leaks and address the issues in a timely manner. It would also allow District staff to enforce the demand reduction actions that require residents to only water on certain days of the week. The severity of the enforcement would increase as the Shortage Levels increase. Many of the water reduction actions such as requiring customers repair leaks in a timely manner and restricting water use for decorative fountains would require further actions by the District to enforce. Discussions on how to enforce demand reduction actions such as these are still in discussion to determine the most efficient method. The repercussions that are to take place are listed below under Legal Authorities for first-, second-, and third-time offenders.

11 Legal Authorities

CWC 10632 (a)(7)

(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code. Water Code Section 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.

BCVWD has provisions within its Rules and Regulations to establish charges for excessive water use. Currently, the District has a 3-tiered rate structure. For single family residences the tier structure ranges from 0 – 16 HCF (Tier 1), 17-34 HCF (Tier 2) and greater than 34 HCF (Tier 3). The unit price for water use increases with each tier. For multi-family residential, the unit price is a single set rate with no tier structure. BCVWD could increase these charges, initiate consumption surcharges for excessive use to cover the additional cost of imported replacement water, and/or provide for additional tiers upon proper notification and following the procedures established by Proposition 218. This is not something that can be done on short notice, however.

BCVWD has “water waster” provisions in Part 15 of its Rules and Regulations.

> “15-1 PROHIBITION OF WATER WASTER – No person, firm, or corporation shall use, deliver, or apply waters received from this District in any manner that causes the loss, waste, or the applications of water for unbeneficial purposes. Within the meaning of this Regulation, any waters that are allowed to escape, flow, and run into areas which do not make reasonable beneficial use of such water, including but not limited to streets, gutters, drains, channels, and uncultivated lands, shall be presumed to be wasted contrary to the prohibitions of these Rules and Regulations.
>
> 1) Upon the first failure of any person, firm, or corporation to comply, this District shall serve or mail a warning notice upon any person determined to be in violation of these Rules and Regulations.
>
> 2) Upon the second failure of any person, firm, or corporation to so comply, the water charges of any such consumer shall be doubled until full compliance with these Rules or Regulations has been established to the satisfaction of the Board of Directors of the District.

3) Upon the third failure of any person, firm, or corporation to so comply, the District shall terminate water service to any connection through which waters delivered by the District are wasted in violation of these Rules and Regulations."

In Resolution 2016-05, there was a list of financial penalties for violation of the water restrictions in the Resolution.

- Upon the first failure of any person, firm, or corporation to comply, the District shall serve or mail a warning notice upon any person determined to be in violation of the District's Rules and Regulations.
- Upon the second failure of any person, firm, or corporation to so comply, the water charges of any such customer shall be doubled until full compliance with the District's Rules and Regulations has been established to the satisfaction of the Board of Directors of the District.
- Upon the third failure of any person, firm, or corporation to so comply, the District shall terminate water service to any connection through which waters delivered by the District are wasted in violation of the District's Rules and Regulations.

11.1 Water Shortage Contingency Resolution

Resolution No._____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT (DISTRICT) ADOPTING WATER USE RESTRICTIONS TO PROTECT THE WATER SYSTEM AND RATEPAYERS OF BEAUMONT-CHERRY VALLEY WATER DISTRICT

WHEREAS, the District's Operations Policies and Procedures Manual, Part III, Section 1.E., District Emergency Declaration allows the General Manager, in consultation with the Board of Directors President, the ability to declare a "District Emergency" with ratification by the Board of Directors within fourteen days (14) at a regular, special or emergency Board meeting; and

WHEREAS, the District is experiencing water shortages of significant impact which results in a District emergency relating to water supply, therefore;

NOW THEREFORE, BE IT RESOLVED by the Board of Directors that full support is given to the General Manager to make the appropriate recommendations which may include increased restrictions on watering days and hours, restrictions on washing vehicles, etc., restrictions on large water users, restrictions on flushing of water lines, restrictions on the filling of swimming pools, and increases in the current penalties for not complying with water conservation restrictions for the duration of the emergency, and urge full support and cooperation from the ratepayers of the District.

ADOPTED this ___ day of _____, _____, by the following vote:

Ayes:

Noes:

Abstain:

Absent:

_____	_____
Director , President of the Board of Directors of Beaumont-Cherry Valley Water District	Director , Secretary of the Board of Directors of Beaumont-Cherry Valley Water District

12 Financial Consequences of WSCP

> ***CWC 10632 (a)(8)***
>
> *A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:*
>
> *(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
>
> *(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
>
> *(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1. [retail urban suppliers only]*

Rather than identify the financial impacts of each prohibition on BCVWD's financial position, the impacts will be assessed on a "percent reduction in water demand" basis.

The District's current water rate structure includes a service (meter) charge (bimonthly, regardless of how much water is used), and a 3-tiered commodity. For single family residences the tier structure ranges from 0 – 16 HCF (Tier 1), 17-34 HCF (Tier 2) and greater than 34 HCF (Tier 3). The unit price for water use increases with each tier. For multi-family residential, the unit price is a single set rate with no tier structure. This accounts for the generally lower family incomes in multi-family residences. In addition, there is a power surcharge and an imported water surcharge per 100 cu ft of water used.

During times of drought, the revenue from the commodity charge and the power and imported water surcharges would be reduced by an amount equal to the water conservation effort. The meter charge would not be affected. But, the reduction in water consumption will also reduce the power consumption needed to pump and produce water and reduce the need for imported water, essentially balancing out the reduction in imported water surcharge revenue.

To further offset any revenue losses, the District also has a drought surcharge policy in place. Please see Figure 1 below:

Figure 1 – BCVWD Drought Surcharge Policy

5-1.4 DROUGHT SURCHARGES

In the event that the District activates water supply drought rates, customers will be notified in advance of the below surcharges. Drought rates are generally triggered by the declaration of a specific water shortage by the California Department of Water Resources, or alternatively, by the District's Board of Directors.

The Surcharge Rate below is additive to the current Commodity Rate, per unit of water, at the date of presentation. The Surcharge Rate in effect is dependent on the drought stage declared.

	Stage 1	Stage 2	Stage 3	Stage 4
Reduction in Use	10%	20%	30%	40%
Surcharge	$0.17	$0.36	$0.60	$0.92

Although the District is proposing 6 Shortage Levels as part of the WSCP, the existing drought surcharges can still be applied. For example, “Stage 1” in the District’s drought surcharges policy correlates to a 10% reduction in use; the drought surcharge identified would be applied to Shortage Level 1 previously described in this section.

For 2020, the adopted budget estimated $3.4 million in fixed meter (service) charges and $5.2 million in water sales revenue including agricultural water sales and construction water sales (commodity charge). Water importation surcharges were budgeted at $3.5 million and SCE power surcharge at $1.6 million. So total “variable” revenue would be approximately $13.68 million. The fixed meter (service) charges would not be affected by a reduction in water sales. All the other revenues and expenses would be.

Assuming a water reduction of 25% is required for a 2-month long-term interruption, the annual reduction would be (2/12) * 25% or 4.2%. The resultant loss in water sales revenue would be $575,000, i. e, 0.042 *$13.68 million; the reduction, electricity and imported water purchase would be $215,000. The net would be an annual loss of revenue of $360,000.

A 50% reduction in water demand for a period of 1 month would result in a similar net annual revenue loss of $360,000.

The costs above do not include additional staff overtime that may be required providing notifications, production, publication, and mailing of notices, updates, water conservation messages, inspection, and enforcement. An estimate of $25,000 for each “event” is reasonable to cover these costs. The total annual impact could be in the $225,000 to $250,000 range.

The BCVWD audited Financial Report for 2020 showed BCVWD with over $176.4 million in net assets of which $29.1 million was in unrestricted funds. The impact of a net $175,000 loss due to a water reduction of 25% over a 2-month period (or 50% for a 1-month period), or even another 10% reduction on an annual basis will not affect BCVWD’s operation. The $476,000 is less than 4% of the District’s unrestricted cash assets. As a result, no special action is needed.

13 Monitoring, Reporting, and WSCP Refinement Procedures

CWC 10632 (a)(9)

For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

CWC 10632 (a)(10)

Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

When the higher Shortage levels are declared, the demand will be closely monitored by District staff on a month-to-month basis to compare the projected water reduction with the actual values. If the District staff finds that the demand reduction actions are not meeting the projected volumes, it will be reassessed and brought to the Board to determine if a higher Shortage Level should be put into effect. There will need to be a few months in between announcing the different shortage levels as it is expected to take some time before the results are shown, however, District staff will be monitoring it closely.

14 Special Water Feature Distinction

CWC 10632 (b)

For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

In Table 6, swimming pools are separate and distinct from “water features.” Water features include decorative ponds, water hazards on golf courses, artificial waterfalls, and fountains. Golf course water hazard ponds that serve as irrigation reservoirs or balancing ponds, supplied with private wells are not covered by BCVWD’s water restrictions. BCVWD water restrictions do not apply to water features supplied by private wells.

Stock ponds for animal watering are not covered under the swimming pool or water feature restrictions. Recycled and non-potable water may be used without restriction in water features and ponds if approved for use.

15 Plan Adoption, Submittal and Availability

> ***CWC 10632 (c)***
>
> *The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

The District's WSCP will be adopted following the same process as the District's 2020 UWMP update. Both the WSCP and the UWMP will be adopted by the Board of Directors, submitted to DWR for review, and implemented.

The District has scheduled a public hearing for review of the 2020 UWMP, which includes the WSCP, on July 22, 2021. At such time the Board of Directors may direct District staff to make appropriate changes and/or corrections based on public comment, or make a motion to adopt the UWMP and the WSCP. The District will make the adopted WSCP available to the public on the District's website no later than 30 days after it is adopted.

The District will notify the public of any amendments made to the WSCP after it has been formally adopted by the Board.

DRAFT

RESOLUTION _____

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE BEAUMONT CHERRY VALLEY WATER DISTRICT
WATER SHORTAGE CONTINGENCY REGULATIONS

The Board of Directors of the Beaumont Cherry Valley Water District (District) does hereby resolve:

WHEREAS, the Urban Water Management Plan (UWMP), 2020 Update, adopted by the Board contains provisions relating to water shortages and contingencies due to catastrophic outage of state, regional and District supply facilities, hydrologic conditions resulting in lower-than-normal water supply or other factors which prevent the District from providing as much water as is customary; and

WHEREAS, the District endeavors to supply water in sufficient quantities to protect public health; and

WHEREAS, the District has established five stages of action in the UWMP 2020 Update which impose both voluntary and mandatory reductions in water use depending on the severity of the shortage,

NOW THEREFORE, BE IT RESOLVED, by the Board of Directors of the District as follows:

1. The General Manager is hereby authorized to declare a Water Shortage according to the Water Shortage Contingency Plan in the UWMP 2020 Update
2. The General Manager is hereby authorized and directed to implement the various stages identified in the UWMP 2020 Update
3. The General Manager shall monitor water use and recommend to the Board of Directors additional measures as may be required to conserve water resources and ensure public health.

ADOPTED this ___ day of _____, _____, by the following vote:

Ayes:

Noes:

Abstain:

Absent:

Director , President
of the Board of Directors of Beaumont-
Cherry Valley Water District

Director , Secretary
to the Board of Directors of Beaumont-
Cherry Valley Water District

Appendix F
Beaumont Basin Adjudication

ORIGINAL COPY

JOSEPH S. AKLUFI (Bar No. 68619)
AKLUFI AND WYSOCKI
3403 Tenth Street, Suite 610
Riverside, California 92501
(909)682-5480 Office
(909)682-2619 Fax

NO FILING FEE REQUIRED PER GOVERNMENT CODE, SEC. 6103

FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

FEB - 4 2004

Attorneys for Plaintiff, SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF RIVERSIDE, RIVERSIDE COURT

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY, a public agency,

Plaintiff,

vs.

CITY OF BANNING, a municipal corporation; BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district; YUCAIPA VALLEY WATER DISTRICT, a county water district; PLANTATION ON THE LAKE LLC, a California limited liability company; SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association; SOUTH MESA MUTUAL WATER COMPANY, a mutual water company; CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company; OAK VALLEY PARTNERS LP, a Texas limited partnership; SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation; SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation; MANHEIM, MANHEIM & BERMAN, a California General Partnership; WALTER M. BECKMAN, individually and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990; THE ROMAN CATHOLIC BISHOP of San Bernardino,

CASE NO. RIC 389197

STIPULATION FOR ENTRY OF JUDGMENT ADJUDICATING GROUNDWATER RIGHTS IN THE BEAUMONT BASIN

a California corporation; MERLIN PROPERTIES, LLC; LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991; and DOES 1 through 500, inclusive,

Defendants.

I. STIPULATING PARTIES IDENTIFIED

The following parties, and each of them, agree to the terms of this Stipulation:

Plaintiff:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Overlying Defendants:

1. SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association
2. CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company
3. OAK VALLEY PARTNERS LP, a Texas limited partnership
4. SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation
5. SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation
6. MANHEIM, MANHEIM & BERMAN, a California general partnership
7. WALTER M. BECKMAN, individually, and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990
8. THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation
9. MERLIN PROPERTIES, LLC
10. LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991
11. PLANTATION ON THE LAKE LLC, a California limited liability company

Appropriating Defendants:

1. CITY OF BANNING, a municipal corporation
2. BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district
3. SOUTH MESA MUTUAL WATER COMPANY, a mutual water company
4. YUCAIPA VALLEY WATER DISTRICT, a county water district

///

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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

II. RECITALS

WHEREAS, plaintiff is a joint powers public agency, formed in 2001 for the purpose, among others, of preparing and implementing a Water Resources Management Plan for the San Timoteo Watershed and the waters tributary thereto, including the Beaumont Basin, in order to conserve local water supplies, improve surface and subsurface water quality and quantity, and to protect and enhance groundwater storage, for the benefit of the public;

WHEREAS, the Beaumont Basin, also known as the Beaumont Storage Unit, is the common source of water supply for appropriative water uses within the communities of Banning, Beaumont, Cherry Valley and Calimesa, and for various overlying uses including, but not limited to, golf courses and related facilities and agricultural production, including egg production and related agricultural irrigation uses;

WHEREAS, the maximum quantity of water which can be produced from the Beaumont Basin, at safe yield, is currently estimated to be 8650 acre feet per year, and the total groundwater production from the Beaumont Basin has exceeded and continues to exceed its safe yield;

WHEREAS, much of the land area within and adjacent to the Beaumont Basin is proposed to be intensively developed with residential, commercial and industrial uses, which will place additional demands on local water resources;

WHEREAS, it is estimated that the Beaumont Basin has the capability of storing more than 200,000 acre feet of water for overlying and appropriative use by water users within and

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RIVERSIDE, CA 92501
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adjacent to the Beaumont Basin;

WHEREAS, the plaintiff proposes to invest substantial public funds to construct facilities that will enable the storage of water within the Beaumont Basin, in addition to the storage that occurs naturally;

WHEREAS, the Overlying and Appropriating Defendants wish to secure the provision and availability of a reliable, affordable, long-term water supply for the area within plaintiff's jurisdiction, making reasonable and beneficial use of the native groundwater in the Beaumont Basin, and other local water resources, promoting the importation of water into the area, and storage of such water, and local surface waters, in the Beaumont Basin;

WHEREAS, the Overlying Defendants believe that it is in their best interest to enter into this Stipulation and be subject to the attached Judgment, rather than continue to litigate the safe yield of the Beaumont Basin, the quantity of their overlying rights, both historical and unexercised, the rights they may have to use the storage volume existing beneath their respective lands, and other issues;

WHEREAS, in order to protect existing overlying and appropriative uses and to justify and protect the public investment necessary to utilize the available groundwater storage capacity in the Beaumont Basin, it is necessary to adjudicate the Beaumont Basin and to define the respective water rights of the overlying and appropriative producers of groundwater.

NOW, THEREFORE, the undersigned parties, and each of them, hereby agree to the following Stipulated Terms.

LAW OFFICES
AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

III. STIPULATED TERMS

1. Form of Judgment: Judgment may be filed and entered in the form attached hereto as Exhibit "1" and made a part hereof.

2. Fees and Costs: Each party shall bear its own costs, attorneys fees and litigation expenses arising out of this adjudication.

3. Waiver: Notice of entry of judgment, the right to trial, stay of execution and appeal, is hereby waived, except as expressly set forth in the Judgment.

4. Binding Effect: This Stipulation and all obligations herein, shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

5. Construction and Interpretation: No adverse construction or interpretation of this Stipulation shall be made under the Civil Code simply because the parties drafted or participated in the drafting of this Stipulation. The terms of the Judgment shall be interpreted to further the purposes of this Stipulation.

6. Jurisdiction and Venue: The Superior Court of California in and for the County of Riverside shall have jurisdiction of this matter. In the event of any litigation arising out of this Stipulation, venue shall conclusively be deemed to lie in the County of Riverside.

7. Advice of Counsel: The undersigned each have had the opportunity to consult with or have consulted with their own legal counsel regarding this Stipulation and all matters set forth herein, or have knowingly waived the right to do so.

LAW OFFICES
AKLUFI / WYSOCKI
3403 TENTH STREET, SUITE 810
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: 1/6/04

By _____
President, Board of Directors

CITY OF BANNING

Dated: 12/23/03

By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____

By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____

By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____

By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____

By _____
President, Board of Directors

AKLUFI AND WYSOCKI
3403 TEN REET, SUITE 610
RIVERSIDE, LIFORNIA 9250
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: July 3, 2003 By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

AKLUFI AND WYSOCKI
3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: 10/1/03 By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: 7/30/03 By James H Krueger
~~President, Board of Directors~~
Manager of Meadows Management Company LLC, Manager

SHARONDALE MESA OWNERS ASSOCIATION

Dated: _____ By _____
President, Board of Directors

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

8. Authority: Each person executing this Stipulation on behalf of any of the undersigned has been fully empowered to execute this Stipulation and that all necessary action for the execution of this Stipulation has been taken.

IT IS SO STIPULATED:

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

Dated: _____ By _____
President, Board of Directors

CITY OF BANNING

Dated: _____ By _____
Mayor

BEAUMONT-CHERRY VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

YUCAIPA VALLEY WATER DISTRICT

Dated: _____ By _____
President, Board of Directors

PLANTATION ON THE LAKE LLC

Dated: _____ By _____
President, Board of Directors

SHARONDALE MESA OWNERS ASSOCIATION

Dated: June 27, 2003 By Lena Jo Alexander
President, Board of Directors

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: 6-27-03

By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____

By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____

By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____

By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____

By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____

By _____

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____

By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: 7-31-2003

By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____

By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____

By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____

By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____

By _____

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____ By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____ By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____ By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____ By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____ By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____ By _____

ARNOLDI AND WYSOCKI
3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____ By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____ By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____ By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: July 8, 2003 By Thomas C. Gustafson
~~President~~, ~~Board of Directors~~
CHIEF Executive Officer

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____ By _____
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____ By _____

3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

SOUTH MESA MUTUAL WATER COMPANY

Dated: _____ By _____
President, Board of Directors

CALIFORNIA OAK VALLEY GOLF AND RESORT LLC

Dated: _____ By _____
President, Board of Directors

OAK VALLEY PARTNERS LP,
A Texas Limited Partnership

By: Oak Valley-Hunt, Inc.
a Texas Corporation
Managing General Partner

Dated: _____ By _____
D. CRAIG MARTIN

Its: President

SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA

Dated: _____ By _____
President, Board of Directors

SUNNY-CAL EGG AND POULTRY COMPANY

Dated: _____ By Michael Markison
President, Board of Directors

MANHEIM, MANHEIM & BERMAN

Dated: _____ By Hartley Berman

3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 788-5480

Dated: 7-23-03

Walter M. Beckman
WALTER M. BECKMAN

Dated: 7-23-03

Walter M. Beckman
WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

Dated: _____

_____
CECIL MERLE MURRAY

MERLIN PROPERTIES, LLC

Dated: _____ By _____

Dated: _____

_____
LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

_____
DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

AKLUFI AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CA 92501
(909) 682-5480

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

_____
JUDGE OF THE SUPERIOR COURT

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation

Dated: 9/18/03

By Msgr. Gerald M. Fogg

MERLIN PROPERTIES, LLC

Dated: _____

By _____

Dated: _____

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

AKLUFI & WYSOCKI
3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

JUDGE OF THE SUPERIOR COURT

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

THE ROMAN CATHOLIC BISHOP of San Bernardino, a California corporation

Dated: _____ By _____

MERLIN PROPERTIES, LLC

Dated: July 31, 2003 By Paul L Rubman

Dated: _____

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: _____

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: _____

JUDGE OF THE SUPERIOR COURT

3403 TENTH ST[illegible], SUITE 610
RIVERSIDE, C[illegible]RNIA 92501
(909) 6[illegible]-5480

Dated: _____

WALTER M. BECKMAN

Dated: _____

WALTER M. BECKMAN, Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990

Dated: _____

CECIL MERLE MURRAY

MERLIN PROPERTIES, LLC

Dated: _____ By _____

Dated: 7-23-03

Leonard M. Stearns

LEONARD M. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

Dated: 7-23-03

Dorothy D. Stearns

DOROTHY D. STEARNS, individually and as Trustee of the LEONARD M. STEARNS FAMILY TRUST OF 1991

ARNOLD AND WYSOCKI
3403 TENTH ST, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

APPROVAL AND ORDER

The foregoing Stipulation is hereby approved and is so ordered.

Dated: FEB - 4 2004

GARY TRANBARGER

JUDGE OF THE SUPERIOR COURT

ORIGINAL COPY

JOSEPH S. AKLUFI (Bar No. 68619)
AKLUFI AND WYSOCKI
3403 Tenth Street, Suite 610
Riverside, California 92501
(909)682-5480 Office
(909)682-2619 Fax

Attorneys for Plaintiff, SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

NO FILING FEE REQUIRED PER GOVERNMENT CODE, SEC. 6103

FILED
SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

FEB - 4 2004

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF RIVERSIDE, RIVERSIDE COURT

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY, a public agency,

Plaintiff,

vs.

CITY OF BANNING, a municipal corporation; BEAUMONT-CHERRY VALLEY WATER DISTRICT, an irrigation district; YUCAIPA VALLEY WATER DISTRICT, a county water district; PLANTATION ON THE LAKE LLC, a California limited liability company; SHARONDALE MESA OWNERS ASSOCIATION, an unincorporated association; SOUTH MESA MUTUAL WATER COMPANY, a mutual water company; CALIFORNIA OAK VALLEY GOLF AND RESORT LLC, a California limited liability company; OAK VALLEY PARTNERS LP, a Texas limited partnership; SOUTHERN CALIFORNIA SECTION OF THE PROFESSIONAL GOLFERS ASSOCIATION OF AMERICA, a California corporation; SUNNY-CAL EGG AND POULTRY COMPANY, a California corporation; MANHEIM, MANHEIM & BERMAN, a California General Partnership; WALTER M. BECKMAN, individually and as Trustee of the BECKMAN FAMILY TRUST dated December 11, 1990; THE ROMAN CATHOLIC BISHOP of San Bernardino,

CASE NO. RIC 389197

JUDGMENT PURSUANT TO STIPULATION ADJUDICATING GROUNDWATER RIGHTS IN THE BEAUMONT BASIN

LAW OFFICES
AKLUFI AND WYSOCKI
3403 TENTH STREET, SUITE 610
RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

a California corporation; MERLIN PROPERTIES, LLC; LEONARD M. STEARNS and DOROTHY D. STEARNS, individually and as Trustees of the LEONARD M. STEARNS FAMILY TRUST OF 1991; and DOES 1 through 500, inclusive,

Defendants.

I. INTRODUCTION

1. Pleadings, Parties and Jurisdiction

The complaint herein was filed on February 20, 2003, seeking an adjudication of water rights, injunctive relief and the imposition of a physical solution. The defaults of certain defendants have been entered, and certain other defendants dismissed. Other than defendants who have been dismissed or whose defaults have been entered, all defendants have appeared herein. This Court has jurisdiction of the subject matter of this action and of the parties herein.

2. Stipulation for Judgment

Stipulation for Entry of Judgment has been filed by and on behalf of all defendants who have appeared herein.

3. Definitions

As used in this Judgment, these terms shall have the following meanings:

A. Appropriator or Appropriator Parties: the pumpers identified in Exhibit "C" attached hereto.

B. Appropriator's Production Right: consists of an Appropriator's share of Operating Yield, plus (1) any water acquired by an Appropriator from an Overlying Producer or other Appropriator pursuant to this Judgment, (2) any water

LAW OFFICES
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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

withdrawn from the Appropriator's storage account, (3) and New Yield created by the Appropriator.

C. Appropriative Water: the amount of Safe Yield remaining after satisfaction of Overlying Water Rights.

D. Appropriative Water Right: each Appropriator's share of Appropriative Water, such share expressed as a percentage as shown on Exhibit "C".

E. Beaumont Basin or Beaumont Storage Unit: the area situated within the boundaries shown on Exhibit "A" attached hereto.

F. Conjunctive Use: the storage of water in a Groundwater Basin for use at a later time.

G. Groundwater: water beneath the surface of the ground within the zone below the water table in which soil is saturated with water.

H. Groundwater Basin: an area underlain by one or more permeable formations capable of furnishing a substantial water supply.

I. Groundwater Storage Agreement: a standard form of written agreement between the Watermaster and any Person requesting the storage of Supplemental Water.

J. Groundwater Storage Capacity: the space available in a Groundwater Basin that is not utilized for storage or regulation of Safe Yield and is reasonably available for Stored Water and Conjunctive Use.

K. Minimal Producer: any Producer who pumps 10 or fewer acre feet of Groundwater from the Beaumont Basin per year.

LAW OFFICES
AKLUFI & WYSOCKI
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RIVERSIDE, CALIFORNIA 92501
(909) 682-5480

L. New Yield: increases in yield in quantities greater than historical amounts from sources of supply including, but not limited to, capture of available storm flow, by means of projects constructed after February 20, 2003, as determined by the Watermaster.

M. Operating Yield: the maximum quantity of water which can be produced annually by the Appropriators from the Beaumont Basin, which quantity consists of Appropriative Water plus Temporary Surplus.

N. Overdraft: a condition wherein the total annual production from a Groundwater Basin exceeds the Safe Yield thereof.

O. Overlying Parties: the Persons listed on Exhibit "B", who are owners of land which overlies the Beaumont Basin and have exercised Overlying Water Rights to pump therefrom. Overlying Parties include successors in interest and assignees.

P. Overlying Water Rights: the quantities decreed to Overlying Parties in Column 4 of Exhibit "B" to this Judgment.

Q. Overproduction: by an Appropriator, measured by an amount equal to the Appropriator's actual annual production minus the Appropriator's Production Right. By a new overlying producer, an amount equal to what the overlying producer pumped during the year.

R. Party (Parties): any Person(s) named in this action, or who has intervened, or has become subject to this Judgment either through stipulation, trial or otherwise

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S. Person: any individual, partnership, association, corporation, governmental entity or agency, or other organization.

T. Physical Solution: the physical solution set forth in Part V of this Judgment.

U. Produce, Producing, Production, Pump or Pumping: the extraction of groundwater.

V. Producer or Pumper: any Person who extracts groundwater.

W. Recycled Water: has the meaning provided in Water Code Section 13050(n) and includes other nonpotable water for purposes of this Judgment.

X. Safe Yield: the maximum quantity of water which can be produced annually from a Groundwater Basin under a given set of conditions without causing a gradual lowering of the groundwater level leading eventually to depletion of the supply in storage. The Safe Yield of the Beaumont Basin is 8650 acre feet per year in each of the ten (10) years following entry of this Judgment.

Y. San Timoteo Watershed Management Authority: a joint powers public agency whose members are the Beaumont-Cherry Valley Water District, the City of Beaumont, the South Mesa Mutual Water Company and the Yucaipa Valley Water District.

Z. Stored Water: Supplemental Water stored in the Beaumont Basin pursuant to a Groundwater Storage Agreement with the Watermaster.

AA. Supplemental Water: water imported into the

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Beaumont Basin from outside the Beaumont Basin including, without limitation, water diverted from creeks upstream and tributary to Beaumont Basin and water which is recycled and useable within the Beaumont Basin.

BB. Temporary Surplus: the amount of groundwater that can be pumped annually in excess of Safe Yield from a Groundwater Basin necessary to create enough additional storage capacity to prevent the waste of water.

CC. Watermaster: the Person appointed by the Court to administer and enforce the Physical Solution.

4. List of Exhibits

The following exhibits are attached to this Judgment and made a part hereof:

Exhibit "A" -- "Location Map of Beaumont Basin"
Exhibit "B" -- "Overlying Owners and Their Water Rights"
Exhibit "C" -- "Appropriators and Their Water Rights"
Exhibit "D" -- "Legal Description of Lands of the Overlying Parties"
Exhibit "E" -- "Location of Overlying Producer Parcels and Boundary of the Beaumont Basin"

II. INJUNCTIONS

1. Injunction Against Unauthorized Production of Beaumont Basin Water

Each party herein is enjoined, as follows:

A. Overlying Parties: Each defendant who is an Overlying Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from producing groundwater from the Beaumont Basin in any five-year period hereafter in excess of five times the share of the Safe Yield assigned to the Overlying Parties as set

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forth in Column 4 of Exhibit "B", as more fully described in the Physical Solution.

B. Appropriator Parties: Each defendant who is an Appropriator Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from producing groundwater from the Beaumont Basin in any year hereafter in excess of such party's Appropriator's Production Right, except as additional annual Production may be authorized by the provisions of the Physical Solution.

2. Injunction Against Unauthorized Storage or Withdrawal of Stored Water

Each and every Party, and its officers, agents, employees, successors and assigns, is hereby enjoined and restrained from storing Supplemental Water in the Beaumont Basin for withdrawal, or causing withdrawal of water stored by that Party, except pursuant to the terms of a written Groundwater Storage Agreement with the Watermaster and in accordance with Watermaster Rules and Regulations. Any Supplemental Water stored in the Beaumont Basin, except pursuant to a Groundwater Storage Agreement, shall be deemed abandoned and not classified as Stored Water.

III. DECLARATION AND ADJUSTMENT OF RIGHTS

1. Overlying Rights

The Overlying Parties are currently exercising Overlying Water Rights in the Beaumont Basin. As shown on Exhibit "B", the aggregate Projected Maximum Production of water from the Beaumont Basin pursuant to Overlying Water Rights is 8610 acre feet and the Overlying Water Rights are individually decreed, in Column 4 of Exhibit "B", for each Overlying Party. The Overlying Parties

8650

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shall continue to have the right to exercise their respective Overlying Water Right as set forth in Column 4 of Exhibit "B" except to the extent their respective properties receive water service from an Appropriator Party, as contemplated by Paragraph III.3 of this Judgment.

2. Appropriator's Share of Operating Yield

Each Appropriator Party's share of Operating Yield is shown on Exhibit "C". Notwithstanding any other provision of this Judgment, each Appropriator Party may use its Appropriator's Production Right anywhere within its service area.

3. Adjustment of Rights

A. The Overlying Parties shall have the right to exercise their respective Overlying Water Rights except as provided in this Paragraph 3.

B. To the extent any Overlying Party requests, and uses its Exhibit "B", Column 4 water to obtain water service from an Appropriator Party, an equivalent volume of potable groundwater shall be earmarked by the Appropriator Party which will serve the Overlying Party, up to the volume of the Overlying Water Right as reflected in Column 4 of Exhibit "B" attached hereto, for the purpose of serving the Overlying Party. The intent of this provision is to ensure that the Overlying Party is given credit towards satisfying the water availability assessment provisions of Government Code, Section 66473.7 et seq. and Water Code, Section 10910 et seq. or other similar provisions of law, equal to the amount of groundwater earmarked hereunder.

C. When an Overlying Party receives water service as

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provided for in subparagraph III.3.B the Overlying Party shall forebear the use of that volume of the Overlying Water Right earmarked by the Appropriator Party. The Appropriator Party providing such service shall have the right to produce the volume of water foregone by the Overlying Party, in addition to other rights otherwise allocated to the Appropriator Party.

D. Should the volume of the Overlying Water Right equal or exceed the volume of potable groundwater earmarked as provided in subparagraph 3.B, the Appropriator Party which will serve the Overlying Party shall (i) impose potable water charges and assessments upon the Overlying Party and its successors in interest at the rates charged to the then-existing regular customers of the Appropriator Party, and (ii) not collect from such Overlying Party any development charge that may be related to the importation of water into the Beaumont Basin. The Appropriator Party which will serve the Overlying Party pursuant to Subparagraph III.3.B shall also consider, and negotiate in good faith regarding, the provision of a meaningful credit for any pipelines, pump stations, wells or other facilities that may exist on the property to be served.

E. In the event an Overlying Party receives Recycled Water from an Appropriator Party to serve an overlying use served with groundwater, the Overlying Water Right of the Overlying Party shall not be diminished by the receipt and use of such Recycled Water. Recycled Water provided by an Appropriator Party to an Overlying Party shall satisfy the

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criteria set forth in the California Water Code including, without limitation, the criteria set forth in Water Code Sections 13550 and 13551. The Appropriator Party which will serve the Recycled Water shall have the right to use that portion of the Overlying Water Right of the Overlying Party offset by the provision of Recycled Water service pursuant to the terms of this subparagraph; provided, however, that such right of use by the Appropriator Party shall no longer be valid if the Recycled Water, provided by the Appropriator Party to the Overlying Party, does not satisfy the requirements of Sections 13550 and 13551 and the Overlying Party ceases taking delivery of such Recycled Water.

F. Nothing in this Judgment is intended to impair or adversely affect the ability of an Overlying Party to enter into annexation or development agreements with any Appropriator Party.

G. Oak Valley Partners LP ("Oak Valley") is developing its property pursuant to Specific Plans 216 and 216A adopted by the County of Riverside ("County") in May 1990, and Specific Plan 318 adopted by the County in August, 2001, (Specific Plans 216, 216A and 318 are collectively referred to as the "Specific Plans"). The future water supply needs at build-out of the Specific Plans will greatly exceed Oak Valley's Projected Maximum Production, as reflected in Exhibit "B" to the Judgment, and may be as much as 12,811 acre feet per year. Oak Valley has annexed the portion of its property now within the City of Beaumont into the Beaumont-Cherry Valley Water District ("BCVWD"), and is in

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the process of annexing the remainder portion of its property into the Yucaipa Valley Water District ("YVWD"), in order to obtain retail water service for the development of the Oak Valley property pursuant to the Specific Plans (for purposes of this subparagraph BCVWD and YVWD are collectively referred to as the "Water Districts", and individually as a "Water District"). YVWD covenants to use its best efforts to finalize the annexation of the Oak Valley property within the Calimesa City limits. Oak Valley, for itself and its successors and assigns, hereby agrees, by this stipulation and upon final annexation of its property by YVWD, to forbear from claiming any future, unexercised, overlying rights in excess of the Projected Maximum Production of Exhibit "B" of 1806 acre feet per year. As consideration for the forbearance, the Water Districts agree to amend their respective Urban Water Management Plans ("UWMP") in 2005 as follows: BCVWD agrees that 2,400 acre feet per year of projected water demand shall be included for the portion of Oak Valley to be served by BCVWD in its UWMP, and YVWD agrees to include 8,000 acre feet per year of projected water demand as a projected demand for the portion of Oak Valley to be served by YVWD in its UWMP by 2025. The Water Districts agree to use their best judgment to accurately revise this estimate to reflect the projected water demands for the UWMP prepared in 2010. Furthermore, the Water Districts further agree that, in providing water availability assessments prior to 2010, as required by Water Code §10910 and water supply verifications as required by Government Code §§66455.3 and

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66473.7, or any similar statute, and in maintaining their respective UWMP, each shall consider the foregoing respective projected water demand figures for Oak Valley as proposed water demands. The intent of the foregoing requirements is to ensure that Oak Valley is credited for the forbearance of its overlying water rights and is fully accounted for in each Water District's UWMP and overall water planning. The Water Districts' actions in performance of the foregoing planning obligations shall not create any right or entitlement to, or priority or allocation in, any particular water supply source, capacity or facility, or any right to receive water service other than by satisfying the applicable Water District's reasonable requirements relating to application for service. Nothing in this subparagraph G is intended to affect or impair the provision of earmarked water to Overlying Parties who request and obtain water service from Appropriator Parties, as set forth in subparagraph III.3.B, above.

H. Persons who would otherwise qualify as Overlying Producers based on an interest in land lying within the City of Banning's service area shall not have the rights described in this Paragraph III.3.

4. Exemption for Minimal Producers

Unless otherwise ordered by the Court, Minimal Producers are exempt from the provisions of this Judgment.

IV. CONTINUING JURISDICTION

Full jurisdiction, power and authority is retained and reserved to the Court for purposes of enabling the Court, upon

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application of any Party, by a motion noticed for at least a 30-day period (or consistent with the review procedures of Paragraph VII.6 herein, if applicable), to make such further or supplemental order or directions as may be necessary or appropriate for interim operation of the Beaumont Basin before the Physical Solution is fully operative, or for interpretation, or enforcement or carrying out of this Judgment, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions hereof consistent with the rights herein decreed; except that the Court's jurisdiction does not extend to the redetermination of (a) Safe Yield during the first ten years of operation of the Physical Solution, and (b) the fraction of the share of Appropriative Water of each Appropriator.

V. THE PHYSICAL SOLUTION

1. Purpose and Objective

In accordance with the mandate of Section 2 of Article X of the California Constitution, the Court hereby adopts, and orders the parties to comply with, a Physical Solution. The purpose of the Physical Solution is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of Beaumont Basin, to facilitate conjunctive utilization of surface, ground and Supplemental Waters, and to satisfy the requirements of water users having rights in, or who are dependent upon, the Beaumont Basin. Such Physical Solution requires the definition of the individual rights of all Parties within the Beaumont Basin in a manner which will fairly allocate the native water supplies and which will provide for equitable sharing of costs of Supplemental Water.

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2. Need for Flexibility

The Physical Solution must provide maximum flexibility and adaptability in order that the Watermaster and the Court may be free to use existing and future technological, social, institutional and economic options. To that end, the Court's retained jurisdiction shall be utilized, where appropriate, to supplement the discretion granted herein to the Watermaster.

3. Production and Storage in Accordance With Judgment

This Judgment, and the Physical Solution decreed herein, address all Production and Storage within the Beaumont Basin. Because the Beaumont Basin is at or near a condition of Overdraft, any Production outside the framework of this Judgment and Physical Solution will potentially damage the Beaumont Basin, injure the rights of all Parties, result in the waste of water and interfere with the Physical Solution. The Watermaster shall bring an action or a motion to enjoin any Production that is not in accordance with the terms of this Judgment.

4. General Pattern of Operation

One fundamental premise of the adjudication is that all Producers shall be allowed to pump sufficient water from the Beaumont Basin to meet their respective requirements. Another fundamental premise of the adjudication is that Overlying Parties who pump no more than the amount of their Overlying Water Right as shown on Column 4 of Exhibit "B" hereto, shall not be charged for the replenishment of the Beaumont Basin. To the extent that pumping exceeds five (5) times the share of the Safe Yield assigned to an Overlying Party (Column 4 of Exhibit "B") in any five (5) consecutive years, or the share of Operating Yield

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Right of each Appropriator Party, each such Party shall provide funds to enable the Watermaster to replace such Overproduction.

5. Use of Available Groundwater Storage Capacity

A. There exists in the Beaumont Basin a substantial amount of available Groundwater Storage Capacity. Such Capacity can be reasonably used for Stored Water and Conjunctive Use and may be used subject to Watermaster regulation to prevent injury to existing Overlying and Appropriative water rights, to prevent the waste of water, and to protect the right to the use of Supplemental Water in storage and Safe Yield of the Beaumont Basin.

B. There shall be reserved for Conjunctive Use a minimum of 200,000 acre feet of Groundwater Storage Capacity in the Beaumont Basin provided that such amount may be reduced as necessary to prevent injury to existing water rights or existing uses of water within the Basin, and to prevent the waste of water. Any Person may make reasonable beneficial use of the Groundwater Storage Capacity for storage of Supplemental Water; provided, however, that no such use shall be made except pursuant to a written Groundwater Storage Agreement with the Watermaster. The allocation and use of Groundwater Storage Capacity shall have priority and preference for Producers within the Beaumont Basin over storage for export. The Watermaster may, from time-to-time, redetermine the available Groundwater Storage Capacity.

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VI. ADMINISTRATION

1. Administration and Enforcement by Watermaster

The Watermaster shall administer and enforce the provisions of this Judgment and any subsequent order or instructions of the Court.

2. Watermaster Control

The Watermaster is hereby granted discretionary powers to develop and implement a groundwater management plan and program for the Beaumont Basin, which plan shall be filed with and shall be subject to review and approval by, the Court, and which may include water quantity and quality considerations and shall reflect the provisions of this Judgment. Except for the exercise by Overlying Parties of their respective Rights described in Column 4 of Exhibit "B" hereto in accordance with the provisions of the Physical Solution, groundwater extractions and the replenishment thereof, and the storage of Supplemental Water, shall be subject to procedures established and administered by the Watermaster. Such procedures shall be subject to review by the Court upon motion by any Party.

3. Watermaster Standard of Performance

The Watermaster shall, in carrying out its duties and responsibilities herein, act in an impartial manner without favor or prejudice to any Party or purpose of use.

4. Watermaster Appointment

The Watermaster shall consist of a committee composed of persons nominated by the City of Banning, the City of Beaumont, the Beaumont-Cherry Valley Water District, the South Mesa Mutual Water Company and the Yucaipa Valley Water District, each of

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which shall have the right to nominate one representative to the Watermaster committee who shall be an employee of or consultant to the nominating agency. Each such nomination shall be made in writing, served upon the other parties to this Judgment and filed with the Court, which shall approve or reject such nomination. Each Watermaster representative shall serve until a replacement nominee is approved by the Court. The nominating agency shall have the right to nominate that representative's successor.

5. Powers and Duties of the Watermaster

Subject to the continuing supervision and control of the Court, the Watermaster shall have and may exercise the following express powers, and shall perform the following duties, together with any specific powers, authority, and duties granted or imposed elsewhere in this Judgment or hereafter ordered or authorized by the Court in the exercise of its continuing jurisdiction:

A. Rules and Regulations: The adoption of appropriate rules and regulations for the conduct of Watermaster affairs, copies of which shall be provided to all interested parties.

B. Wellhead Protection and Recharge: The identification and management of wellhead protection areas and recharge areas.

C. Well Abandonment: The administration of a well abandonment and well destruction program.

D. Well Construction: The development of minimum well construction specifications and the permitting of new wells.

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E. Mitigation of Overdraft: The mitigation of conditions of uncontrolled overdraft.

F. Replenishment: The acquisition and recharge of Supplemental Water.

G. Monitoring: The monitoring of groundwater levels, ground levels, storage, and water quality.

H. Conjunctive Use: The development and management of conjunctive-use programs.

I. Local Projects: The coordination of construction and operation, by local agencies, of recharge, storage, conservation, water recycling, extraction projects and any water resource management activity within or impacting the Beaumont Basin.

J. Land Use Plans: The review of land use plans and coordination with land use planning agencies to mitigate or eliminate activities that create a reasonable risk of groundwater contamination.

K. Acquisition of Facilities: The purchase, lease and acquisition of all necessary real and personal property, including facilities and equipment.

L. Employment of Experts and Agents: The employment or retention of such technical, clerical, administrative, engineering, accounting, legal or other specialized personnel and consultants as may be deemed appropriate. The Watermaster shall maintain records allocating the cost of such services as well as all other expenses of Watermaster administration.

M. Measuring Devices: Except as otherwise provided

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by agreement the Watermaster shall install and maintain in good operating condition, at the cost of the Watermaster, such necessary measuring devices or meters as Watermaster may deem appropriate. Such devices shall be inspected and tested as deemed necessary by the Watermaster and the cost thereof borne by the Watermaster. Meter repair and retesting will be a Producer expense.

N. Assessments: The Watermaster is empowered to levy and collect the following assessments:

(1) Annual Replenishment Assessments

The Watermaster shall levy and collect assessments in each year, in amounts sufficient to purchase replenishment water to replace Overproduction by any Party.

(2) Annual Administrative Assessments

a. Watermaster Expenses: The expenses of administration of the Physical Solution shall be categorized as either "General Watermaster Administration Expenses", or "Special Project Expenses".

i. General Watermaster Administration Expenses: shall include office rent, labor, supplies, office equipment, incidental expenses and general overhead. General Watermaster Administration Expenses shall be assessed by the Watermaster equally against the Appropriators who have appointed representatives to the Watermaster.

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ii. Special Project Expenses: shall include special engineering, economic or other studies, litigation expenses, meter testing or other major operating expenses. Each such project shall be assigned a task order number and shall be separately budgeted and accounted for. Special Project Expenses shall be allocated to the Appropriators, or portion thereof, on the basis of benefit.

O. Investment of Funds; Borrowing: The Watermaster may hold and invest Watermaster funds as authorized by law, and may borrow, from time-to-time, amounts not exceeding annual receipts.

P. Contracts: The Watermaster may enter into contracts for the performance of any of its powers.

Q. Cooperation With Other Agencies: The Watermaster may act jointly or cooperate with other local, state and federal agencies.

R. Studies: The Watermaster may undertake relevant studies of hydrologic conditions and operating aspects of the management program for the Beaumont Basin.

S. Groundwater Storage Agreements: The Watermaster shall adopt uniform rules and a standard form of agreement for the storage of Supplemental Water, provided that the activities undertaken pursuant to such agreements do not injure any Party.

T. Administration of Groundwater Storage Capacity: Except for the exercise by the Overlying Parties of their

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respective Overlying Water Rights described in Part III, above, in accordance with the provisions of the Physical Solution, all Groundwater Storage Capacity in the Beaumont Basin shall be subject to the Watermaster's rules and regulations, which regulations shall ensure that sufficient storage capacity shall be reserved for local projects. Any Person or entity may apply to the Watermaster to store water in the Beaumont Basin.

U. Accounting for Stored Water: The Watermaster shall calculate additions, extractions and losses and maintain an annual account of all stored water in the Beaumont Basin, and any losses of water supplies or Safe Yield resulting from such stored water.

V. Accounting for New Yield: Recharge of the Beaumont Basin with New Yield water shall be credited to the Party that creates the New Yield. The Watermaster shall make an independent scientific assessment of the estimated New Yield created by each proposed project. New Yield will be allocated on an annual basis, based upon monitoring data and review by the Watermaster.

W. Accounting for Acquisitions of Water Rights: The Watermaster shall maintain an accounting of acquisitions by Appropriators of water otherwise subject to Overlying Water Rights as the result of the provision of water service thereto by an Appropriator.

X. Annual Administrative Budget: The Watermaster shall prepare an annual administrative budget for public review, and shall hold a public hearing on each such budget

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prior to adoption. The budget shall be prepared in sufficient detail so as to make a proper allocation of the expenses and receipts. Expenditures within budgeted items may thereafter be made by the Watermaster as a matter of course.

Y. Redetermining the Safe Yield: The Safe Yield of the Beaumont Basin shall be redetermined at least every 10 years beginning 10 years after the date of entry of this Judgment.

6. Reports and Accounting

(a) Production Reports: Each Pumper shall periodically file, pursuant to Watermaster rules and regulations, a report showing the total production of such Pumper from each well during the preceding report period, and such additional information as the Watermaster may reasonably require.

(b) Watermaster Report and Accounting: The Watermaster shall prepare an annual report of the preceding year's operations, which shall include an audit of all assessments and Watermaster expenditures.

7. Replenishment

Supplemental Water may be obtained by the Watermaster from any source. The Watermaster shall seek the best available quality of Supplemental Water at the most reasonable cost for recharge in the Basin. Sources may include, but are not limited to:

(a) Recycled Water;

(b) State Water Project Water;

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(c) Other imported water.

Replenishment may be accomplished by any reasonable method including:

(a) Spreading and percolation, or injection of water in existing or new facilities; and/or

(b) In-lieu deliveries for direct surface use, in lieu of groundwater extraction.

VII. MISCELLANEOUS PROVISIONS

1. Designation of Address for Notice and Service

Each Party shall designate, in writing to the plaintiff, the name and address to be used for purposes of all subsequent notices and service herein, such designation to be delivered to the plaintiff within 30 days after the Judgment has been entered. The plaintiff shall, within 45 days after judgment has been entered, file the list of designees with the Court and serve the same on the Watermaster and all Parties. Such designation may be changed from time-to-time by filing a written notice of such change with the Watermaster. Any Party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by the Watermaster. The Watermaster shall maintain, at all times, a current list of Parties to whom notices are to be sent and their addresses for purposes of service. The Watermaster shall also maintain a full current list of names and addresses of all Parties or their successors, as filed herein. Copies of such lists shall be available to any Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: (i) the Party's attorney of record; or (ii) if the Party does not have an

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attorney of record, the Party itself at the address on the Watermaster list.

2. Intervention After Judgment

Any Person who is neither a Party to this Judgment nor a successor or assignee of a Party to this Judgment may seek to become a party to this Judgment by filing a petition in intervention.

3. Interference with Pumping

Nothing in this judgment shall be deemed to prevent any party from seeking judicial relief against any other party whose pumping activities constitute an unreasonable interference with the complaining party's ability to extract groundwater.

4. Successors and Assigns

This Judgment and all provisions herein shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

5. Severability

The provisions of this Judgment are severable. If any provision of this Judgment is held by the Court to be illegal, invalid or unenforceable, that provision shall be excised from the Judgment. The remainder of the terms of the Judgment shall remain in full force and effect and shall in no way be affected, impaired or invalidated by such excision. This Judgment shall be reformed to add, in lieu of the excised provision, a provision as similar in terms to the excised provision as may be possible and be legal, valid and enforceable.

6. Review Procedures

Any action, decision, rule or procedure of the Watermaster

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pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party, as follows:

A. Effective Date of Watermaster Action: Any order, decision or action of the Watermaster pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred on the date of the order, decision or action.

B. Notice of Motion: Any Party may, by a regularly-noticed motion, petition the Court for review of the Watermaster's action or decision pursuant to this Judgment. The motion shall be deemed to be filed when a copy, conformed as filed with the Court, has been delivered to the Watermaster, together with the service fee established by the Watermaster sufficient to cover the cost to photocopy and mail the motion to each Party. The Watermaster shall prepare copies and mail a copy of the motion to each Party or its designee according to the official service list which shall be maintained by the Watermaster according to Part VII, paragraph 1, above. A Party's obligation to serve the notice of a motion upon the Parties is deemed to be satisfied by filing the motion as provided herein. Unless ordered by the Court, any petition shall not operate to stay the effect of any Watermaster action or decision which is challenged.

C. Time for Motion: A motion to review any Watermaster action or decision shall be filed within 90 days after such Watermaster action or decision, except that motions to review Watermaster assessments hereunder shall be filed within 30 days of mailing of notice of the assessment.

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D. De Novo Nature of Proceeding: Upon filing of a petition to review a Watermaster action, the Watermaster shall notify the Parties of a date when the Court will take evidence and hear argument. The Court's review shall be de novo and the Watermaster decision or action shall have no evidentiary weight in such proceeding.

E. Decision: The decision of the Court in such proceedings shall be an appealable Supplemental Order in this case. When the same is final, it shall be binding upon the Watermaster and the Parties.

Dated: FEB - 4 2004

GARY TRANBARGER

JUDGE OF THE SUPERIOR COURT

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117°0'0"W

34°0'0"N

Chicken Hill Fault
Yucaipa Fault
Casa Blanca Fault
Oak Glen Creek
Yucaipa Hills
San Bernardino County
Riverside County
Yucaipa Creek
10
Yucaipa Basins
Cherry Valley Fault
Singleton
Banning Fault
Edgar Canyon
San Timoteo Canyon
Little San Gorgonio Creek
Noble Creek
San Gorgonio
Beaumont Basin
San Timoteo Wash
Smith Creek
Banning Bench
San Timoteo Badlands
Beaumont Barrier
60
South Beaumont
Montgomery Creek
McInnes Fault
Potrero Creek
Banning

117°0'0"W

San Timoteo Watershed Management Authority

Beaumont Basin Boundary
{based on faults of Bloyd (1970)}

Fault by Burnham and Dutcher (1960)

Fault by Bloyd (1971)

Generalized Geology

Unconsolidated Sediments

Consolidated Bedrock

Semi-Consolidated Sediments

Streams

N
W E
S

0 1 2
Miles

Exhibit A

Boundary Map and Features of the Beaumont Basin Area

Map prepared by:
WE Wildermuth Environmental

File: Exhibit_A.mdx
Author: AEM
Date: 9/2/2002

Exhibit B
Overlying Producers and Their Rights

(1) Producer	(2) Average Production during 1997-2001 (acre-ft/yr)	(3) Exercised Rights[1] (acre-ft/yr)	(4) Projected Maximum Production (acre-ft/yr)
Beckman, Walt	0	0	75
Roman Catholic Bishop of San Bernardino	104	114	154
Rancho Calimesa Mobile Home Park	60	150	150
Merlin Properties, LLC.	540	550	550
Sunny-Cal Egg and Poultry Company[2]	1,340	1,340	1,439.5
Sunny-Cal North - Manheim, Manheim & Berman[2]			300
Nick Nikodinov[3]			20
Ronald L. McAmis[4]			5
Nicolas and Amalia Aldama[5]			7
Hector Gutierrez, Luis Gutierrez and Sebastian Monroy[6]			10
Boris and Miriam Darmont[7]			2.5
California Oak Valley Golf and Resort LLC	692	950	950
Leonard Stearn	0	0	200
Oak Valley Partners	510	553	1,806
So. California Professional Golf Association	680	1,688	2,200
Sharondale Mesa Owners Association	184	200	200
Plantation on the Lake	271	300	581
Totals	4,381	5,845	8,650

Note 1 -- Maximum Reported Production during 1997-2001

Note 2 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 300 af of the aggregate right to MMB aka Sunny-Cal North on February 7, 2006.*

Note 3 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 20 af of aggregate right to Nick Nikodinov on April 17, 2006.*

Note 4 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 5 af of aggregate right to Ronald L. McAmis on June 13, 2006.*

Note 5 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 7 af of aggregate right to Nicolas and Amalia Aldama on June 13, 2006.*

Note 6 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 10 af of aggregate right to Hector Gutierrez, Luis Gutierrez and Sebastian Monroy on June 13, 2006.*

Note 7 -- The *Exercised Right* and *Projected Maximum Production* were an aggregate right for defendents *Sunny-Cal Egg and Poultry* , and *Manheim, Manheim and Berman(MMB). As requested, Watermaster action designated 2.50 af of aggregate right to Boris and Miriam Dermont on June 13, 2006.*

Exhibit C
Appropriators and Their Water Rights

(1) Producer	(2) Average Production during 1997-2001 (acre-ft/yr)	(3) Share of Safe Yield Allocated to Appropriators	(4) Initial Estimate of Appropriate Rights[1] (acre-ft/yr)	(5) Controlled Overdraft and Supplemental Water Recharge Allocation [2] (acre-ft/yr)	(6) Operating Yield (acre-ft/yr)
Banning, City of	2,170	31.43%	882	5,029	5,910
City of Beaumont	0	0.00%	0	0	0
Beaumont Cherry Valley Water District	2,936	42.51%	1,193	6,802	7,995
South Mesa Water Company	862	12.48%	350	1,996	2,346
Yucaipa Valley Water District	938	13.58%	381	2,173	2,554
Totals	6,906	100.00%	2,805	16,000	18,805

Note 1 -- Based on a 8,650 acre-ft/yr safe yield

Note 2-- Controlled overdraft will not exceed 160,000 acre-ft during for first ten years of operation under the physical solution.

Exhibit D

Overlying Producers and the Parcels Upon Which Their Overlying Rights are Exercised[1]

(1) Overlying Producer	(3) Assessors Parcel Number(s)	(4) Area (Acres)
Beckman, Walt	405250004	19.04
	405250005	19.00
Total Area		38.04
California Oak Valley Golf and Resort	406070041	209.71
Total Area		209.71
Manheim, Manheim & Berman[2]	407200009	20.35
	407200011	20.00
	407200012	20.04
	407210001	45.41
	407210002	12.04
	407210004	4.16
Total Area		122.00
Roman Catholic Bishop of San Bernardino	413280016	16.78
	413280030	2.06
	413280036	12.42
Total Area		31.26
Oak Valley Partners	406060010	115.82
	406060015	4.00
	406060017	19.03
	406230020	4.26
	411210003	2.40
	411210005	105.41
	411210010	15.14
	411210016	9.77
	411210017	8.94
	413030011	315.30
	413040001	493.40
	413040002	137.00
	413040003	74.48
	413040004	6.50
	413040005	80.02
	413040006	75.54
	413040007	76.22

(1) Overlying Producer	(3) Assessors Parcel Number(s)	(4) Area (Acres)
Oak Valley Partners (cont'd)	413040008	144.48
	413040009	10.00
	413040010	78.22
	413060003	1.70
	413160003	80.00
	413160004	106.92
	413160005	53.08
	413160006	64.47
	413160007	15.53
	413170020	40.26
	413170021	27.62
	413170023	12.38
	413170027	14.19
	413170028	4.11
	413170029	2.35
	413170030	20.28
	413170031	66.63
	413170033	2.79
	413170035	11.74
	413180017	556.91
	413180019	9.77
	413190001	111.31
	413190003	5.64
	413190005	10.35
	413190008	12.40
	413190011	138.92
	413200002	0.23
	413200003	0.15
	413200010	5.94
	413200014	10.61
	413200015	11.36
	413200020	5.00
	413200023	14.47
	413200024	5.00
	413200026	32.86
	413200027	42.90
	413200028	116.62
	413200029	6.39
	413200030	19.01
	413200034	2.18
	413200035	10.99
	413200036	10.42
	413200037	4.95
	413270021	0.31
	413280034	2.37
	413280039	13.61
	413280040	1.91

(1) Overlying Producer	(3) Assessors Parcel Number(s)	(4) Area (Acres)
Oak Valley Partners (cont'd)	413280041	2.24
	413280042	6.86
	413290003	510.57
	413290004	16.08
	413290006	8.40
	413290007	103.68
	413450019	74.85
	413450020	169.96
	413450021	146.99
	413450024	48.25
	413450025	50.83
	413450026	122.59
	413450029	108.92
	413460036	199.12
	413460037	23.51
	413460038	19.58
	413460039	45.23
	413460039	45.23
	414090005	1.59
	414090007	1.38
	414090013	31.60
	414090017	20.00
	414090018	4.50
	414100002	42.13
	414100003	65.00
Total Area		5,331.65
Plantation on the Lake	407230031	12.36
	407230010	1.25
	406050018	156.85
	406050002	5.12
	406050003	1.81
Total Area		177.39
Rancho Calimesa Mobile Home Park	413270001	29.66
Total Area		29.66
Merlin Properties, LLC.	407230014	48.52
Total Area		48.52
Sharondale Mesa Owners Association	413330014	1.55
	413330015	2.14
	413331022	0.48
	413331035	0.22
	413340021	0.04
	413340022	0.04
	413340023	1.53
	413340024	2.52
	413341033	0.29

(1) Overlying Producer	(3) Assessors Parcel Number(s)	(4) Area (Acres)
Sharondale Mesa Owners Association (cont'd)	413341034	0.81
	413341036	0.35
	413342004	0.35
	413350011	1.04
	413350012	1.44
	413351018	17.08
	413351019	0.16
	413360032	1.92
	413360033	2.30
	413360035	0.90
	413361001	0.14
	413361008	0.12
	413361010	0.18
	413370027	0.39
	413370028	5.34
	413370030	0.69
	413371018	2.07
	413372019	1.39
Total Area		45.48
So. California Professional Golf Association	406060011	146.59
	406060013	2.83
	406060014	4.58
	406060016	10.35
	413450016	99.66
	413450022	95.15
	413450023	2.89
	413450027	91.53
Total Area		453.58
Stearns, Leonard	413221001	0.25
	413221002	0.34
	413260018	49.33
	413260025	0.37
	413270007	10.58
	413280010	1.27
	413280018	9.37
	413280021	4.26
	413280027	3.80
	413280037	14.32
Total Area		93.89
Sunny-Cal Egg and Poultry Company[2]	406080013	0.07
	407190016	4.95
	407190017	31.32
	407230022	20.03
	407230023	20.03
	407230024	20.03
	407230025	21.99

(1) Overlying Producer	(3) Assessors Parcel Number(s)	(4) Area (Acres)
Sunny-Cal Egg and Poultry Company[2] (cont'd)	407230026	25.94
	407230027	21.63
	407230028	21.56
Total Area		187.55
Nikodinov, Nick[4]	407180004	9.35
Total Area		9.35
McAmis, Ronald L.[5]	407190018	0.93
Total Area		0.93
Aldama, Nicolas and Amalia[6]	407190015	1.35
Total Area		1.35
Hector Gutierrez, Luis Gutierrez and Sebastian Monroy[7]	407190013	2.01
Total Area		2.01
Darmont, Boris and Miriam[8]	407190014	0.50
Total Area		0.50
Total Area for All Overlying Producers[3]		**6,782.87**

Note 1 -- Parcels as of June 1, 2003; updated to include Nick Nikodinov per April 17, 2006 Watermaster action; updated to include Ronald L. McAmis, Nicolas and Amalia Aldama, Hector Gutierrez, Luis Guiterrez, and Sebastian Monroy, and Boris and Miriam Darmont per June 13, 2006 Watermaster actions.

Note 2 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to MMB on February 7, 2006.

Note 3 -- The Watermaster shall recognize adjustments in parcel boundaries that result in de minimus changes in water use

Note 4 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to Nick Nikodinov on Aprin 17, 2006.

Note 5 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to Ronald L. McAmis on June 13, 2006.

Note 6 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to Nicolas and Amalia Aldama on June 13, 2006.

Note 7 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to Hector Gutierrez, Luis Gutierrez and Sebastian Monroy on June 13, 2006.

Note 8 -- Parcels owned by Sunny-Cal Egg & Poultry Company include the overlying water rights of Manheim, Manheim and Berman (MMB) and is aggregated as shown in Column 4 of Exhibit B as attributable to Sunny-Cal Egg & Poultry Company. As requested, Watermaster designated a portion of these aggregated rights to Boris and Miriam Durmont on June 13, 2006.

EXHIBIT E
LOCATION OF OVERLYING PRODUCER PARCELS AND BOUNDARY OF BEAUMONT BASIN

LEONARD STEARNS
SHARONDALE MESA OWNERS ASSOCIATION
LEONARD STEARNS
RANCHO CALIMESA
SUNNY CAL EGG & POULTRY INC.
LEONARD STEARNS
CECIL MURRAY
MARVIN MANHEIM
NOT OAK VALLEY PARTNERS
OAK VALLEY PARTNERS
SUNNY CAL EGG & POULTRY INC.
WALT BEKKMAN
OAK VALLEY PARTNERS
BEAUMONT STORAGE UNIT
FRED RIEDMAN
PLANTATION ON THE LAKE
CALIFORNIA OAK VALLEY GOLF AND RESORT LLC
SO CALIFORNIA SECTION PGA

EXHIBIT E
LOCATION OF OVERLYING PRODUCER PARCELS AND BOUNDARY OF BEAUMONT BASIN

N
W E
S

0 1,800 3,600 5,400 7,200 Feet

Appendix G
Public Notices

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Dan Jaggers

Secretary, Beaumont Basin Watermaster

560 Magnolia Ave

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Art Vela,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

All interested parties are invited to attend the public hearing and to comment on the District's Draft 2020 UWMP. Alternatively, interested parties may submit written comments to the District at least 30 days prior to the public hearing, a draft copy of the District's 2020 UWMP will be made available at the District's office at 560 Magnolia Ave, Beaumont, CA 92223 and on its website at www.bcvwd.org.

Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Art Vela

City of Banning/Department of Public Works

99 East Ramsey Street

Banning, CA 92220

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Art Vela,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Ray Casey

City of Yucaipa

34272 Yucaipa Blvd.

Yucaipa, CA 92399

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Ray Casey,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Bonnie Johnson

City of Calimesa

908 Park Avenue

Calimesa, CA 92320

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Bonnie Johnson,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Joseph Zoba

Yucaipa Valley Water District

P.O. Box 730

Yucaipa, CA 92399-0730

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Joseph Zoba,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

David Armstrong

South Mesa Water Company

P.O. Box 458

Calimesa, CA 92320

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear David Armstrong,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Paul D. Jones

Eastern Municipal Water District

P.O. Box 8300

Perris, CA 92570

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Paul D. Jones ,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Jeff Davis

San Gorgonio Pass Water Agency

1210 Baumont Avenue

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Jeff Davis,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

All interested parties are invited to attend the public hearing and to comment on the District's Draft 2020 UWMP. Alternatively, interested parties may submit written comments to the District at least 30 days prior to the public hearing, a draft copy of the District's 2020 UWMP will be made available at the District's office at 560 Magnolia Ave, Beaumont, CA 92223 and on its website at www.bcvwd.org.

Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Jay Orr

County of Riverside - LAFCO

6216 Brockton Ave St 111-B

Riverside, CA 92506

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Jay Orr,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159

Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Patsy Reeley

Cherry Valley Acres and Neighbors

P.O. Box 3257

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Patsy Reeley,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

All interested parties are invited to attend the public hearing and to comment on the District's Draft 2020 UWMP. Alternatively, interested parties may submit written comments to the District at least 30 days prior to the public hearing, a draft copy of the District's 2020 UWMP will be made available at the District's office at 560 Magnolia Ave, Beaumont, CA 92223 and on its website at www.bcvwd.org.

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March 30, 2021

Bill Blankenship

Riverside Building Industry Association

3891 11th Street

Riverside, CA 92501

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Bill Blankenship,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

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March 30, 2021

Kathleen Rollings-McDonald

County of San Bernardino - LAFCO

1170 W. Third St, Unit 150

San Bernardino, CA 92415-0490

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Kathleen Rollings-McDonald,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

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http://www.bcvwd.org

March 30, 2021

Amer Jakher

City of Beaumont

550 East 6th Street

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Amer Jakher,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

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March 30, 2021

Duane Burke

Beaumont Cherry Valley Recreation and Parks District

650 Oak Valley Parkway

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Duane Burke,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

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http://www.bcvwd.org

March 30, 2021

Terrence Davis

Beaumont Unified School District

350 Brookside Avenue

Beaumont, CA 92223

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Terrence Davis,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Beaumont-Cherry Valley Water District

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http://www.bcvwd.org

March 30, 2021

Celeste Cantu'

Santa Ana Watershed Project Authority

11615 Sterling Avenue

Riverside, CA 92503

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Celeste Cantu',

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Senior Engineer
Beaumont-Cherry Valley Water District

Beaumont-Cherry Valley Water District

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Email: info@bcvwd.org

http://www.bcvwd.org

March 30, 2021

Jason E. Uhley

Riverside County Flood Control & Water Conservation

1995 Market Street

Riverside, CA 92501

Subject: Beaumont-Cherry Valley Water District Urban Water Management Plan - 2020 Update Notice Pursuant to Section 10621(b) of the California Water Code

Dear Jason E. Uhley,

The purpose of this letter is to provide notice that the Beaumont-Cherry Valley Water District (District) is revising its Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009 and subsequent revisions thereto.

The District will hold a public hearing to consider, and to receive public comments on its draft 2020 UWMP. The public hearing will be held a minimum of 60 days from the date of this letter at the District's offices (located at 560 Magnolia Ave, Beaumont, CA 92223). A public notice stating the specific date, time, and location of the public hearing will be issued two (2) weeks prior to said hearing.

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Sincerely,

Mark Swanson, P.E.
Senior Engineer
Beaumont-Cherry Valley Water District

Appendix H
SGPWA Delta Reliance Tables

Service Area Water Use Efficiency Demands (Acre-Feet)		2015	2020	2025	2030	2035	2040	2045 (opt)
City of Banning	n/a	6,709	7,012	9,473	10,198	10,853	11,565	12,278
Beaumont Cherry Valley		9,792	14,186	15,244	16,364	17,632	19,045	20,197
Yucaipa Valley WD (Riverside Portion)		1,048	1,133	1,466	1,798	2,131	2,464	2,796
South Mesa WC (Riverside Portion)		886	983	1,032	1,084	1,138	1,196	1,196
High Valley WD								
Cabazon County WD		3,200	3,300	3,400	3,600	3,900	4,100	4,300
Mission Springs (SGPWA area)								
Other SGPWA service area not served by named retailers								
Potable Service Area Demands with Water Use Efficiency		21,636	26,614	30,615	33,044	35,654	38,369	40,767

Total Service Area Population		2015	2020	2025	2030	2035	2040	2045 (opt)
City of Banning	n/a	30,491	30,325	35,730	40,969	46,207	51,446	56,685
Beaumont Cherry Valley		47,169	59,019	65,773	73,590	82,002	88,823	95,028
Yucaipa Valley WD (Riverside Portion)		5,996	6,355	8,335	10,315	12,295	14,275	16,255
South Mesa WC (Riverside Portion)		3,840	3,974	4,114	4,258	4,407	4,561	4,561
High Valley WD		3,609	3,776	4,055	4,355	4,614	4,888	5,177
Cabazon County WD								
Mission Springs (SGPWA area)								
Other SGPWA service area not served by named retailers								
Service Area Population	66,865	91,105	103,449	118,007	133,487	149,525	163,993	177,706

Water Use Efficiency Since Baseline (Acre-Feet)	20x2020 baseline	2015	2020	2025	2030	2035	2040	2045 (opt)
Per Capita Water Use (GPCD)	266	188	209	215	204	196	192	188
Change in Per Capita Water Use from Baseline (GPCD)		(78)	(57)	(51)	(62)	(70)	(74)	(78)
Estimated Water Use Efficiency Since Baseline		7,968	6,570	6,743	9,208	11,767	13,598	15,480

Total Service Area Water Demands (Acre-Feet)		2015	2020	2025	2030	2035	2040	2045 (opt)
Service Area Water Demands with Water Use Efficiency	n/a	21,636	26,614	30,615	33,044	35,654	38,369	40,767
Estimated Water Use Efficiency Since Baseline		7,968	6,570	6,743	9,208	11,767	13,598	15,480
Service Area Water Demands without Water Use Efficiency		29,604	33,184	37,359	42,252	47,421	51,968	56,247

Calculation of Supplies Contributing to Regional Self-Reliance

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)		2015	2020	2025	2030	2035	2040	2045 (opt)
Water Use Efficiency	n/a	7,968	6,570	6,743	9,208	11,767	13,598	15,480
Local Surface Water Supplies (water rights or contracts)		250	250	250	250	250	250	250
Groundwater Supplies		12,012	11,386	13,540	14,317	15,415	16,460	17,505
Water Recycling		1,199	4,480	3,622	4,008	4,479	4,730	4,915
Stormwater Capture and Use		-	-	250	250	250	250	250
Advanced Water Technologies		-	-	2,500	3,424	3,641	3,643	3,635
Conjunctive Use Projects								
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	9,536	21,429	22,686	26,905	31,457	35,801	38,931	42,035

Service Area Water Demands without Water Use Efficiency		2015	2020	2025	2030	2035	2040	2045 (opt)
Service Area Water Demands without Water Use Efficiency	19,916	29,604	33,184	37,359	42,252	47,421	51,968	56,247

Change in Regional Self Reliance (Acre-Feet)		2015	2020	2025	2030	2035	2040	2045 (opt)
Water Supplies Contributing to Regional Self-Reliance	9,536	21,429	22,686	26,905	31,457	35,801	38,931	42,035
Change in Water Supplies Contributing to Regional Self-Reliance		1,514	2,770	6,989	11,541	15,886	19,015	22,119

Change in Regional Self Reliance (As a Percent of Water Demand w/out WUE)		2015	2020	2025	2030	2035	2040	2045 (opt)
Water Supplies Contributing to Regional Self-Reliance	47.9%	72.4%	68.4%	72.0%	74.5%	75.5%	74.9%	74.7%
Change in Water Supplies Contributing to Regional Self-Reliance		24.5%	20.5%	24.1%	26.6%	27.6%	27.0%	26.9%

Water Supplies from the Delta Watershed (Acre-Feet)		2015	2020	2025	2030	2035	2040	2045 (opt)
CVP/SWP Contract Supplies	10,380	10,726	10,726	10,034	10,034	10,034	10,034	8,996
Delta/Delta Tributary Diversions								
Transfers and Exchanges	-							
Other Water Supplies from the Delta Watershed				4,000	5,000	10,000	15,000	18,000
Total Water Supplies from the Delta Watershed	10,380	10,726	10,726	14,034	15,034	20,034	25,034	26,996

Service Area Water Demands without Water Use Efficiency	baseline	2015	2020	2025	2030	2035	2040	2045 (opt)
Service Area Water Demands without Water Use Efficiency	19,916	29,604	33,184	37,359	42,252	47,421	51,968	56,247

Change in Supplies from the Delta Watershed (Acre-Feet)	baseline	2015	2020	2025	2030	2035	2040	2045 (opt)
Total Water Supplies from the Delta Watershed	10,380	10,726	10,726	14,034	15,034	20,034	25,034	26,996
Change in Water Supplies from the Delta Watershed		346	346	3,654	4,654	9,654	14,654	16,616

Change in Supplies from the Delta Watershed (As a Percent of Water Demand w/out WUE)	baseline	2015	2020	2025	2030	2035	2040	2045 (opt)
Total Water Supplies from the Delta Watershed	52.1%	36.2%	32.3%	37.6%	35.6%	42.2%	48.2%	48.0%
Change in Water Supplies from the Delta Watershed		-15.9%	-19.8%	-14.6%	-16.5%	-9.9%	-3.9%	-4.1%

Appendix I
Water Loss Audits

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Beaumont Cherry Valley Water District (3310002)
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 input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET 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:	5	11,452.980	acre-ft/yr	n/a				acre-ft/yr
Water imported:	n/a	0.000	acre-ft/yr					acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr					acre-ft/yr

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

WATER SUPPLIED: 11,452.980 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	5	10,128.921	acre-ft/yr			
Billed unmetered:	n/a	0.000	acre-ft/yr			
Unbilled metered:	10	47.228	acre-ft/yr			
Unbilled unmetered:		143.162	acre-ft/yr	1.25%		acre-ft/yr

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

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

AUTHORIZED CONSUMPTION: 10,319.311 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

1,133.669 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		28.632	acre-ft/yr	0.25%		acre-ft/yr

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

Customer metering inaccuracies:	3	207.677	acre-ft/yr	2.00%	acre-ft/yr
Systematic data handling errors:		25.322	acre-ft/yr	0.25%	acre-ft/yr

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

Apparent Losses: 261.631 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 872.037 acre-ft/yr

WATER LOSSES: 1,133.669 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,324.059 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	4	380.0	miles
Number of active AND inactive service connections:	9	17,997	
Service connection density:		47	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 75.0 psi

COST DATA

Total annual cost of operating water system:	10	$13,235,100	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$2.03	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$520.96	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 60 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

CAVANAUGH
Stewardship Through Innovation

AWWA 2017 Water Audit Level 1 Validation – Review Document

Validator Provided

Audit Information:

Utility: Beaumont-Cherry Valley Water District PWS ID: 3310002

System Type: Potable Audit Period: Calendar 2017

Utility Representation: James Bean, Bill Clayton

Validation Date: 8/9/2018 Call Time: 8:00am Sufficient Supporting Documents Provided: Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 60 Data Validity Band (Level): Band III (51-70)

ILI: 2.18 Real Loss: 43.26 (gal/conn/day) Apparent Loss: 12.98 (gal/conn/day)

Non-revenue water as percent of cost of operating system: 5.9%

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Validator Information:

Water Audit Validator: Drew Blackwell Validator Qualifications: Contractor for California Water Loss TAP

2017 AWWA Water Audit Level 1 Validation

Water System Name: **Water System ID Number:** **Water Audit Period:**

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

BCVWD has made changes in the frequency of testing source water meters to verify accuracy. Some of the source water verification has been made by Southern California Edison efficiency testing. Tracking water metered and not billed (i.e. water used by BCVWD owned facilities) has been accounted for in this year's Water Audit. Estimating real water losses due to leaks has also been ongoing.

Utility Provided

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

James M. Bean	Assistant Director of Operations		09/5/2018
Executive Name (Print)	Executive Position	Signature	Date

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Beaumont Cherry Valley Water District (3310002)
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 input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET 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	13,764.640	acre-ft/yr	3	0.00%		acre-ft/yr
Water imported:			acre-ft/yr				acre-ft/yr
Water exported:	3	11.130	acre-ft/yr				acre-ft/yr

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

WATER SUPPLIED: 13,753.510 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	5	12,178.570	acre-ft/yr			
Billed unmetered:			acre-ft/yr			
Unbilled metered:	7	53.320	acre-ft/yr			
Unbilled unmetered:	7	34.384	acre-ft/yr		34.384	acre-ft/yr

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

AUTHORIZED CONSUMPTION: ? 12,266.274 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 1,487.236 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		34.384	acre-ft/yr	0.25%		acre-ft/yr

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

Customer metering inaccuracies:	3	186.272	acre-ft/yr	1.50%	acre-ft/yr
Systematic data handling errors:		30.446	acre-ft/yr	0.25%	acre-ft/yr

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

Apparent Losses: ? 251.103 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 1,236.134 acre-ft/yr

WATER LOSSES: 1,487.236 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 1,574.940 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	6	375.0	miles
Number of active AND inactive service connections:	9	18,757	
Service connection density:		50	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 75.0 psi

COST DATA

Total annual cost of operating water system:	10	$13,583,971	$/Year	
Customer retail unit cost (applied to Apparent Losses):	8	$1.80	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$413.17	$/acre-ft	☐ 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

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AWWA 2018 Water Audit Level 1 Validation – Review Document

Validator Provided

Audit Information:

Utility: Beaumont-Cherry Valley Water District PWS ID: 3310002

System Type: Potable Audit Period: Calendar 2018

Utility Representation: James Bean, Bill Clayton

Validation Date: 6/20/2019 Call Time: 10:30am Sufficient Supporting Documents Provided: Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 51 Data Validity Band (Level): Band III (51-70)

ILI: 3.04 Real Loss: 58.83 (gal/conn/day) Apparent Loss: 11.95 (gal/conn/day)

Non-revenue water as percent of cost of operating system: 5.5%

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Validator Information:

Water Audit Validator: Larry Lewison, Will Jernigan P.E. Validator Qualifications: Contractor for California Water Loss TAP

2018 AWWA Water Audit Level 1 Validation

Water System Name: Beaumont-Cherry Valley Water District **Water System ID Number: 3310002**
Water Audit Period: Calendar Year 2018

Utility Provided

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

Beaumont-Cherry Valley Water District has increased the frequency of calibration to source well flow meters. Some of the source water verification has been made by Southern California Edison efficiency testing. The water that is being consumed by BCVWD owned facilities has been accounted for and tracked as this is production water that is metered and not billed. Spreadsheets have been created to track real water losses during main and service line leaks, system flushing, as well as, actual water loss due to metered system flushing. Upgrades to real time telemetry monitoring is ongoing.

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

James Bean	Asst. Director of Operations		7-8-19
Executive Name (Print)	Executive Position	Signature	Date

AWWA Free Water Audit Software:
Reporting Worksheet

? Click to access definition
+ Click to add a comment

Water Audit Report for: Beaumont Cherry Valley Water District (3310002)
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 input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET 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	12,509.500	acre-ft/yr	3	0.00%		acre-ft/yr
Water imported:	n/a		acre-ft/yr				acre-ft/yr
Water exported:	3	6.510	acre-ft/yr	2	0.00%		acre-ft/yr
WATER SUPPLIED:		12,502.990	acre-ft/yr				

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

				Pcnt:	Value:	
AUTHORIZED CONSUMPTION						
Billed metered:	4	11,194.800	acre-ft/yr			
Billed unmetered:	n/a	0.000	acre-ft/yr			
Unbilled metered:	7	54.770	acre-ft/yr			
Unbilled unmetered:	5	31.257	acre-ft/yr		31.257	acre-ft/yr
AUTHORIZED CONSUMPTION:		11,280.827	acre-ft/yr			
WATER LOSSES (Water Supplied - Authorized Consumption)		1,222.163	acre-ft/yr			
Apparent Losses						
Unauthorized consumption:		31.257	acre-ft/yr	0.25%		acre-ft/yr
Customer metering inaccuracies:	3	171.313	acre-ft/yr	1.50%		acre-ft/yr
Systematic data handling errors:		27.987	acre-ft/yr	0.25%		acre-ft/yr
Apparent Losses:		230.558	acre-ft/yr			
Real Losses (Current Annual Real Losses or CARL)						
Real Losses = Water Losses - Apparent Losses:		991.605	acre-ft/yr			
WATER LOSSES:		1,222.163	acre-ft/yr			
NON-REVENUE WATER						
NON-REVENUE WATER:		1,308.190	acre-ft/yr			

Click here: ? for help using option buttons below

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

= Water Losses + Unbilled Metered + Unbilled Unmetered

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

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

SYSTEM DATA

Length of mains:	2	375.0	miles
Number of active AND inactive service connections:	8	19,349	
Service connection density:		52	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	75.0	psi

COST DATA

Total annual cost of operating water system:	10	$9,128,310	$/Year	
Customer retail unit cost (applied to Apparent Losses):	8	$1.01	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$548.94	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

Retail costs are less than (or equal to) production costs; please review and correct if necessary

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: Customer metering inaccuracies

CAVANAUGH
Stewardship Through Innovation

AWWA 2019 Water Audit Level 1 Validation – Review Document

Validator Provided

Audit Information:

Utility: Beaumont-Cherry Valley Water District PWS ID: 3310002

System Type: Potable Audit Period: Calendar 2019

Utility Representation: James Bean, Bill Clayton

Validation Date: 7/7/2020 Call Time: 8:30am Sufficient Supporting Documents Provided: Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 49 Data Validity Band (Level): Band II (26-50)

ILI: 2.39 Real Loss: 45.75 (gal/conn/day) Apparent Loss: 10.64 (gal/conn/day)

Non-revenue water as percent of cost of operating system: 7.6%

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Validator Information:

Water Audit Validator: Larry Lewison, Drew Blackwell Validator Qualifications: Contractor for California Water Loss TAP

2019 AWWA Water Audit Level 1 Validation

Water System Name: **Water System ID Number:** **Water Audit Period:**

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

<<Information to be completed by Utility>>

Utility Provided

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

James Bean	Asst. Director of operations		7-13-2020
Executive Name (Print)	Executive Position	Signature	Date

Appendix J
Energy Report

Urban Water Supplier: *Beaumont Cherry Valley Water District*

Table O-1C: Recommended Energy Reporting - Multiple Water Delivery Products

Enter Start Date for Reporting Period	1/1/2020
End Date	12/31/2020
☐ Is upstream embedded in the values reported?	

	Urban Water Supplier Operational Control					
	Water Management Process				**Non-Consequential Hydropower (if applicable)**	
	Extract and Divert	Place into Storage	Distribution	Total Utility	Hydropower	Net Utility
Water Volume Units: *AF* — *Total Volume of Water Entering Process (volume units)*	14182.23		2129.89	N/A		N/A
Retail Potable Deliveries (%)	75%		100%			
Retail Non-Potable Deliveries (%)	12%					
Agricultural Deliveries (%)	0.4%					
Environmental Deliveries (%)	0%					
Other (%)	13%					
Total Percentage (must equal 100%)	100%	0%	100%	N/A	0%	N/A
Energy Consumed (kWh)	13783417		838496	14621913		14621913
Energy Intensity (kWh/AF)	971.8	-	394.1	N/A	#DIV/0!	N/A

Water Delivery Type	*Production Volume (volume units defined above)*	*Total Utility (kWh/volume)*	*Net Utility (kWh/volume)*
Retail Potable Deliveries	12795	875.6	875.6
Retail Non-Potable Deliveries	1645	971.8	971.8
Agricultural Deliveries	50	971.8	971.8
Environmental Deliveries	0	0.0	0.0
Other	1801	971.8	971.8
All Water Delivery Types	16290.99	898.0	898.0

Quantity of Self-Generated Renewable Energy

0 kWh

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

Combination of Estimates and Metered Data

Data Quality Narrative:

Data gathered from metered District pump stations, wells, and metered energy charges. Deliveries derived from actual 2020 meter data.

Narrative:

Appendix K
References

RESOLUTION 2014-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF BEAUMONT-CHERRY VALLEY WATER DISTRICT PRECLUDING THE APPROVAL OF A REQUEST FOR THE ISSUANCE OF ANY WILL SERVE LETTER UNDER THE CIRCUMSTANCES STATED HEREIN SUBJECT TO THE EXCEPTIONS STATED HEREIN

WHEREAS, This Board has discussed and desires to adopt a policy which will suspend the issuance of will serve letters which will add demand to the District's water supplies not previously considered and approved by this Board during conditions specified herein.

WHEREAS, This policy is intended to avoid requiring conservation by presently served ratepayers in order to protect available supplies while simultaneously creating new demand on those supplies and to preserve the rights of persons who have relied on the issuance of a will serve letter by annexing to the District or paying fees or constructing infrastructure in consideration of the issuance of a will serve letter.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Beaumont-Cherry Valley Water District declares the following:

1. Subject to the exceptions stated in Paragraph 2 below, this Board shall not issue a will serve letter when:

   (a) A condition of drought exists in the State of California as declared by the Governor of the State of California,

   (b) There is in effect mandatory conservation measures applicable to the District's ratepayers imposed directly by the State of California, or imposed by implementation of District conservation measures in accordance with the District's Urban Water Management Plan and

   (c) The quantity of the District's ready to deliver water supplies is less than a projected demand of five years based on the District's then current annual demand.

2. The following applications shall be excepted from the prohibition of the issuance of will serve letters stated in Paragraph 1 of this Resolution:

   (a) An application for residential or commercial water use reasonably estimated to constitute an annual demand equal to or less than 2 (two) EDU's;

   (b) An application for service to property as to which a will serve letter previously has been issued and the recipient of that letter or his or her successor in interest has relied on the letter in paying fees to the District, annexing the subject property to the District or constructing District infrastructure in order to provide service to the subject property.

3. The District Secretary shall certify the adoption of this Resolution.

ADOPTED AND APPROVED this 8th day of October, 2014

Chairman

I, Daniel Slawson, Secretary of the Beaumont-Cherry Valley Water District Board of Directors, do hereby certify that the foregoing Resolution was adopted at a regular meeting of the Beaumont-Cherry Valley Water District Board of Directors, held on the 8th day of October, 2013, by the following vote:

AYES:	3	BOARDMEMBERS:	Ross, Guldseth, Ball
NOES:	1	BOARDMEMBERS:	Slawson
ABSENT:	1	BOARDMEMBERS:	Woll (vacant seat)
ABSTAINED:	0	BOARDMEMBERS:	

ATTEST: _____, Secretary

RESOLUTION 2015-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT ACKNOWLEDGING THE REVIEW, RECEIPT AND ACCEPTANCE OF THE DISTRICT'S INVESTMENT POLICY

WHEREAS, the Legislature of the State of California has declared that the deposit and investment of public funds by local officials and local agencies is an issue of statewide concern (California Government Code sections 53600.6 and 53630.1); and

WHEREAS, the legislative body of a local agency may invest surplus monies not required by the immediate necessities of the local agency in accordance with the provisions of California Government Code Sections 5920 et seq. and 53601 et seq., and

WHEREAS, the General Manager of the Beaumont-Cherry Valley Water District shall annually prepare and submit a statement of investment policy and such policy shall be considered by the Board of Directors at a public meeting (California Government Code 53646(a)), and

WHEREAS, the last investment policy was last reviewed and approved by Resolution 2014-01 on January 8th, 2014, and

WHEREAS, the Board of Director declares the Investment Policy approved and adopted as attached.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Beaumont-Cherry Valley Water District accepts by this Resolution the District's Investment Policy.

ADOPTED, This 11th day of February, 2015.

Kenneth Ross, President of the
Board of Directors of the
Beaumont-Cherry Valley Water District

ATTEST:

Daniel Slawson, Secretary to the
Board of Directors of the
Beaumont-Cherry Valley Water District

RESOLUTION 2015-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT AUTHORIZING THE IMPLEMENTATION OF PENALTIES FOR NON-COMPLIANACE WITH MANDATORY WATER USE RESTRICTIONS AND RESCINDING RESOLUTION 2015-02

WHEREAS, On May 5, 2015 the State Water Resources Control Board (State Board) adopted updated emergency water use regulations intended to safeguard urban water supplies in the event of continued drought, minimize the potential for waste and unreasonable use of water, and to achieve a 25 percent statewide potable water usage reduction ordered by Governor Brown in his April 1, 2015 executive order, and

WHEREAS, The Board of Directors has discussed and desires to implement penalties and, or fees for failure by any water user to comply with mandatory water use restrictions adopted by the State Water Resources Control Board and The Beaumont-Cherry Valley Water District to achieve a mandatory 36 percent reduction in urban water usage as compared to 2013, and

WHEREAS, the drought conditions that formed the basis of Governor Brown's executive order continue to exist; and

WHEREAS, the Board of Directors declares the conditions continue to exist to implement water usage restrictions in accordance with the Urban Water Management Plan adopted by the Board of Directors, and additional outdoor water use restrictions approved by the Office of Administrative Law (OAL) on May 18, 2015.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Beaumont-Cherry Valley Water District declares the following:

1. Implementation of the emergency water use regulations was previously adopted by the Board of Directors of the Beaumont-Cherry Valley Water District by Resolution 2015-02 which shall be rescinded by the adoption of this resolution.
2. A Level 2 Water Supply Shortage continues to exist within the Beaumont - Cherry Valley Water District service area.
3. The water conservation measures identified in this resolution are mandatory and violations are subject to penalties, fees, and remedies as described in the Water Code and District Rules and Regulations.
    - All persons using water provided by the Beaumont-Cherry Valley Water District shall comply with the restrictions as defined in this resolution, except where recycled water or other non-potable water is used.
    - The application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited;
    - The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle is prohibited;

- The application of potable water to sidewalks, and driveways is prohibited;
- The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system is prohibited;
- Irrigating turf or ornamental landscapes during and 48 hours after measurable precipitation is prohibited;
- Restaurants and other food service establishments may only serve water to customers on request;
- Operators of hotels and motels must provide guests with the option of choosing not to have towels and linens laundered daily; notice of this option must be prominently displayed;
- The irrigation with potable water of landscapes of ornamental turf on public street medians
- The irrigation with potable water off landscapes outside newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development
- Lawn watering, park, school and street median landscape watering is restricted to Monday and Friday between the hours of 8:00 pm. and 8:00 am.

4. Penalties for non-compliance. The following financial penalties will be imposed when a customer violates the Mandatory Restrictions set forth in Section 3 of this Resolution.

   a) First Violation – Written Notice.
   Any notice required by this Resolution may include, for example and not by way of limitation, the following information: (i) The water conservation stage and restrictions that are in effect; (ii) Actions required for compliance in order to prevent future violations; and (iii) Penalties and enforcement actions which may be imposed for future violations.

   b) Second Violation – A penalty will be imposed in an amount equal to 10 percent of the customer's current water bill.

   c) Third Violation – A penalty will be imposed in an amount equal to 20 percent of the customer's current water bill.

   d) Fourth Violation – A penalty will be imposed in an amount equal to 30 percent of the customer's current water bill.

RESOLUTION 2015-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT CHERRY VALLEY WATER DISTRICT AUTHORIZING THE IMPLEMENTATION OF PENALTIES FOR NON-COMPLIANACE WITH MANDATORY WATER USE RESTRICTIONS AND RESCINDING RESOLUTION 2015-02

e) Fifth Violation and any subsequent violation – A penalty will be imposed in an amount equal to 50 percent of the customers current water bill.

In the event of any violation after the fifth violation, the General Manager, or his/her designee, may determine, in his/her reasonable discretion that the continued violation of the restrictions set forth in this Resolution warrant the initiation of procedures for the termination of water service pursuant to Part 15 of the District's Regulations Governing Water Service.

ADOPTED, This 8th day of July, 2015

ATTEST:

Ken Ross, President of the
Board of Directors of the
Beaumont Cherry Valley Water District
District

Daniel Slawson, Secretary to the
Board of Directors of the
Beaumont Cherry Valley Water

RESOLUTION 2016-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT AUTHORIZING THE IMPLEMENTATION OF WATER USE RESTRICTIONS AND RESCINDING RESOLUTION 2015-05

WHEREAS, On May 5, 2015 the State Water Resources Control Board (State Board) adopted emergency water use regulations intended to safeguard urban water supplies in the event of continued drought, minimize the potential for waste and unreasonable use of water, and to achieve a 25 percent statewide potable water usage reduction ordered by Governor Brown in his April 1, 2015 executive order, and

WHEREAS, On May 9, 2016 Governor Brown issued Executive Order B-37-16 directing the State Water Board to adjust emergency water conservation regulations through the end of January 2017 in recognition of differing water supply conditions across the state, and

WHEREAS, On May 18, 2016 the State Board adopted the revised emergency regulation based on the ongoing need to prevent the waste and unreasonable use of water supplies and promote conservation during the ongoing drought emergency, and

WHEREAS, the drought conditions that formed the basis of Governor Brown's executive order continue to exist; and

WHEREAS, the Board of Directors declares the conditions continue to exist to implement water usage restrictions in accordance with the Urban Water Management Plan adopted by the Board of Directors, and additional outdoor water use restrictions adopted by the State Water Board that shall be based on the Districts specific circumstances as it relates to water supply and demands.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Beaumont-Cherry Valley Water District declares the following:

1. Implementation of the emergency water use regulations was previously adopted by the Board of Directors of the Beaumont-Cherry Valley Water District by Resolution 2015-05 which shall be rescinded by the adoption of this resolution.
2. The water conservation measures identified in this resolution are mandatory and violations are subject to penalties, fees, and remedies as described in the District's Rules and Regulations.
3. All persons using water provided by the Beaumont-Cherry Valley Water District shall comply with the restrictions as defined in this resolution and in Part 15 of the District Regulations Governing Water Service, except where recycled water or other non-potable water is used.

- The application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited;
- The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle is prohibited;
- The application of potable water to sidewalks, and driveways is prohibited;
- The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system, is prohibited;
- Irrigating turf or ornamental landscapes during and 48 hours after measurable precipitation is prohibited;
- Restaurants and other food service establishments may only serve water to customers on request;
- The irrigation with potable water of landscapes of ornamental turf on public street medians is prohibited;
- The irrigation with potable water of landscapes of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development;
- Operators of hotels and motels must provide guests with the option of choosing not to have towels and linens laundered daily; notice of this option must be prominently displayed;

4. Penalties for non-compliance. The following penalties will be imposed when a customer violates the water waste prohibitions set forth in Part 15 of the Beaumont Cherry Valley Water District Regulations Governing Water Service:

    - Upon the first failure of any person, firm or corporation to comply, this District shall serve or mail a warning notice upon any person determined to be in violation of these Rules and Regulations.

    - Upon the second failure of any person, firm or corporation to so comply, the water charges of any such customer shall be doubled until full compliance with these Rules and Regulations has been established to the satisfaction of the Board of Directors of the District.

    - Upon the third failure of any person, firm or corporation to so comply, the District shall terminate water service to any connection through which waters delivered by the District are wasted in violation of these Rules and Regulations.

ADOPTED, This 8th day of June, 2016

Jeffrey Cottrell, President of the
Board of Directors of the
Beaumont-Cherry Valley Water District

ATTEST:

Daniel Slawson, Secretary to the
Board of Directors of the
Beaumont-Cherry Valley Water District