

BEAUMONT-CHERRY VALLEY WATER DISTRICT

560 MAGNOLIA AVENUE
BEAUMONT, CALIFORNIA 92223

www.bcvwd.org

ADDENDUM #1 - WATER SUPPLY ASSESSMENT

for

BEAUMONT POINTE DEVELOPMENT

City of Beaumont, CA

DRAFT - January 17, 2022

FINAL – April 8, 2022



Prepared by
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for

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1 Background and Purpose for Addendum

1.1 Background

The Beaumont Pointe Development “Project”, previously referred to as the Jack Rabbit Trail Development, is located in the City of Beaumont, CA. The Project will be a new 625-acre industrial, commercial, and recreational complex constructed south of the CA-60 freeway and northwest of the proposed Hidden Canyon Development. The Project will consist of general commercial/retail land uses and five large industrial warehouse buildings totaling approximately 5.0 million square feet of floor space. The Project is currently proceeding with filing an EIR and seeking incorporation into the Beaumont Cherry Valley Water District (BCVWD) and, by association, the San Geronio Pass Water Agency (SGPWA).

The Project will be located in the Beaumont Cherry Valley Water District’s (“District”) sphere of influence. The Project’s potable water (PW) and fire flow demands are proposed to be provided from the District’s 2650 pressure zone, which currently serves the westerly part of the District’s service area, south of Interstate 10 and west of Cherry Valley Blvd. As part of on-going water conservation efforts and the Project’s plan of service with the District, all outdoor irrigation demands will utilize non-potable water (NPW) distributed by BCVWD.

From 2018 through 2021, the Project worked with the District to complete a Water Supply Assessment (WSA), dated April 13, 2021. The Beaumont Point Development WSA was originally based on the District’s 2015 Urban Water Management Plan (UWMP) and continuously updated with the most current information from the SGPWA / District’s “White Papers”, which contained the most current updated calculations and projections for imported water supplied from SGPWA and local groundwater supplied from BCVWD for their committed service area. During the District’s June 9th, 2021 Board Meeting, the 2021 Beaumont Point WSA was presented and approved by the District’s Board of Directors. Subsequently, the District provided the Project with a conditional Will Serve Letter, which stipulated that the District will provide water service to the Project. The Project is currently working with the District on a Plan of Service document required by the Will Serve Letter.

In September 2021, four months after approval of the Beaumont Pointe WSA, the District Board of Directors approved the 2020 BCVWD UWMP, updating the District’s 2015 UWMP to be in compliance with State law. Specific to the Beaumont Pointe Development, the 2020 BCVWD UWMP incorporates the specific change in land use from residential to commercial, reducing the total water demand for the Project from 2,000 Equivalent Dwelling Units (EDUs) to 360.26 EDUs, a reduction of 82%. Additionally, the 2020 BCWD UMWP further defines the District’s and City of Beaumont’s commitment to using non-potable water, available from the City’s upgraded Title 22 recycled water treatment plant and shallow aquifer wells, which are not suitable for direct potable water supply. This is consistent with the approved Beaumont Pointe Development WSA, which indicated 43.31% of the total demand could be supplied by BCVWD’s non-potable water system. Doing so reduces the Project’s imported and local ground water (potable) demand further, from 360.26 EDUs to 204.21 EDUs.

1.2 Purpose for Addendum

State law indicates that the WSA for a project shall utilize the most recent UWMP (See Water Code Section 10910 (c)3), which states that if the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from that plan in preparing the WSA. As mentioned above, the water demand information presented in the approved Beaumont Pointe WSA utilized the District’s most up to date calculations from the “White Papers” and therefore, the water demand values are consistent with the adopted BCVWD 2020 UWMP. However, the approved Beaumont Point WSA also indicated that it was based on the BCVWD 2015 UWMP and therefore, the document did present tables and information about the general service areas from both the SGPWA and BCVWD 2015 UWMPs, which the Project wishes to now update with this Addendum. The BCVWD 2020 UWMP includes the

Beaumont Pointe Development water demands and indicates that the District can meet its service area's water supply requirements under normal, single, and multiple consecutive dry years.

Since Beaumont Pointe Development's overall water demands did not change (outdoor irrigation demands will utilize NPW as discussed further), and since the updated BCVWD 2020 UWMP included the Project's demands and verified the District can satisfy the service area's demands under the required conditions, the purpose of this addendum is the following:

- Identify, summarize, and provide modified and/or replacement language to the Project's previously approved WSA for differences between the SGPWA and BCVWD 2015 and 2020 UWMPs referenced in the Project's WSA. Specifically, this includes the following:
 - As indicated in the BCVWD 2020 UWMP and the previously approved Beaumont Pointe Development WSA, update the Project's WSA to further define the use of NPW supplies for all outdoor irrigation demands.
 - Update the SGPWA and BCVWD data and tables presented in the Beaumont Pointe Development WSA with the current data and tables from agency's 2020 UWMPs.
 - Update the SGPWA and BCVWD data and tables for the projected future water supplies and demands of BCVWD for the required 20-year projection (through 2045) under normal, single, and multiple consecutive dry year conditions.
 - Add a new section summarizing the BCVWD 2020 Water Shortage Contingency Plan referenced in the BCVWD 2020 UWMP.

2 2021 Beaumont Pointe WSA Updates

As part of this addendum, the following lists the revisions, additions, and/or deletions that shall be made from the existing sections in the approved *April 13th, 2021 Water Supply Assessment for the Beaumont Pointe Development*.

Section 1. Introduction

Within Section 1, the second paragraph shall be removed and replaced with the following. This revision adds language reflecting the Project's utilization of NPW for all outdoor irrigation demands as discussed during the Project's Plan of Service. Additionally, this revision includes a brief introduction to the planning of the Project in the updated BCVWD 2020 UWMP.

The Project was previously planned and included in the BCVWD's 2015 UWMP with a land use density of 2,000 equivalent dwelling units (EDUs) (previously identified as Jack Rabbit Trail). Based on the District's adopted EDU usage factor of 0.546 AFY/EDU, this equates to an estimated water demand of 1,092 AFY. The new Beaumont Pointe Development land use plan, consisting primarily of industrial warehouse buildings, estimates a density of 360.26 EDUs. The originally approved Beaumont Point Development WSA indicated that approximately 43.31% of the potable water demand from the 360.26 EDUs could be served by BCVWD's Non-Potable Water (NPW) system reducing the Project's potable water demand to 204.21 EDUs. As part of the Project's Plan of Service documents and ongoing water conservation efforts, the Project will be designed to utilize NPW for all outdoor irrigation demands.

To clarify, when the District was preparing the basis for future water demands within the District's service area in the BCVWD's 2020 UWMP, the District utilized the potable water demands from the DRAFT November 2020 Beaumont Pointe WSA. This draft version of the Project's WSA identified the potable water demand as 221 EDUs as shown in Table 3-7 in the BCVWD's 2020 UWMP. Because the Project's updated land use plan has a potable water demand of 204.21 EDUs, the District's 2020 UWMP conservatively included the Project's anticipated potable water demands at 221 EDU

Section 3.1 Background

The fifth paragraph shall be removed and replaced with the following. This revision updates 2015 UWMP references with the applicable BCVWD 2020 UWMP updates showing the District's latest UWMP has considered the Beaumont Pointe Development in their updated water supply assessments.

Like SB 221, SB 610 specific levels of supply reliability are not mandated (i.e., whether a specific level of demand can be met over a designated frequency); rather, the law provides that it is a local policy decision of the water provider as part of the planning process. As provided for in the law, the WSA can rely on the data in the latest UWMP in assessing the water demand of the proposed project relative to the overall increase in demands expected by BCVWD. The Beaumont Pointe development project site was included in Table 3-7 of BCVWD's 2020 UWMP (previously identified as Jack Rabbit Trail). The Project site was previously planned for the development of single-family residences with a land use density of, and corresponding water demand for, 2,000 equivalent dwelling units (EDUs). Based on the District's adopted EDU usage factor of 0.546 AFY/EDU, this equates to an estimated water demand of 1,092 AFY. The new Beaumont Pointe Development land use plan, consisting primarily of industrial warehouse buildings, estimates a density of 360.26 EDUs. The originally approved Beaumont Point Development WSA indicated that approximately 43.31% of the potable water demand from the 360.26 EDUs could be served by BCVWD's Non-Potable Water (NPW) system reducing the Project's potable water demand to 204.21 EDUs. As part of the Project's Plan of Service documents and ongoing water conservation efforts, the Project will be designed to utilize NPW for all outdoor irrigation demands.

To clarify, when the District was preparing the basis for future water demands within the District's service area in the BCVWD's 2020 UWMP, the District utilized the potable water demands from the November 2020 BP DRAFT WSA. This draft version of the Project's WSA identified the potable water demand as 221 EDUs as shown in Table 3-7 in the BCVWD's 2020 UWMP. Because the Project's updated land use plan has a potable water demand of 204.21 EDUs, the District's 2020 UWMP conservatively included the Project's anticipated potable water demands.

Section 3.2 San Gorgonio Pass Water Agency 2015 UWMP

Section 3.2 shall be removed and replaced with the following and the section title shall be replaced with “San Gorgonio Pass Water Agency 2020 UWMP”. This section has been updated to reflect the changes in both the BCVWD and the SGPWA 2020 UWMP.

The Beaumont Pointe Development is located within the service area of the San Gorgonio Pass Water Agency (SGPWA or Pass Agency). BCVWD provided data to SGPWA on BCVWD’s projected demands so the SGPWA could prepare their UWMP. Because the California Department of Water Resources (DWR) required the imported water suppliers to submit their UWMPs earlier than the retail agencies, BCVWD made some preliminary estimates of their demand over the 20-year projection period and provided the projections to SGPWA. These preliminary estimates deviated slightly from the actual demands in BCVWD’s 2020 UWMP. Since the BP Project site was included in the demands in BCVWD’s 2020 UWMP, it is considered to be included in the 2020 SGPWA UWMP, adopted by SGPWA Board of Directors on June 21st, 2021. Table 3-1 below is taken from Table 3-16 in the SGPWA 2020 UWMP.

Table 3-1 – Project Water Demands on SGPWA (AF)

Service Area Water Supply to Meet Demands	2025	2030	2035	2040	2045
City of Banning	9,473	10,198	10,853	11,565	12,278
Beaumont Cherry Valley	14,963	16,160	17,515	18,710	19,693
Yucaipa Valley WD (Riverside Portion)	1,509	1,841	2,174	2,507	2,839
South Mesa WC (Riverside Portion)	1,032	1,084	1,138	1,196	1,196
High Valley WD	3,400	3,600	3,900	4,100	4,300
Cabazon County WD					
Mission Springs (SGPWA area)					
Other SGPWA service area not served by named retailers					
Total SGPWA Boundary Supply to meet Demands	30,400	32,900	35,600	38,100	40,300

Note:

1. Table 3-1 is taken from Table 3-16 in the SGPWA 2020 UWMP.

In Chapter 1 of the SGPWA’s 2020 UWMP, the UWMP stated the following.

“It is important to note that this UWMP [SGPWA 2020 UWMP] has been completed to address regional resource management and does not address the particular conditions of any specific retail water agency or entity within the SGPWA service area. The retail urban water suppliers within SGPWA service area are preparing their own separate UWMPs where required, though SGPWA has facilitated coordination among the retailers to assure consistency.”

BCVWD recognizes and acknowledges the disclaimer statement within the 2020 Urban Water Management Plan prepared by the SGPWA related to regional planning. While the UWMP prepared by the SGPWA "...does not address the particular conditions of any specific retail water agency..." BCVWD relies upon the policies and practices of the SGPWA as a foundation for regional water supply solutions. In other words, while the SGPWA's regional planning document does not address local water conditions, BCVWD does rely upon the policies of the SGPWA to provide comprehensive regional solutions related to the use of imported water in the SGPWA area. As an example of the policies and practices adopted by the SGPWA and relied upon by BCVWD include, but are not limited, to the following:

- San Gorgonio Pass Water Agency, Ordinance No. 8, An Ordinance Establishing Rules and Regulations for SGPWA Water Service, February 7, 2005;
- San Gorgonio Pass Water Agency Strategic Plan, May 2012;
- San Gorgonio Pass Water Agency, Resolution No. 2014-02, A Resolution of the San Gorgonio Pass Water Agency Establishing a Policy for Meeting Future Water Demands, February 18, 2014;
- San Gorgonio Pass Water Agency, Ordinance No. 10, Ordinance Establishing Water Shortage Plan, July 21, 2014;
- San Gorgonio Pass Water Agency, Resolution No. 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;
- San Gorgonio Pass Water Agency, State of the Supply PowerPoint Presentation, September 30, 2016;
- San Gorgonio Pass Water Agency, Ordinance No. 13, An Ordinance Amending Rules and Regulations Regarding Authorization for Service, June 5, 2017.

Section 3.3 BCVWD’s 2015 UWMP

Section 3.3 shall be revised as shown in red below. This Section has been updated to note the minor differences between the projections in the BCVWD’s 2020 UWMP and the projections provided to SGPWA for their 2020 UWMP. Additionally, the section title shall be revised to state “BCVWD’s 2020 UWMP”.

There were some minor differences between the projections in BCVWD’s 2020 UWMP and the projections provided to SGPWA for their 2020 UWMP. These differences stemmed from the need for BCVWD to provide preliminary demand projections early on so the SGPWA could meet their prescribed deadline.

BCVWD’s demands for imported water are presented in BCVWD’s 2020 UWMP (Table 6-24) and are repeated in Table 3-2 below. Table 3-2 shows the actual imported water demand to meet the potable water demand plus the banking water demand to ensure drought-proofing of future development. If imported water is not available in a given year, no banking will occur. But when imported water is available, any deficiencies from previous years would be “carried over” and “made up.” As can be seen, there is a slight difference between the demands in Table 3-2 versus those shown above in Table 3-1.

Table 3-2 BCVWD Imported Water Needs from BCVWD 2020 UWMP

	2025	2030	2035	2040	2045
BCVWD Drinking Water Demand, AFY	9,144 ²	9,546 ²	9,966	10,717	11,281
Banking Demands, AFY	1,500	1,200	1,000	1,000	1,000
Total BCVWD Imported Water Demand, AFY	10,644	10,746	10,966	11,717	12,281

Note:

1. Taken from the BCVWD 2020 UWMP, Table 6-24
2. Includes imported water for non-potable water system since non-potable water system is supplied with potable groundwater.

Section 4.1 – Figure 2

Figure 2 shall be replaced with the following updated Figure 2. While the land use and acreage of the Beaumont Pointe Development project did not change, this Addendum updates Figure 2 of the previously approved WSA to no longer show the additional proposed conservation area south of the project.

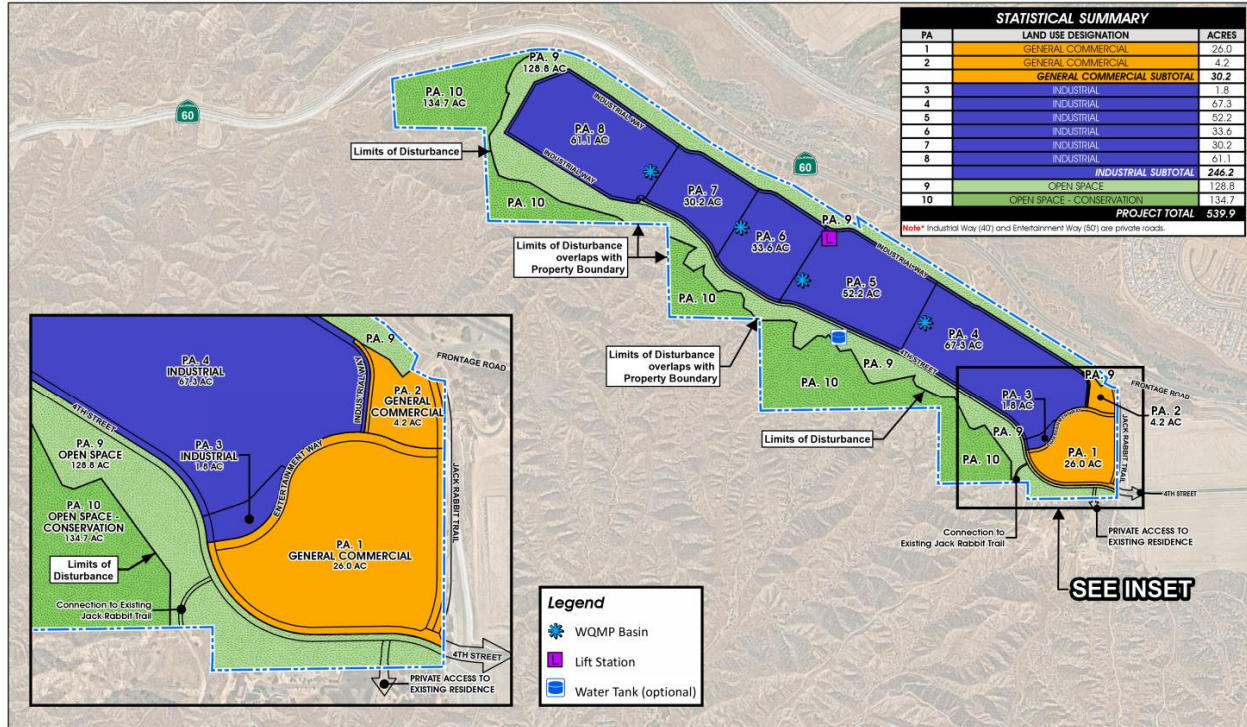


Figure 2 – Beaumont Pointe Land Use Plan

Section 4.1 – Project Description

The last paragraph in Section 4.1 shall be revised as shown in red below. These revisions will clarify the use of utilizing non-potable water for all outdoor irrigation demands.

The project is required to adhere to the landscaping standards in the “Guide to California Friendly Landscaping”, the City of Beaumont’s, and Riverside County Landscaping Ordinances which requires water efficient landscaping. Pursuant to BCVWD requirements, and as part of ongoing water conservation efforts, all outdoor irrigation demands shall utilize non-potable water, and recycled water produced by the City of Beaumont and distributed by BCVWD as it becomes available.

Section 4.2 – Estimated Water Demand - Tables 4-2 Note 5 and 6

Notes 5 and 6 under Table 4-2 in the WSA shall be revised as shown in red below. These revisions clarify the potable water demand for the Project’s latest land use plan, and the use of non-potable water for all outdoor irrigation demands.

[5] Not Used

[6] Represents demands that will be served by non-domestic water sources.

Section 4.2 – Estimated Water Demand - Tables 4-3 Note 4 and 5

Notes 4 and 5 under Table 4-3 in the WSA shall be revised as shown in red below. These revisions clarify the potable water demand for the Project’s latest land use plan, and the use of non-potable water for all outdoor irrigation demands.

[4] Not Used

[5] Represents demands that will be served by non-domestic water sources.

Section 4.2 – Estimated Water Demand

The last paragraph shall be revised as shown in red below. These revisions clarify the reduced potable water demand shown in the BCVWD 2020 UWMP and the use of non-potable water for all outdoor irrigation demands.

Table 4-2 and 4-3 calculate the total estimated water demand at Beaumont Pointe Development buildout of 175,584 gpd, or 196.70 AFY. Based on BCVWD equivalent dwelling unit usage of 0.546 AFY per equivalent dwelling unit, this equates to 360.26 EDUs (196.70 AFY). Of the total water demand, the potable water demand is estimated to be 204.21 EDUs (111.50 AFY) and the non-potable water demand for outdoor irrigation is estimated to be 85.20 AFY, equivalent to 156.04 EDUs.

Section 5.1 – Overview of BCVWD’s Water System and Operation – Table 5-1

Table 5-1 shall be revised as shown in red below. These revisions update the potable and non-potable water connections, average and maximum day demands to reflect the values listed in the BCVWD 2020 UWMP. Please note that the BCVWD 2020 UWMP does not include the total water pumped for 2020 and therefore this row was removed from Table 5-1.

Table 5-1 BCVWD Potable and Non-Potable Water Connection and Deliveries 2020

	Potable Water	Non-Potable Water	Total
Number of Connections	19,359	300	19,659 ¹
Average Annual, MGD	10.8 ²	5.6 ²	16.4
Maximum Day, MGD	21.6 ²	6.7 ²	NA
Total Demand, AF ³	10,845	1,647	12,492

Notes:

1. Taken from Section 3.1 the BCVWD 2020 UWMP.
2. Taken from Section 3.6 in the BCVWD 2020 UWMP.
3. The Total Demand shown does not include system losses.

Section 5.2 – Potable Water System

Section 5.2 shall be removed and replaced with the potable water system overview provided in the District's 2020 UWMP.

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. The Beaumont Basin Adjudication requires that the extracted amount of water from the Basin must be replaced.

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 due to there being no replenishment requirement like the Beaumont Basin; 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.

Section 5.3 – Imported Water and Recharge Facilities

Section 5.3 shall be removed and replaced with the Imported Water and Recharge Facilities overview provided in the District's 2020 UWMP.

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.

The District is also currently working with Riverside County Flood Control and Water Conservation District 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.

Section 5.4– Non-potable (Recycled) Water System

Section 5.4 shall be removed and replaced with the Non-potable (Recycled) Water System overview provided in the District's 2020 UWMP. The purpose of including this section will be to identify the current and future operating NPW systems and their source of NPW.

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.

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. Upon the availability of recycled water from the City, the non-potable system will be completely severed from the potable system.

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.

Section 6.1 Regional Water Supply Demand Spreadsheet Models

As required by SB610, a Project’s WSA must identify other public water systems that receive water from the same source as the public water system. Since BCVWD relies heavily on imported water from the SGPWA, updated numbers from the other regional retail agencies and their estimated current and future water demands were listed in the original Project’s WSA. Therefore, Table 3-16 from the 2020 SGPWA UWMP is shown below and is intended to update the water supply demands for the different SGPWA service areas described in Section 6.1.1 through Section 6.1.3 in the original WSA.

Service Area Water Supply to Meet Demands	2025	2030	2035	2040	2045
City of Banning	9,473	10,198	10,853	11,565	12,278
Beaumont Cherry Valley	14,963	16,160	17,515	18,710	19,693
Yucaipa Valley WD (Riverside Portion)	1,509	1,841	2,174	2,507	2,839
South Mesa WC (Riverside Portion)	1,032	1,084	1,138	1,196	1,196
High Valley WD	3,400	3,600	3,900	4,100	4,300
Cabazon County WD					
Mission Springs (SGPWA area)					
Other SGPWA service area not served by named retailers					
Total SGPWA Boundary Supply to meet Demands	30,400	32,900	35,600	38,100	40,300

Note:
1. Taken from Table 3-16 in the SGPWA 2020 UWMP

Section 6.1.3.1 – City of Beaumont Development

Section 6.1.3.1 in the Beaumont Pointe Development WSA listed the major development projects in the BCVWD service area and their estimated EDUs. This allowed for the Supply-Demand Model for BCVWD to be projected for the next 20 years. Tables 3-6 through 3-8 in the BCVWD 2020 UWMP (shown below) list the updated projects within the BCVWD service area or sphere of influence currently under construction or planning and their corresponding EDU. These tables shall replace the existing Table 6-6 in the Beaumont Pointe Development WSA and shall be used as a reference for the projected water demands in future projections. Additionally, the following changes in red from the second paragraph in Section 6.1.3.1 will be made to reflect the updated Beaumont Pointe Development EDUs.

Prior “proposed” projects equivalent dwelling units within the BCVWD service area were estimated at 12,544 (Legacy Highlands WSA, June 2020). The **Beaumont Pointe Development** project site was previously planned with a land use density of 2,000 equivalent dwelling units (EDUs). The new **Beaumont Pointe Development** land use plan estimates a significantly reduced density of 360.26 EDUs, representing a reduced site density by 82 percent. The originally approved Beaumont Point Development WSA indicated that approximately 43.31% of the potable water demand from the 360.26 EDUs could be served by BCVWD’s Non-Potable Water (NPW) system reducing the Project’s potable water demand to 204.21 EDUs. As part of the Project’s Plan of Service documents and ongoing water conservation efforts, the Project will be designed to utilize NPW for all outdoor irrigation demands or approximately 156.04 EDUs.

To clarify, when the District was preparing the basis for future water demands within the District’s service area in the BCVWD’s 2020 UWMP, the District utilized the potable water demands from the November 2020 BP DRAFT WSA. This draft version of the Project’s WSA identified the potable water demand as 221 EDUs as shown in Table 3-7 (shown below) in the BCVWD’s 2020 UWMP. Because the Project’s updated land use plan has a potable water demand of 204.21 EDUs, the District’s 2020 UWMP conservatively included the Project’s anticipated potable water demands.

Figure 4 shows the number of single-family home building permits issued in the City of Beaumont since year 2002. (Year 2018 was estimated based on data through September 2018.) Although not shown in the figure, the permit applications started to increase in 1999- 2000 and reached their peak in 2005 with 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, permits averaged 396 per year, and 508 over the last 5 years. The 16-year average was 747 per year. Future growth will likely be in the range of 450 to 650 permits per year, although some developers have projected slightly higher amounts in their build-out forecasts.

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	

Note:

1. Taken from Table 3-6 in the BCVWD 2020 UWMP

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	
Potrero Logistics (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	

Note:

1. Taken from Table 3-7 in the BCVWD 2020 UWMP

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.

Note:

- 1. Taken from Table 3-7 in the BCVWD 2020 UWMP

	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

Note:

- 1. Taken from Table 3-8 in the BCVWD 2020 UWMP

Section 6.1.3.3 – Supply Demand Model for BCVWD

Section 6.1.3.3 shall be removed and replaced with the following updates from the BCVWD 2020 UWMP. As required by the SB610, the Project's WSA shall discuss the public water systems water supplies available during normal conditions for existing and future conditions in 5 year periods for 20 years. To update Section 6 and to provide a 20-year outlook based on the BCVWD 2020 UWMP, the following is intended to update Section 6.1.3.3 based on providing a 20-year projection.

	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)

Note:

1. Taken from Table 7-8 in the BCVWD 2020 UWMP

BCVWD's current and future water sources can be summarized in the Table below and as described below. As shown in the table above, the total BCVWD demand is less than the total available supply showing BCVWD will have sufficient water supplies for the Project under normal operating conditions.

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

Note:

1. Taken from Table 6-1 in the BCVWD 2020 UWMP

BCWD’s source of supply consists of:

- **Edgar Canyon (Little San Gorgonio Creek) Groundwater** – 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. As shown in Table 6-7 in the BCVWD 2020 UWMP the Edgar Canyon Wells produced about 10% of the District’s annual demand (potable and non-potable) in 2020.
- **Beaumont Basin**
 - **Overlier Potable and Non-Potable Water Forbearance** – is credited to a water supplier by Watermaster for any potable and/or recycled water provided to an overlying party or an overlying party’s land. The overlier forbears pumping the equivalent amount of water supplied and 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.

- **Reallocated Unused Overlier Pumping Rights** – All of the “safe yield” from the Beaumont Basin is allocated to the overlying parties (overliers). Each overlier was given a share of the safe yield and was allowed to pump no more than five times that share in any five-year period. Most, if not all, of the overlies 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 C3. 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.
- **Return Flow Credits** – Return flow is defined as the portion of water which is applied to the land which is not evaporated or evapo-transpired and which ultimately percolates (returns) to the groundwater table and which can be re-extracted for use. Return flows originate from irrigation of agricultural land and lawns and landscaped areas in rural and urban settings and from deep percolation of septic tank effluent in unsewered areas, e.g., Cherry Valley. In most adjudicated groundwater basins, credit is given to the supplier of water which is used on land overlying the groundwater basin and which percolates back or “returns” to the groundwater. Watermaster provided annual return flow estimates from various land uses in Table 3 of the Safe Yield Report and were used in estimating current and future return flow credits.
- **Storm Water** – Stormwater capture plays a significant role in BCVWD’s local water resources supply development. Diverted stormwater is/will be routed to percolation ponds capable of recharging the groundwater basins. The District currently has stormwater diversion located in the Upper and Middle of Edgar Canyon and has several other proposed projects in the future.
- **Non-Potable Groundwater**
 - **Mouth of Edgar Canyon** – High nitrate groundwater located at the mouth of Edgar Canyon can supplement the recycled water/non-potable water system flow in the summer, high demand months, making well water available for potable water use. BCVWD believes as much as 300 AFY can be captured and reused.
 - **San Timoteo Creek** – San Timoteo Canyon Extraction Wells to capture groundwater from the Beaumont Basin flowing into San Timoteo Canyon and also to capture City of Beaumont wastewater flow discharged to Cooper’s Creek once the water has percolated and is no longer available for habitat maintenance. It is estimated that 400 to 800 AFY can be captured and put into the recycled water/non-potable water system to meet summertime demands.
- **Recycled Water** – BCVWD is currently working with the City of Beaumont to distribute Title 22 recycled water produced at the City of Beaumont’s Treatment Plant No. 1. Phase 1 of the City’s wastewater treatment plant construction has been completed, increasing the rated capacity from 4 MGD to 6 MGD. Process upgrades include redundant coarse screens, a grit removal system, a flow equalization basin, a fine screen system, an activated sludge process coupled with a new MBR system followed by a partial RO, and a new UV disinfection system. The City submitted a Title 22 Recycled Water Engineering Report to the Santa Ana Regional Water Board in September 2019 and is awaiting formal comment. 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.

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 recycle water from the City will be treated to a high-level and should have no issue in achieving the Maximum Benefit Water Quality Objectives.

Table 6-15 in the BCVWD 2020 UWMP shown below lists 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. Please note that not all the wastewater can be recycled due to onsite recycled water demands and reject water from the reverse osmosis process.

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	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

Notes

1. The City of Beaumont population growth is less aggressive than shown in tables presented in Section 3 of the BCVWD 2020 UWMP to be conservative in the amount of recycled water available.
 2. Table taken from Table 6-15 in the BCVWD 2020 UWMP.
- **Imported Water from SGPWA** – The amount of imported water which BCVWD is able to purchase and recharge is only the amount left over after YVWD, the City of Banning, and others have purchased the amount each needs to meet their demands and banking. The amount available from the SGPWA collectively is discussed later in this WSA. BCVWD has entered into an agreement, and participated financially, with the SGPWA for a share of the yield from the Sites Reservoir Project. This is discussed later in this WSA.

Section 7 SGPWA Available Imported Water

BCVWD relies on imported water from the SGPWA. In order to meet the requirements of SB610 of showing the current and future availability of the BCVWD water supplies, Section 7 of the original WSA is intended to be replaced with following which is essentially a summary of Section 3.1 from the 2020 SGPWA UWMP in order to describe the updated SGPWA Imported Water Supply Sources.

7 SGPWA Available Imported Water

In November of 1962, SGPWA entered a State Water Project water service contract (SWP Contract) with the State of California Department of Water Resources (DWR). The SWP Contract authorized DWR to deliver SWP water to SGPWA under certain terms and conditions.

SGPWA also acquires water supplies through contracts with other agencies and annual water transfers and exchanges. SGPWA annually acquires Yuba Accord water as well as water under the Nickel Agreement. SGPWA may also acquire water through an agreement with San Bernardino Valley Municipal Water District (SBVMWD) as well as annual transfers and exchanges with other SWP contractors. And, in the future, SGPWA will acquire water through the Sites Reservoir Agreement. All of these additional supplies, beyond SGPWA's SWP supply, are discussed in the following sections

SGPWA's delivery of supplemental water includes both delivery to water filtration facilities and groundwater recharge basins to assist with the management of groundwater in the SGPWA service area. Whether by direct delivery, in-lieu recharge, or direct recharge, the SGPWA plays a critical role in the local management of groundwater and surface water resources.

7.1 State Water Project Overview

The State Water Project (SWP) is the largest state-built, multi-purpose water project in the country. It was authorized by the California State Legislature in 1959, with the construction of most facilities completed by 1973. Today, the SWP includes 28 dams and reservoirs, 26 pumping and generating plants, and approximately 660 miles of aqueducts.

The primary water source for the SWP is the Feather River, a tributary of the Sacramento River. The water flowing in the Feather River is captured by the SWP in Oroville dam and reservoir. Storage released from Oroville Dam flows down natural river channels to the Sacramento-San Joaquin River Delta (Delta). While some SWP supplies are pumped from the northern Delta into the North Bay Aqueduct or diverted by SWP contractors upstream, the vast majority of SWP supplies are pumped from the southern Delta into the 444-mile-long California Aqueduct. The California Aqueduct conveys water along the west side of the San Joaquin Valley to the Edmonston Pumping Plant, where water is pumped over the Tehachapi Mountains. From there the California Aqueduct divides into the East and West Branches. SGPWA takes its SWP deliveries from the East Branch, which was completed in 2003. Phase 2 of the East Branch Extension was completed in 2018 which increased the capacity of the supplemental water supplies and allowed the SGPWA to take the Agency's official maximum allotment of State Project Water.

SGPWA delivers its SWP supplies, along with other water supplies, to recharge local groundwater basins through transmission pipelines and recharge systems as well as some delivery to Yucaipa Valley Water District.

SGPWA is one of 29 water agencies that have a SWP Contract with DWR. Each SWP contractor's SWP Contract contains a "Table A Annual Amounts" (Table A) which lists the contracted maximum amount of water an agency may receive under its contract. Table A is also used in determining each contractor's share of the total SWP water supply DWR determines to be available each year. The total planned annual delivery capability of the SWP and the sum of all

contractors’ maximum Table A amounts was originally 4.23 million acre-feet. The initial SWP storage and conveyance facilities were designed to meet contractors’ water demands with the construction of additional storage facilities planned as demands increased. However, few additional SWP storage facilities have been constructed since the early 1970s and a portion of the original conveyance design was never completed. SWP conveyance facilities were generally designed and have been constructed to deliver Table A to all contractors. The maximum Table A of all SWP contractors now totals about 4.133 million AF. SGPWA manages its SWP supplies to maximize the availability of these supplies to its retail customers. In this way, SGPWA seeks to optimally manage its Table A wet year supplies, acquire additional SWP supplies through Article 21 conditions (SWP surplus conditions), access Advanced Table A supplies, and potentially exchange Table A supplies with other SWP contractors. All of these actions improve the long-term reliability of Table A supplies.

7.1.1 Table A Allocations

SGPWA’s Table A Annual Amount is 17,300 acre-feet per year up through the 2045 UWMP planning horizon. SGPWA’s Table A represents a maximum contract amount that could be available each year assuming that the SWP could deliver 100% contract supplies to all SWP contractors. The last 100% allocation year occurred in 2006. SGPWA’s SWP Contract has numerous components that allow SGPWA to manage and control the annually available SWP water supplies.

More often than not, actual SWP allocations are less than 100% SGPWA’s Table A Annual Amount. Annual SWP percentage Table A allocations fluctuate based upon hydrology, water storage, and regulatory criteria in the Delta. Table 7-1 below shows the SGPWA Table A Annual Amount from 2010 through 2020, the SWP allocation percentage, and the final available Table A allocation from 2010-2020. During this period, the SGPWA received on average 8,335 acre-feet, or about 48% of the Table A contract amount. It is important to recognize that this period included a significant and recent drought event.

Table 7-1: SWP Table A Allocations and Deliveries

Year	SWP Contract Table A	Percent Allocation	Allocation Amount
2010	17,300	50%	8,650
2011	17,300	80%	13,840
2012	17,300	65%	11,245
2013	17,300	35%	6,055
2014	17,300	5%	865
2015	17,300	20%	3,460
2016	17,300	60%	10,380
2017	17,300	85%	14,705
2018	17,300	35%	6,055
2019	17,300	75%	12,975
2020	17,300	20%	3,460

Notes

1. Taken from Table 3-1 in the 2020 SGPWA UWMP.

DWR has projected that it is less likely that 100% allocation years will occur on a regular basis in the future. In August 2020, DWR finalized the “2019 SWP Delivery Capability Report” (DCR) that outlined the probable future water supply allocations for the SWP system. The DCR showed variations in future Table A deliveries based upon hydrological and regulatory conditions. These

conditions are summarized in Table 7-2 below along with SGPWA’s corresponding Table A amount.

Table 7-2: SWP Estimated Table A Deliveries from DCR (values in acre-feet)

	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%

Notes

1. Taken from Table 3-2 in the 2020 SGPWA UWMP

As shown in Table 7-2, DWR’s long-term average reliability shows a downward trend from 62% in the 2017 SWP DCR to 58% in the 2019 DCR. DWR attributes this downward trend to climatological and hydrological factors that impact precipitation patterns and snowfall accumulation above its main SWP facility, Lake Oroville. In this way, SGPWA characterizes its average normal year SWP water supply through 2045 as 58% of its Table A Annual Amount in accordance with the DCR. Thus, from 2025 through 2045, SGPWA’s projected Table A final available allocation will be 58% of 17,300 acre-feet or 10,034 acre-feet per year. Importantly, SGPWA anticipates years where its Table A Allocation exceeds the average normal year delivery of 58%. In these years, SGPWA will capture and store the surplus water assets.

The single dry year characterization and five consecutive dry year characterization for the SWP supplies are also an important consideration in SGPWA’s UWMP. The 2017 and 2019 DCR represent the single driest year as 1977 with an 8% SWP allocation estimate in 2017 DCR and a 7% SWP allocation estimate in 2019 DCR. The single lowest historical SWP allocation occurred in 2014 at 5%, and this 5% allocation is also representative of the 2021 Table A Allocation. As such, to be conservative in its projections, SGPWA will use 5% of 17,300 acre-feet or 865 acre-feet per year as the single dry year allocation through 2045 as depicted in Table 7-3.

Table 7-3: SWP Future Table A Projected Water Year Deliveries During Single and Multi-Year Drought Conditions (AFY)

Table A	Year Type	Amount
	Normal	10,034
	Single Dry Year	865
Multi-Year Drought	Year 1	6,055
	Year 2	865
	Year 3	865
	Year 4	3,460
	Year 5	6,055

Notes

1. Taken from Table 3-3 in the 2020 SGPWA UWMP

The 2019 DCR also identifies various drought periods for purposes of characterizing SWP allocation percentages that would accompany those drought periods. The averaging of the allocations over the course of the drought period is not representative of SGPWA drought planning purposes. SGPWA will use the following drought characterization for its short-term and long-term planning: year 1 at 35%; year 2 at 5%; year 3 at 5%; year 4 at 20%; and year 5 at 35%. SGPWA examined the historical record and determined that there was no representative five consecutive year historical SWP delivery dry period that adequately reflects a potential future

five-year critical drought condition that could drastically reduce SWP supply deliveries for SGPWA’s service area. As such, taking a more conservative planning approach, SGPWA created a more restrictive dry year characterization that adequately represents a critical drought over five consecutive years. In this dry year modeled sequence, two consecutive critically dry years are bounded by Table A allocations that are reflected in the recent historical record. Table 3-4 shows the normal year, single dry year, and five consecutive dry years planned SWP Table A Allocation for San Gorgonio Pass Water Agency through 2045.

Table 7-4: Future SWP Allocations by Year Type Through 2045 (AFY)

Total Supply		2025	2030	2035	2040	2045
Normal		10,034	10,034	10,034	10,034	10,034
Single Dry Year		865	865	865	865	865
Multi-Year Drought	Year 1	6,055	6,055	6,055	6,055	6,055
	Year 2	865	865	865	865	865
	Year 3	865	865	865	865	865
	Year 4	3,460	3,460	3,460	3,460	3,460
	Year 5	6,055	6,055	6,055	6,055	6,055

Notes

1. Taken from Table 3-4 in the 2020 SGPWA UWMP

7.1.2. Table A Carryover Water

SGPWA’s SWP Contract allows it to forego use of its allocated SWP Table A supply and retain a portion of that allocated supply in storage for future use. This retained supply is termed “Carryover” and is governed under Article 56 of SGPWA’s SWP contract. Carryover water is water that is released from Oroville dam and reservoir, re-diverted at the Delta, and then stored in San Luis Reservoir – an off-stream reservoir located just outside the City of Santa Nella at the junction of Interstate 5 and California State Highway 152. San Luis Reservoir is jointly owned and operated by the state and federal governments and all SWP contractors may use the storage facility to manage Carryover water supplies. In short, the San Luis Reservoir receives, regulates, and stores exported water derived from the State Water Project and Federal Central Valley Project.

The amount of water that SGPWA may carryover in any given year is subject to a set of rules that implicate all SWP contractors throughout California. In brief, SGPWA delivers its Table A supplies to Carryover in San Luis Reservoir with an expectation that it will be able to divert all or a portion of these supplies in a subsequent year. In the event that water supplies are abundant, San Luis Reservoir may “spill.” When San Luis Reservoir reaches a “spill” stage, DWR releases SGPWA’s Carryover in accordance with the aforementioned rules as they apply in the context of all entities with stored water in San Luis Reservoir. Nevertheless, over the last 10 years SGPWA has retained a portion of its Table A Allocation as Carryover even in the driest years and continues to maintain a Carryover balance. Table 7-5 shows SGPWA’s Carryover balance from 2010 through 2020.

Table 7-5: SGPWA Historic SWP Carryover Storage and Use (AFY)

Year	Source	Available Carryover
2010	97-12 Historic Delivery Database	2,719
2011	97-12 Historic Delivery Database	4,535
2012	97-12 Historic Delivery Database	4,956
2013	Finalization Report	5,277
2014	Finalization Report	5,264
2015	Finalization Report	954
2016	Finalization Report	936
2017	Finalization Report	1,700
2018	Finalization Report	5,159
2019	Finalization Report	2,668
2020	Finalization Report	4,211

Notes

1. Taken from Table 3-5 in the 2020 SGPWA UWMP

The Carryover supplies noted in Table 7-5 combine a number of water management factors that impact SGPWA's overall water supply availability. For example, where SGPWA is able to acquire additional water assets in normal and wet year types, SGPWA may carryover SWP supplies to water shortage years for use. Moreover, where SGPWA may acquire alternative supplies through transfers and exchanges, even in the driest years, the Agency may then manage its supply portfolio to preserve Carryover supplies for later use. For instance, in 2015, SGPWA stored 954 acre-feet of water supplies as Carryover when SWP allocations were at the lowest historical allocation on record – five percent (5%) – in the 2014 water year (see Table 7-1). Similarly, in 2015 – a 20% allocation year – SGPWA was able to carryover 936 acre-feet of water into the 2016 water year by acquiring alternative supplies and flexibly managing regional supplies in coordination with the retail agencies. SGPWA's management actions coordinated the Agency's available water supply portfolio in these years with the regional retail agencies water supply portfolios and water conservation efforts in order to preserve SWP supplies for future uses.

SGPWA will have access to its Table A Carryover supplies in future years based upon the hydrological and regulatory conditions. The Table A Carryover supplies result from a number of variables that are tied to the SWP Table A annual percent allocation, operations in San Luis Reservoir, and water supply management by SGPWA throughout its service area. In wet years, SGPWA carries over substantial supplies that are considered in the annual carryover numbers.

Accordingly, water years 2013 through 2017 above are representative of a five-year Carryover supply availability for SGPWA – and include 2014 and 2015 two of the driest years on record. Furthermore, SGPWA conservatively estimates future Carryover supplies in a normal year to be approximately 5,200 acre-feet similar to 2013, 2014, and 2018 and carryover in a single dry year to be just over 900 acre-feet like 2015 and 2016. These supplies are estimated based upon typical SWP management in a normal year in context of SGPWA's total water supply portfolio. The future normal year Carryover supply represents approximately half of SGPWA's normal year carryover number as noted in Table 7-5 but other years represent Carryover supplies that may result from additional SGPWA multi-year management actions that allow Carryover supplies to be available in these year types. Table 7-6 shows the Carryover supplies through 2025 and Table 7-7 shows the representative Table A Carryover supplies through 2045

Table 7-6: Carryover Supplies Through 2025 (AFY)

Carryover	Year Type	Amount
	Normal	3,000
	Single Dry Year	936
Multi-Year Drought	Year 1	3,000
	Year 2	2,500
	Year 3	954
	Year 4	936
	Year 5	1,700

Notes

1. Taken from Table 3-6 in the 2020 SGPWA UWMP

Table 7-7: Future Available Table A Carryover Supplies (AFY)

Year Type	2025	2030	2035	2040	2045
Normal	3,000	3,000	3,000	3,000	3,000
Single Dry Year	936	936	936	936	936
Multi-Year Drought	Year 1	3,000	3,000	3,000	3,000
	Year 2	2,500	2,500	2,500	2,500
	Year 3	954	954	954	954
	Year 4	936	936	936	936
	Year 5	1,700	1,700	1,700	1,700

Notes

1. Taken from Table 3-7 in the 2020 SGPWA UWMP

7.1.3 Delta Conveyance Project Future SWP Increment

The Delta Conveyance Project, if implemented, would increase the future reliability of SGPWA water supplies derived from the SWP. Consistent with Executive Order N-10-19, in early 2019, the state announced a new single tunnel project, which proposed a set of new diversion intakes along Sacramento River in the north Delta for SWP. In 2019, the California Department of Water Resources (DWR) initiated planning and environmental review for a single tunnel Delta Conveyance Project (DCP) to protect the reliability of State Water Project (SWP) supplies from the effects of climate change and seismic events, among other risks. DWR’s current schedule for the DCP environmental planning and permitting extends through the end of 2024. DCP will potentially be operational no later than 2040 following extensive planning, permitting, and construction.

SGPWA anticipates that the DCP will increase access to water assets by providing conveyance opportunities that are currently unavailable. SGPWA recently increased its investment in the DCP from 1.22% to 2% of project capacity in order to improve future conveyance actions related to its water asset portfolio. As such, the DCP investment should provide better access to SWP supplies in normal and wet years as well as opportunities to deliver alternative planned supplies as they become available to SGPWA.

7.2 SGPWA Additional Imported Water Supplies

SGPWA has numerous other current and future water assets besides its Table A Annual Amount and Table A carryover supplies. These supplies are derived from the following items: Yuba

Accord, Nickel Agreement, San Bernardino Valley Municipal Water District Agreement, and Sites Reservoir Agreement. These additional water sources are more fully described below.

7.2.1. Yuba Accord Water

In 2008, SGPWA entered into the Yuba Accord Agreement and has amended the agreement several times through 2014. The Yuba Accord Agreement allows SGPWA to purchase water from Yuba County Water Agency through its contractual arrangement with DWR that permits 21 SWP contractors (including SGPWA) and the San Luis and Delta-Mendota Water Authority regular access to the supply. Yuba Accord water comes from the Yuba River, located north of the Delta, and the water purchased under this agreement is subject to losses associated with transporting it to SGPWA’s service area. While the amount of this water varies each year depending on hydrologic conditions, the Agency anticipates receiving an average future amount of approximately 300 AFY. The Agency recently signed an extension to this agreement allowing it to purchase this water well into the future. Table 7-8 shows the last five years of Yuba Accord water supplies coming to SGPWA. Table 7-9 shows the normal, single dry, and five consecutive dry year water supplies available under the Yuba Accord.

Table 7-8: Last Five Years of Yuba Accord Water Deliveries (AFY)

Year	Yuba Accord Deliveries
2015	0
2016	0
2017	0
2018	124
2019	0
2020	406

Notes:

1. Taken from Table 3-8 in the 2020 SGPWA UWMP

Table 7-9: Yuba Accord Future Water Deliveries in all Year Types (AFY)

Yuba Accord Supply		2025	2030	2035	2040	2045
Normal		400	400	400	400	400
Single Dry Year		100	100	100	100	100
Multi-Year Drought	Year 1	300	300	300	300	300
	Year 2	100	100	100	100	100
	Year 3	100	100	100	100	100
	Year 4	200	200	200	200	200
	Year 5	300	300	300	300	300

Notes:

2. Taken from Table 3-9 in the 2020 SGPWA UWMP

7.2.2. Nickel Agreement

SGPWA signed an agreement with Antelope Valley – East Kern Water Agency (AVEK) on July 7, 2017 (hereafter called “Nickel Agreement”). The Nickel Agreement entitles SGPWA to purchase 1,700 acre-feet of AVEK water each year under a take or pay provision. The AVEK water is non-project water that is provided by the Kern County Water Agency. The Nickel Agreement expires in 2036 and SGPWA has a right of first refusal for an additional 20-year term. AVEK is required

to deliver 100% of the supply in all years. Table 7-10 shows SGPWA Nickel Agreement water deliveries since 2017.

Table 7-10: Nickel Agreement Water Deliveries since 2017 (AFY)

Year	Nickel Agreement Deliveries
2017	1,700
2018	1,700
2019	1,700
2020	1,700

Notes:

1. Taken from Table 3-10 in the 2020 SGPWA UWMP

SGPWA may consider the Nickel Agreement water supply always available in normal, single dry, and five consecutive dry years. The Nickel Agreement is a take or pay contract with no shortage provision that obligates AVEK to deliver the water in all year types. Table 7-11 shows the SGPWA Nickel Agreement future water supply availability.

Table 7-11: Nickel Agreement Future Water Deliveries in all Year Types (AFY)

Nickel Agreement Deliveries		2025	2030	2035	2040	2045
Normal		1,700	1,700	1,700	1,700	1,700
Single Dry Year		1,700	1,700	1,700	1,700	1,700
Multi-Year Drought	Year 1	1,700	1,700	1,700	1,700	1,700
	Year 2	1,700	1,700	1,700	1,700	1,700
	Year 3	1,700	1,700	1,700	1,700	1,700
	Year 4	1,700	1,700	1,700	1,700	1,700
	Year 5	1,700	1,700	1,700	1,700	1,700

Notes:

1. Taken from Table 3-11 in the 2020 SGPWA UWMP.

7.2.3. San Bernardino Valley Municipal Water District Agreement

SGPWA entered the Surplus Water Sale Agreement with San Bernardino Valley Municipal Water District Surplus Water Sale Agreement (SBVMWD Agreement) in June of 2018. SBVMWD is a SWP contractor that holds an entitlement to 102,600 acre-feet under its Table A Annual Amount in its 1960 SWP contract. The SBVMWD Agreement entitles SGPWA to purchase up to 5,000 acre-feet of SWP entitlement each year with SBVMWD’s express concurrence. The SBVMWD Agreement expires on December 31, 2032, and there is no right of renewal. Nevertheless, SGPWA anticipates renewing this contract. The amount of water available under the contract varies each year and is subject to the “sole discretion” of SBVMWD whether the water will be made available for SGPWA to purchase. The water supply under this agreement may be available depending upon SBVMWD’s supply availability determination. The SGPWA is not incorporating this potential supply into its water supply reliability determinations for all year types but considers the supply a component of its available transfer and exchange supplies and, when acquired, may be incorporated into its groundwater storage facilities.

7.2.4. Site Reservoir Agreement

SGPWA signed the Sites Reservoir Agreement in 2019. Sites Reservoir is a proposed new 1,500,000 acre-feet off-stream storage reservoir in northern California near Maxwell. Sacramento River flows will be diverted during excess flow periods and stored in the off-stream reservoir and released for use in the drier periods. Sites Reservoir is expected to provide water supply, environmental, flood, and recreational benefits. The proponents of Sites Reservoir include 30 entities including several individual SWP Public Water Agencies (PWAs). Sites Reservoir is expected to provide approximately 240 TAF of additional deliveries on average to participating agencies under existing conditions. Sites Reservoir is currently undergoing environmental planning and permitting. Full operations of the Sites Reservoir are estimated to start by 2029 following environmental planning, permitting, and construction. Sites was conditionally awarded \$816 million from the California Water Commission for ecosystem, recreation, and flood control benefits under Proposition 1. Reclamation has also invested in Sites Reservoir and has allocated \$13.7 million in 2021 for the project. Both SGPWA and Beaumont Cherry Valley Water District have purchased shares in Sites Reservoir, 10,000 shares and 4,000 shares respectively, that would augment supplies in the San Geronio Pass Water Agency service area. Table 7-12 shows the future availability of Sites Reservoir water in the SGPWA’s service area and incorporates both the SGPWA and Beaumont Cherry Valley potential supplies. Other stakeholders with investments in Sites Reservoir have accounted for available supplies in 2035 as well.

Table 7-12 Future Availability of Site Reservoir Water (AFY)

Sites Reservoir		2025	2030	2035	2040	2045
Normal		0	0	10,000	12,000	15,000
Single Dry Year		0	0	10,000	12,000	15,000
Multi-Year Drought	Year 1	0	0	10,000	12,000	15,000
	Year 2	0	0	10,000	12,000	15,000
	Year 3	0	0	10,000	12,000	15,000
	Year 4	0	0	10,000	12,000	15,000
	Year 5	0	0	10,000	12,000	15,000

Notes:

1. Taken from Table 3-12 in the 2020 SGPWA UWMP.

7.2.5. Water Transfers and Exchanges

SGPWA also engages in water transfers and exchanges involving its SWP assets and other contractors’ SWP water assets. Historically, SGPWA has both received and delivered water through these transfers and exchanges with various agencies throughout California. These transfers are essentially spot market transfers where short-term opportunities are identified and then actions taken for acquisition. These transfers help support management of SGPWA’s and the retail agencies’ water supply portfolios. Future SGPWA transfers and exchanges depend upon the allocations available to SGPWA and other water purveyors. As noted in Section 7.2.1., SGPWA has regularly acquired Yuba Accord water through its transfer and exchange activities. In addition, the State Water Contractors collectively develop annual water transfer and exchange programs to develop transferable supplies and negotiate transfer terms. SGPWA regularly participates in SWC’s transfer programs. SGPWA seeks to augment potential opportunities for exchanges and transfers with SWP contractors and alternative transfer opportunities like the SWC annual transfer program. Table 7-13 shows the planned future SWP and other water transfer opportunities that could be available for SGPWA.

Table 7-13 SGPWA Future Transfers and Exchanges (AFY)

Target Supply	2025	2030	2035	2040	2045
State Water Project	500	1,000	1,000	1,000	1,000
Additional Supplies	600	1,100	1,600	2,100	2,600
Total Transfers	1,100	2,100	2,600	3,100	3,600

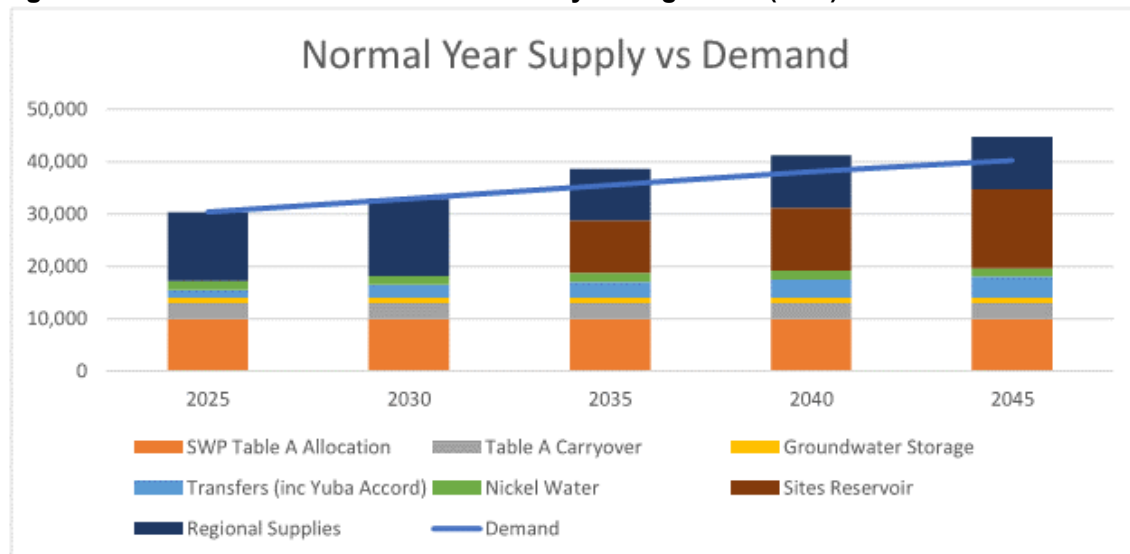
Notes:

1. Taken from Table 3-13 in the 2020 SGPWA UWMP.

7.3. Summary of Available Imported Water Supplies

As shown in Figure 7-1, SGPWA has reliable water supplies through the 2045 planning horizon. SGPWA has assessed the available SWP supplies, imported supplies, and locally available managed water supplies to assess regional water supply reliability through this planning horizon. In addition, SGPWA engages in annual water transfers and exchanges and stores water both within SGPWA’s service area boundaries and outside its boundaries to address variable water conditions. Together, these supplies make up SGPWA’s regional water asset portfolio that is actively managed by coordinated actions between SGPWA and the regional retail agencies to ensure long-term reliability.

Figure 7-1: SGPWA’s Water Service Reliability through 2045 (AFY)

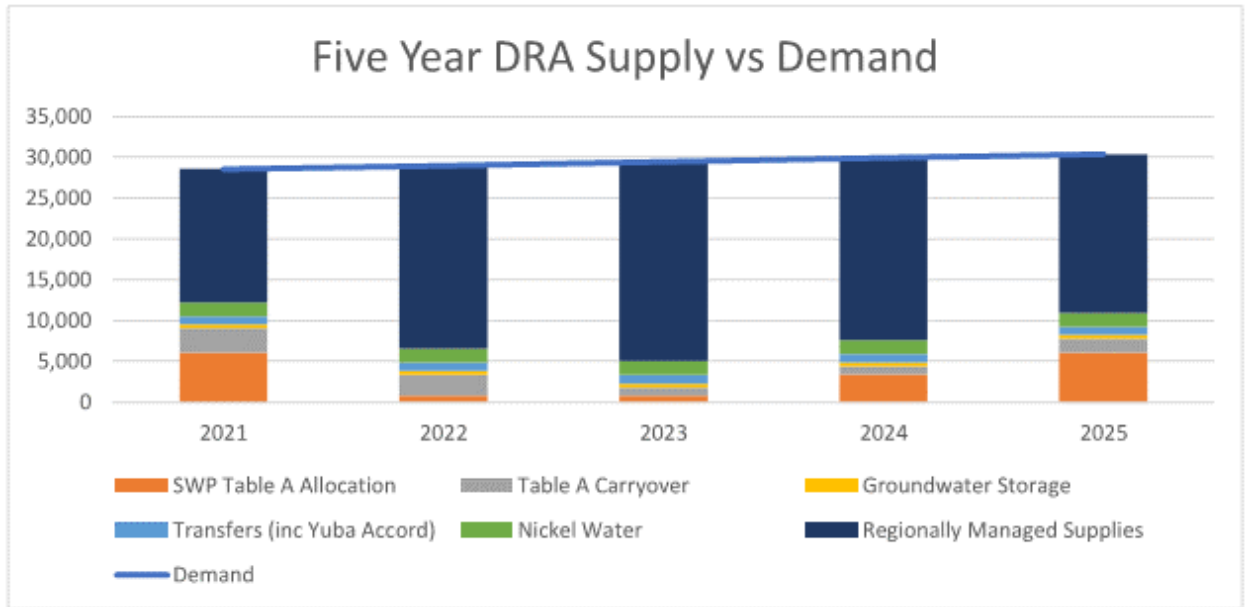


Notes:

1. Taken from Figure ES-2 from the 2020 SGPWA UWMP.

SGPWA also coordinates management of its water supplies with the retail agencies to address projected dry conditions. Specifically, SGPWA and the retail agencies capture and store surplus imported water in normal and wet years in order to use the stored water assets to meet regional demands in dry years. Moreover, the retail agencies rely upon locally managed water supplies, including native groundwater, recycled supplies, surface water assets, and return flows, to meet their annual demands. These actions stabilize annual fluctuations in recurring imported supplies that may not meet regional demands under certain dry conditions. Figure 7-2 shows a water reliability assessment for a drought lasting five consecutive years where the retail agencies in SGPWA service area use stored water and regionally managed supplies to offset fluctuations in its SWP supplies. In summary, SGPWA’s diverse surface water supply portfolio, combined with its coordinated management of regionally managed surface and groundwater resources with retail purveyors, provide stable and reliable water supplies to meet SGPWA’s current and 2045 future water demands in its service area.

Figure 7-2: SGPWA's Drought Risk Assessment from 2021 through 2025 (AFY)



Notes

1. Taken from Figure ES-3 from the 2020 SGPWA UWMP.

Section 8 Water Supply and Demand for BCVWD

As shown in the updated Sections 6 and 7 above, BCVWD has sufficient supply and imported water to meet demands beyond 2045 under average demand and supply conditions (see specifically updates to Section 6.1.3.3.). Therefore, no amendments are required for this section.

Section 9 Water Supply Single and Multiple Dry Period Analysis

As shown in the updated Sections 6 and 7 above, BCVWD has sufficient supply and imported water from SGPWA to meet the District's water supply requirements beyond 2045 under normal supply conditions. As required by SB610, the Project's WSA must describe the reliability of BCVWD's water supplies during dry years. The following is intended to summarize the water supply reliability and drought risk assessment presented in Section 7 of the BCVWD 2020 UWMP for the purposes of replacing Section 9 in the Project's WSA.

Section 9 – Water Supply Reliability and Drought Risk Assessment

Section 9.1 Constraints on Water Sources

A detailed description of BCVWD's current and future water sources are described previously in Section 6 of this WSA. **Table 9-1**, below shows a summary of BCVWD's current and future water sources and identifies the factors 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 State Project Water.

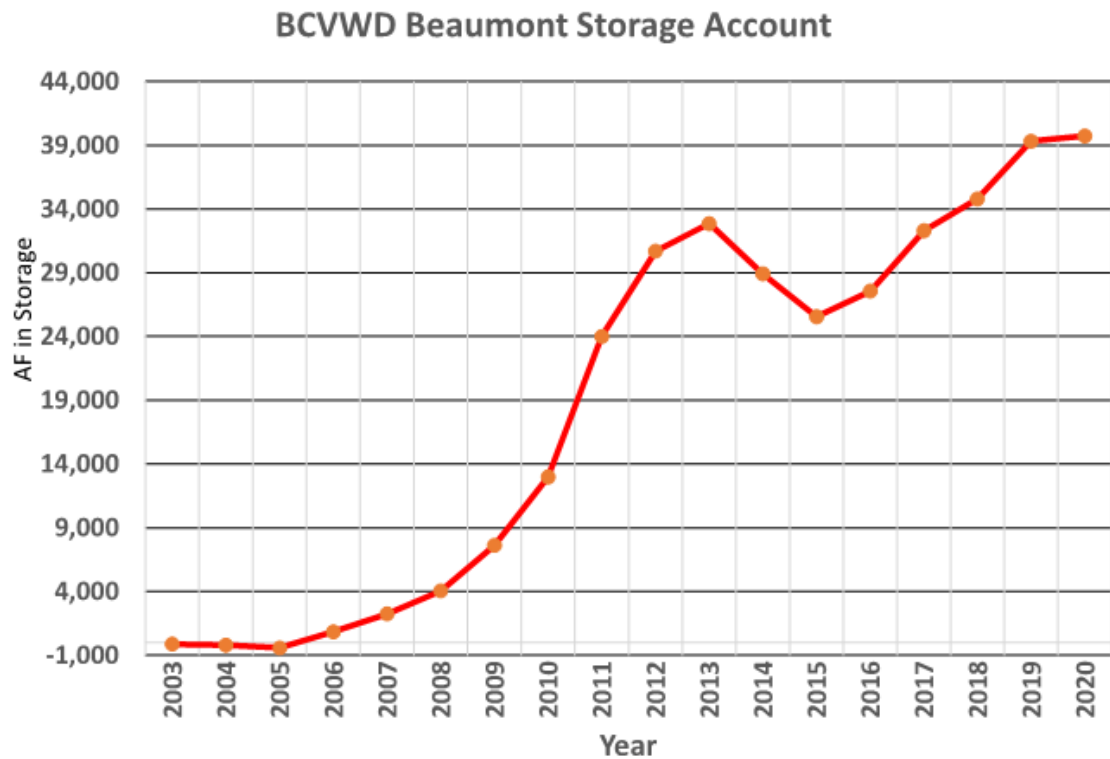
Table 9-1: Factors Resulting in Inconsistency of Supply

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.

The District relies on groundwater banking within the Beaumont Basin during wet periods to supply demands during specified dry periods. Complementing the large storage capacity is the fact that percolation and recharge occur at relatively high rates making it very easy to “bank” water in the Beaumont Basin. Figure 9-1 below shows the amount of water BCVWD has accumulated in its storage account since 2003. Please note that imported water began to be spread in 2006.

Figure 9-1 – BCVWD’s Beaumont Basin Storage Amount



Notes

1. Taken from Figure 7-1 in the BCVWD 2020 UWMP

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. 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 Table 9-2 below (Table 6-24 in the 2020 BCVWD UWMP) 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 SPW is not available.

SGPWA is to supply the imported water requested in Table 9-2 below 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. 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 2045 demands with no SPW for over 3.5 years. The following subsections quantify the variability in BCVWD’s water sources.

Table 9-2: BCVWD Water Supplies – Projected

DWR Table 6-9 Retail: Water Supplies — Projected											
Water Supply <small>Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUDdata online submittal tool</small>	Additional Detail on Water Supply	Projected Water Supply * Report To the Extent Practicable									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
<small>Add additional rows as needed</small>											
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 overlie 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		3,789	
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	
<small>*Units of measure (AF, CCF, MG) must remain consistent throughout the LAMWP as reported in Table 2-3.</small>											
NOTES:											

Section 9.2 Regional Supply Reliability

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 the 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 mount 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 include the following and were described in Section 6.1.3.3 in this WSA.

- 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

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 and are discussed within Section 7 above:

- Article 21 Water
- Turn-Back Pool Water

Section 9.3 Water Service Reliability Assessment

The amount of water available during the dry periods from BCVWD’s water sources are presented below.

Section 9.3.1 Groundwater

Section 9.3.1.1. Beaumont Basin

The Beaumont Basin is managed by the Beaumont Basin Watermaster. 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 and varies from year to year. 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 also decrease during dry periods as users reduce water consumption.

Table 9-1 below (Table 7-2 in the BCVWD 2020 UWMP) 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 9-1, 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 9-1 below, were not applied with a 15% reduction factor as return flows are dependent upon the conservation factors in effect during the year for which credits are given.

Table 9-1 Summary of BCVWD’s Beaumont Basin Storage Credits^{1,2}

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

Note

1. Taken from Table 7-2 in the BCVWD 2020 UWMP.
2. Reference Table 6-10 included in the table above should reference to Table 7-8 in the 2020 BCVWD UWMP.

Edgar Canyon

Groundwater from Edgar Canyon is affected to some degree by climate change. 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 9-2 (Table 7-3 in the BCVWD 2020 UWMP) along with the Base Period for moving averages.

Table 9-2 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

Note

1. Taken from Table 7-3 in the BCVWD 2020 UWMP.

Section 9.1.2 Imported Water – Table 9-3 and Table 9-4

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 9-3 (Table 7-4 in the BCVWD 2020 UWMP).

Table 9-3 SGPWA SWP Delivery Capability as Percent of Table A

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%

Note

1. Taken from Table 7-4 in the BCVWD 2020 UWMP.

The percentages in Table 9-3 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 and this WSA, the allocation percentages in Table 9-4 (Table 7-5 in the BCVWD 2020 UWMP) will be used.

Table 9-4 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

Note

1. Taken from Table 7-5 in the BCVWD 2020 UWMP.

For the reliability analysis, the percentages in Table 9-4 will be applied to BCVWD's estimated available imported water supplies for any particular dry year period. The results of the reliability analysis are presented in Tables 9-8 through 9-13.

By Resolution 2015-05, the SGPWA Board of Directors established an obligation to meet the future water supply needs of the region, including BCVWD. 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.

Section 9.1.3. 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 9-5 provides an estimate of the available recycled water during extended dry periods. The amount of recycled water under normal conditions is shown in the updated Section 6 above.

Table 9-5 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

Notes:

1. Taken from Table 7-6 in the BCVWD 2020 UWMP.

Section 9.1.4. 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 9-6 (Table 7-7 in the BCVWD 2020 UWMP). 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 9-6 Estimated Recycled Water Available During Extended Dry Periods

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

Notes:

1. Taken from Table 7-7 in the BCVWD 2020 UWMP.

Section 9.2 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 from the anticipated Table A Allocation available (using percentages described previously in Table 9-4), 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 9-7, 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 9-7 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%

Notes:

1. Taken from Table 7-9 in the BCVWD 2020 UWMP.

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 9-9 (Table 7-11 in the BCVWD 2020 UWMP) 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 Tables 9-10 through 9-14 (Tables 7-12 through 7-16 in the BCVWD 2020 UWMP).

Table 9-8 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%

Notes:

1. Taken from Table 7-10 in the BCVWD 2020 UWMP.

This is a reasonable assumption since there would be adequate time to implement the potential water use restrictions identified in Section 10 for a dry period lasting longer than a single year. Tables 9-9 through 9-14 present the water service reliability assessment for single through 6 consecutive dry years.

Table 9-9 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

Notes:

1. Taken from Table 7-11 in the BCVWD 2020 UWMP.

Table 9-10 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

Notes:

1. Taken from Table 7-12 in the BCVWD 2020 UWMP.

Table 9-11 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

Notes:

1. Taken from Table 7-13 in the BCVWD 2020 UWMP.

Table 9-12 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

Notes:

1. Taken from Table 7-14 in the BCVWD 2020 UWMP.

Table 9-13 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

Notes:

1. Taken from Table 7-15 in the BCVWD 2020 UWMP.

Table 9-14 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

Notes:

1. Taken from Table 7-16 in the BCVWD 2020 UWMP.

In all of the assessments, water must be extracted from BCVWD's Beaumont Basin Storage Account. Tables 9-9 through 9-14 clearly indicate the importance of maintaining substantial amounts of water in the storage account. Based on the assessment, BCVWD should keep about 12,000 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 10 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 9-15 (Table 7-17 in the BCVWD 2020 UWMP) below. The results of the Drought Risk Assessment above assume that the demand reductions and conservation measures described in Section 12 (Section 8 in the BCVWP 2020 UWMP) are achieved.

Table 9-15 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

Notes:

1. Taken from Table 7-17 in the BCVWD 2020 UWMP.

Section 11 Conclusions (Previously Section 10 in Project's WSA)

The following revisions noted in red shall be incorporated into Section 11 (previously Section 10 in the Project's WSA)

1. The projected water demand from the Beaumont Pointe Development project is 196.70 AFY of which 85.20 AFY is outdoor, non-potable water use. This equates to approximately 1% of the District existing water demand for 2020.
2. The Beaumont Pointe development project site was included in the list of planned development projects in BCVWD's 2020 UWMP (previously identified as Jack Rabbit Trail) which demonstrated adequate water supplies up to the year 2045. To clarify, when the District was preparing the basis for future water demands within the District's service area in the BCVWD's 2020 UWMP, the District utilized the potable water demands from the DRAFT November 2020 Beaumont Pointe WSA. This draft version of the Project's WSA identified the potable water demand as 221 EDUs as shown in Table 3-7 in the BCVWD's 2020 UWMP. Because the Project's updated land use plan has a potable water demand of 204.21 EDUs, the District's 2020 UWMP conservatively included the Project's anticipated potable water demands at 221 EDU
3. BCVWD prepared a series of White Papers which analyzed the regional (SGPWA) imported water supply requirements and funding requirements. These White Papers are referenced for the Beaumont Pointe Development WSA. The basis for the White Papers was a regional spreadsheet demand model, developed by BCVWD, which was reviewed by the City of Banning and YVWD.
4. The White Papers indicate that SGPWA can obtain sufficient imported water supply to supplement local supplies to meet regional needs including BCVWD's needs. The White Papers also indicated that adequate funding is available to implement the imported water projects currently planned for the short and long terms.
5. BCVWD prepared and adopted a Potable Water Master Plan which identified water needs and facility needs to build-out. The BCVWD 2020 UWMP identified recycled water from the City of Beaumont for non-potable water irrigation with a plan for the recharge of surplus recycled water with appropriate treatment and permits. The City and BCVWD signed a Memorandum of Understanding (MOU) in 2019 which began the process of an agreement for purchase of recycled water by BCVWD. In addition, storm water capture and other local water resource projects were identified. One of these projects, MDP-Line 16, (Grand Avenue Storm Drain) is currently in design by the Riverside County Flood and Water Conservation District and BCVWD. The storm drain will be partially funded through a grant from the Santa Ana Watershed Project Authority.
6. SGPWA and BCVWD have made financial commitments to the Sites Reservoir project Phase 1 studies and will commit funds to Phase 2.
7. Adequate water supply exists, or is planned, for the Beaumont Pointe development project to 2045 and beyond as outlined in Section 9. BCVWD can meet the Project needs as well as BCVWD's existing demands and the demands of the other planned developments within BCVWD's service area which are listed in the Beaumont Pointe Development WSA.
8. Multiple dry-year reliability analysis demonstrates that BCVWD will be able to meet its existing demands and the demands of the other planned developments within its service area which were listed in the Beaumont Pointe WSA. BCVWD will supplement its existing supply sources during these dry periods with banked water in BCVWD's Beaumont Basin Groundwater Storage Account.

9. Pursuant to §10910 of the California Water Code (SB 610) and information provided in the BP WSA, BCVWD has determined that currently available and planned supplies are sufficient to meet the water demands of the proposed BP project in addition to the existing and other planned project demands during normal, single dry and multiple dry years over the next 20 years, as outlined in **Section 6 through 9 in this WSA**.
10. Pursuant to the California Government Code Section 66473.7, (SB 221) BCVWD has determined that it has sufficient and adequate water supply available to serve the long-term needs of the Beaumont Pointe in addition to the existing and other planned project demands during normal, single dry and multiple dry years over the next 20 years, as outlined in **Sections 6 through 9**.

3 2021 Beaumont Pointe WSA Additions

Addition of Section 10 – BCVWD Water Shortage Contingency Plan

The BCVWD 2020 UWMP Section 10 addresses the DWR new requirements of a District-wide Water Shortage Contingency Plan (WSCP). The following is intended to be added as Section 10 – BCVWD Water Shortage Contingency Plan to the Project’s WSA to summarize the BCVWD WSCP.

SECTION 10 – BCVWD WATER SHORTAGE CONTINGENCY PLAN (WSCP)

As a companion to the BCVWD 2020 UWMP and required by the State, the District prepared and approved the BCVWD 2020 Water Shortage Contingency Plan (WSCP) as a strategic planning process to prepare for and respond to water shortages. As part of this new requirement, BCVWD will assess each year’s water supplies to determine if there was a water volume shortage for that year. Based on the water shortage, the District will implement one of the six water conservation levels (shown in Table 10-1 below), as defined in the District’s WSCP, to encourage or require water conservation among its service area. The Beaumont Pointe Development will be subject to these water conservation levels as dictated by BCVWD.

Table 10-1 Water Shortage Contingency Levels

DWR Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	Percent Shortage Range	Shortage Response Actions <i>(Narrative description)</i>
1	Up to 10%	Up to 10% reduction in normal, "long term" water supply (including conjunctive 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 conjunctive 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 conjunctive 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 conjunctive 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 conjunctive 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 conjunctive 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:		

Notes:

1. Taken from Table 8-1 in the BCVWD 2020 UWMP.

4 2021 Beaumont Pointe WSA Attachments

Beaumont Basin Adjudication and 2020 Annual Watermaster Report

Water Code Section 10910(f) must be met which will require the Project's WSA to include a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public system. While the updated sections above summarize the amount of groundwater available for BCVWD listed in the 2020 UWMP, the following will be included as attachments to meet the requirements of Water Code Section 10910(f).

Attachment A – Beaumont Basin Formation Documents

Attachment B – Amended Judgement Pursuant to Stipulation Adjudicating Groundwater Rights in the Beaumont Basin

Attachment C – Beaumont Basin Watermaster 2020 Consolidated Annual Report and Engineering Report

Beaumont Cherry Valley Water District 2020 Urban Water Management Plan and Water Shortage Contingency Plan

The information presented in the Project's WSA references the 2020 BCVWD 2020 UWMP. The following attachments include the updated BCVWD 2020 UWMP and their new 2020 BCVWD Water Shortage Contingency Plan.

Attachment D – BCVWD 2020 Urban Water Management Plan

Attachment E – BCVWD 2020 Water Shortage Contingency Plan

Water Supply Assessment for Beaumont Pointe – April 13th, 2021

This addendum is intended to update the Project's previously approved WSA. Attached will be the previously approved WSA for the Project

Attachment F – Water Supply Assessment for Beaumont Pointe – April 2021