City of Brentwood 2022 Annual Water Supply and Demand Assessment Report

Prepared for
City of Brentwood
Brentwood, CA
June 30, 2022

FINAL

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List of Abbreviations

AF	acre-feet
AFY	acre-feet per year
Annual Assessment	annual water supply and demand assessment
CCWD	Contra Costa Water District
City	City of Brentwood
COBWTP	City of Brentwood Water Treatment Plant
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
ECCID	East Contra Costa Irrigation District
EO	Executive Order
FY	Fiscal year
GPCD	gallons per capita per day
GSP	Groundwater Sustainability Plan
MG	million gallons
MGD	million gallons per day
MGY	million gallons per year
RBWTP	Randall-Bold Water Treatment Plant
ECC Subbasin	East Contra Costa Subbasin
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WTP	Water treatment plant
WWTP	Wastewater treatment plant

Section 1

City Background

The City of Brentwood (City) lies in Eastern Contra Costa County and is bounded to the north by the City of Oakley, to the west by the City of Antioch, and to the south and east by unincorporated portions of Contra Costa County. The City was incorporated in 1948. Its incorporated boundary currently totals 14.8 square miles (9,502 acres), with a sphere of influence totaling 17.4 square miles (11,129 acres) (City of Brentwood, 2021a). The City provides water treatment and distribution services as well as wastewater collection and treatment services for its residents and businesses. The City's water distribution system consists of three pressure zones, one potable water treatment plant (WTP), nine groundwater wells (five of which are active), six water reservoirs, seven water booster pump stations, and 347 miles of water mains within the city limits (City of Brentwood, 2013a). The City also has one wastewater treatment plant (WWTP). Figure 1 shows the service area and its surroundings.

1.1 Water Supply Reliability

The City's water supply consists of surface water from the Sacramento-San Joaquin Delta (Delta), groundwater from the East Contra Costa Subbasin (ECC Subbasin), and recycled water. The reliability of the City's surface water supplies is relatively high since the permanent purchase entitlement from which the City's supplies stem are protected by pre-1914 water rights, which historically have not been subject to delivery reductions during water shortages, including regulatory restricted and drought years. The City's groundwater supply appears to be fairly reliable as available data for the ECC Subbasin indicate that historical extraction patterns have not exceeded the safe yield of the basin (City of Brentwood, 2021b). The comparison of current and projected water supply and demand conducted as part of the water supply reliability assessment in the 2020 Urban Water Management Plan (UWMP) showed that the City water supply is adequate to meet the projected demand across all year types.

1.2 Water Supply Reliability

Even though the reliability of the City's water supply is relatively high, there are issues that could result in the City declaring a water shortage stage condition. Below is a list of the key issues that could potentially result in a shortage condition for the City.

- State mandates due to drought circumstances.
- Availability of Delta water supplies:
  - Climate change-related sea-level rise and extreme weather
  - Water quality conditions/contamination
  - Mechanical breakdown of surface water diversion structure, intake, or WTP facilities
- Declining groundwater levels.
- Groundwater Sustainability Plan (GSP) groundwater pumping limitations (this is a future potential condition - to be defined by the East Contra Costa Subbasin Groundwater Sustainability Agencies).
- Contamination of one or more wells.

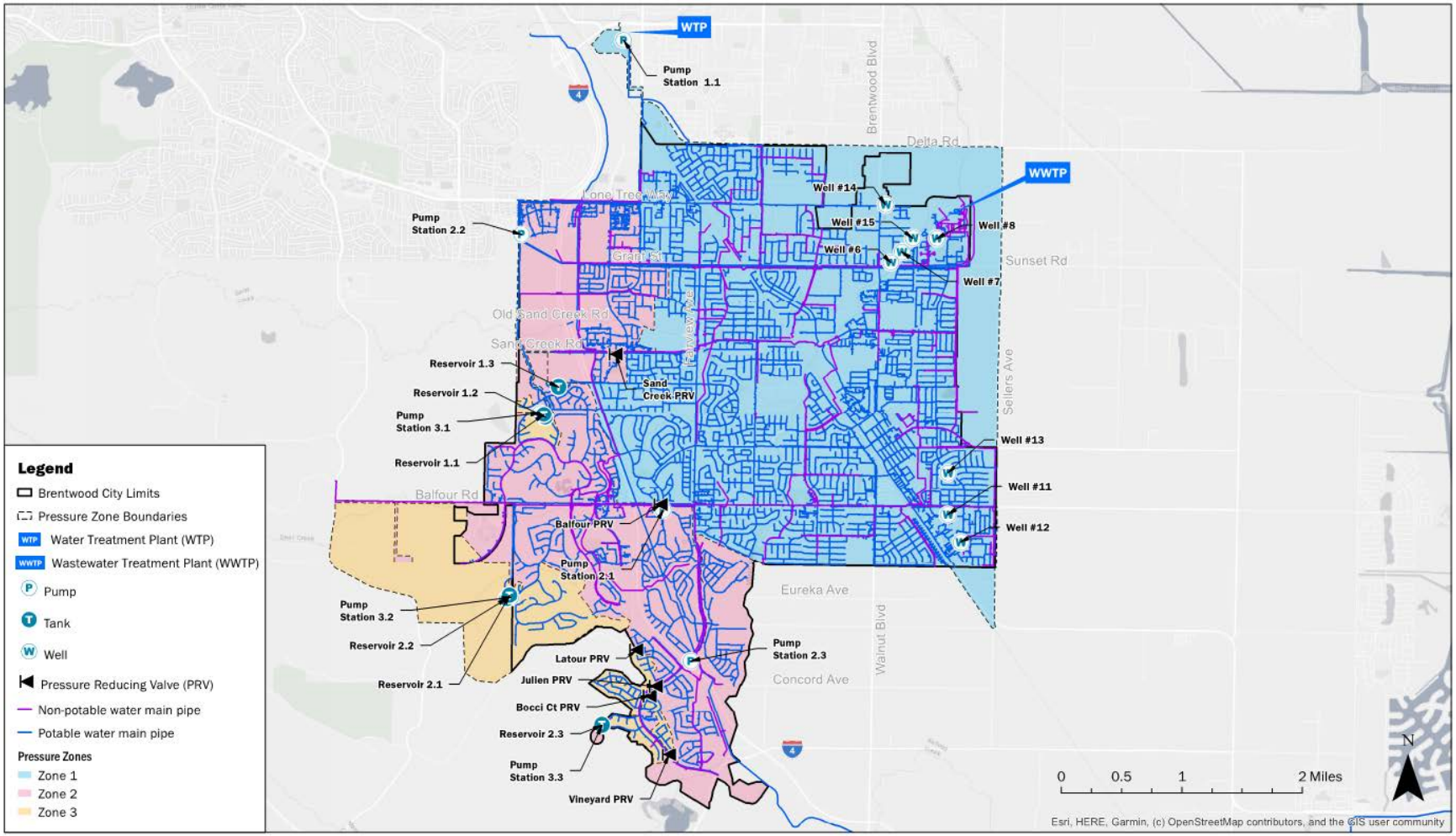

Figure 1-1. City of Brentwood water service area

Section 2

Annual Water Supply and Demand Procedures

In 2018, the California Legislature enacted into law new requirements for urban water suppliers to increase drought resilience and to improve communication of water shortage response actions. Among other activities, this legislation required each urban water supplier to prepare an Annual Water Supply and Demand Assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report to the California Department of Water Resources (DWR) on or before July 1, 2022, and every year thereafter. The Annual Assessment Report is submitted to DWR with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with each suppliers Water Shortage Contingency Plan (WSCP).

As a result of continuing drought conditions in the state, on March 28, 2022, Governor Gavin Newsom issued Executive Order N-7-22 (EO) which required suppliers to submit a preliminary shortage report by June 1, 2022 and their final Annual Shortage Report by July 1, 2022. The City submitted their preliminary shortage report on May 31, 2022.

The City's Annual Assessment determination was based on considerations of unconstrained water demand, available water supplies, and infrastructure considerations. Since shortages are based on the difference between expected water supplies and unconstrained demand under current year and dry year conditions, the locally applicable evaluation criteria used in the Annual Assessment for determining a shortage included the following:

- Depiction of current year and subsequent dry year based on best-available data, including anticipated hydrologic conditions.
- Current and subsequent dry year unconstrained demand for the City's customers considering weather, growth, and other influencing factors.
- Estimation of available water supply for current and subsequent dry year.

What follows is an overview of the City's Annual Assessment procedures and a summary of the key data inputs that went into the analysis.

2.1 Decision Making Process

The City's Annual Assessment followed the steps that were outlined in the City's 2020 UWMP and that are illustrated in Figure 2. These steps are described below. The procedures will continue to be reviewed and updated as necessary.

Step 1. Estimate Unconstrained Customer Demand - Current year unconstrained demand considering weather, growth, and other influencing factors such as policies to manage current supplies to meet demand objectives in future years, as applicable were estimated. Unconstrained customer demand does not include demand reductions that may occur as a result of the City implementing any special shortage response actions that may be necessary.

Step 2. Estimate Available Water Supply - The available water supply by source was estimated for the current year and one subsequent dry year:

- Quantify each source of water supply and provide descriptive text of each source.
- Quantify current year available supply by source, this includes coordinating with East Contra Costa Irrigation District (ECCID) and Contra Costa Water District (CCWD) and considerations for hydrological and regulatory conditions in the current year.
- Quantify available supply by source for one subsequent dry year.
- Considerations for water supply availability estimates by source:
  - The existing infrastructure capabilities and plausible constraints as they impact the City's ability to deliver supplies to meet expected customer water use needs in the coming year should be considered
  - Specific locally applicable factors that can influence or disrupt each supply source

Step 3. Compare Projected Water Supplies to Demands – The estimated water supplies identified in the Annual Assessment represent the maximum water demand that can be met after factoring in the considerations noted in Step 2.

Step 4. Identify and Quantify Anticipated Water Supply Shortages, if any – The estimated water supplies in comparison to unconstrained water demands identified and quantified any anticipated water shortages. While no shortages are projected for this Current Year, depending on the extent of the projected shortage in future assessments, the appropriate shortage stage would be selected at this stage.

Step 5. Develop Draft Annual Assessment Report – The City compiled the draft Annual Assessment report based on the format determined by DWR using the key data inputs and evaluation criteria.

Step 6. Review Draft Annual Assessment Report – The City reviewed and provided comment on the draft Annual Assessment report.

Step 7. Address Comments to the Draft Annual Assessment Report, Finalize Report – The City addressed internal comments to the draft Annual Assessment report and finalized the report.

Step 8. Submit Annual Assessment Report to DWR – The City will submit the Annual Assessment report to DWR.

Figure 2-1. Annual Assessment Procedure and Decision-Making Process

Section 3

Annual Water Supply and Demand Analysis

The following sections describe the approach that was utilized to estimate unconstrained water demand, available water supply, the supply and demand analysis, and any planned shortage response actions. For the purpose of this Annual Assessment, the Current Year is defined as the twelve-month period which ends on June 30th, preceding the July 1st due date of the Annual Shortage Report. Other pertinent information on the City's Annual Assessment is included in Table 1.

Table 3-1. (DWR Table 1) Annual Assessment Information

Year Covered by This Shortage Report	
Start:	July 1. 2022
End:	June 30. 2023
Supplier's Annual Assessment Planning Cycle	
Start Month:	July
End Month:	June
Data Reporting Interval Used:	Monthly
Volume Unit for Reported Supply and Demand:	Million Gallons
Water Supplier's Contact Information	
Water Supplier's Name:	City of Brentwood
Contact Name:	James Wolfe
Contact Title:	Water Operations Manager
Street Address:	2201 Elkins Way, Brentwood, CA
ZIP Code:	94513
Phone Number:	(925) 516-6025
Email Address:	jwolfe@brentwoodca.gov
Report Preparer's Contact Information	
Preparer's Organization Name:	Brown and Caldwell
Preparer's Contact Name:	Rene Guillen
Phone Number:	(925) 210-2464
Email Address:	rguillen@brwncald.com
Supplier's Water Shortage Contingency Plan	
Water Shortage Contingency Plan Title:	City of Brentwood Water Shortage Contingency Plan
Water Shortage Contingency Plan Adoption Date:	5/25/2021
Other Annual Assessment Related Activities	

Table 3-1. (DWR Table 1) Annual Assessment Information	
Annual Assessment/ Shortage Report Title:	City of Brentwood's 2022 Annual Water Supply and Demand Assessment Report
Annual Assessment / Shortage Report Approval Date:	06/30/2022

3.1 Current Year Unconstrained Water Demands

The City's water system serves more than 20,000 connections. Historical water deliveries for the following water sectors were obtained from the City's annual reports:

Single-Family Residential – This sector refers to single-family residences in an identifiable suburban residential neighborhood or cluster-style development designed with open space and other amenities.

Multi-Family Residential – This sector refers to families living in apartments and condominiums in structures of two or three stories with off-street parking and other requirements for higher density living.

Commercial/Institutional/Industrial – This sector includes commercial, government, and industrial uses. It primarily includes uses associated with commercial buildings (e.g., landscaping; toilets; heating, ventilation, air conditioning, etc.) and commercial uses (e.g., car washes, laundries, nurseries, etc.).

Landscape – This sector primarily includes raw water (untreated) use for irrigation at parks, schools, cemeteries, churches, residences, or public facilities. This sector also includes recycled water at various parkways and landscaped medians throughout the City.

Other – This sector includes metered water used for construction and unmetered water used for fire response from fire hydrants throughout the City. Hydrant meters are read quarterly.

Water demand projections were estimated using an assumed gallons per capita day (GPCD) of 152 and population projections. This GPCD was estimated based on the water use over the last three years (i.e., 2018-2020). This approach takes into account steady stabilization of post-drought water use levels of 2018 and 2019 with increased levels of residential water use in 2020 due to the COVID 19 pandemic. The year 2020 water use was included in the assumption since it is expected that remote work and social habits will persist in the following years, causing water use trends from 2020 to affect future years instead of acting as an isolated event. This approach is consistent with the approach that was utilized in the City's 2020 UWMP. Table 2 presents the projected water demands used in this Annual Assessment.

Table 3-2. (DWR Table 2) Water Demands[a]

Use Type	Additional Description	Level of Treatment for Non-Potable Supplies	Start Year: 2022 — Volumetric Unit Used: million gallons												
			Projected Water Demands - Volume												
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Demand Type
Demands Served by Potable Supplies															
Single Family		--	278	285	274	229	182	128	116	111	121	177	218	264	2382
Multi-Family		--	10	10	11	10	9	8	8	7	7	8	9	10	106
Commercial		--	19	20	20	18	17	13	14	14	14	15	17	20	201

Table 3-2. (DWR Table 2) Water Demands[a]																
Use Type	Additional Description	Level of Treatment for Non-Potable Supplies	Start Year: 2022												Volumetric Unit Used: million gallons	
			Projected Water Demands - Volume													
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Demand Type	
Industrial	Included with Commercial use data	--	0	0	0	0	0	0	0	0	0	0	0	0	0	
Institutional/ Governmental	Included with Commercial use data	--	0	0	0	0	0	0	0	0	0	0	0	0	0	
Landscape	From potable water supply	--	92	96	90	69	39	15	6	9	17	28	62	84	606	
Other Potable		--	2	0	0	4	0	1	4	0	0	1	0	0	14	
Losses		--	49	50	48	40	30	20	18	17	19	28	37	46	403	
Total by Month (Potable)			450	461	444	370	277	186	166	159	178	255	344	423	3,711	
Demands Served by Non-Potable Supplies																
Landscape	Recycled Water	Tertiary	53	50	43	31	18	5	5	7	11	22	43	50	338	
Total by Month (Non-Potable)			53	50	43	31	18	5	5	7	11	22	43	50	338	

Notes:
Values in green cells are auto calculated using water supply and demand data.
Units: million gallons (MG)
--: not applicable
a. Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.

3.2 Current Year Available Supply

The City's current supply consists of both surface water from the Delta, groundwater from existing wells located in the ECC Subbasin, and recycled water. These supply sources are briefly described below including the assumptions that were used to estimate the amount of available supply for the Current Year.

3.2.1 Groundwater

The City pumps groundwater from the ECC Subbasin, an alluvial basin underlying the City. The City has nine permitted groundwater wells within its service area, five of which are active wells. The total design capacity of the wells is 6.62 million gallons per day (MGD). The firm design capacity of the wells, where firm capacity is the capacity of all the wells minus the capacity of the largest well, is 5.18 MGD. For this assessment, it was assumed that the City's wells are pumping 5 MGD, which equates to about 1,825 million gallons (MG) for the year. This is consistent with the assumption that was used in the City's 2020 UWMP.

3.2.2 Surface Water Supplies

The City's surface water supply stems from an agreement with ECCID that provides the City with a permanent entitlement to purchase 14,800 acre-feet per year (AFY) (4,823 million gallons per year [MGY]) of surplus irrigation water from the Delta. ECCID has pre-1914 water rights, which historically

have not been subject to delivery reductions during water shortages, including regulatory restricted and drought years. The City anticipates being able to tap into the entire 4,823 MGY purchase entitlement for the Current Year even though historically the need to do so has not been there.

The City's surface water supply is transported through the Contra Costa Canal where a portion of the water is treated at the CCWD Randall-Bold Water Treatment Plant (RBWTP) and the rest is either treated at the City of Brentwood Water Treatment Plant (COBWTP) or used as raw surface water for non-potable landscape irrigation. The RBWTP has a design capacity to treat up to 50 MGD and is jointly owned by Diablo Water District and CCWD. The City has purchased a permanent capacity share of 6 MGD at the RBWTP and may use additional capacity on an as-need basis (CCWD, 2020). However, the City has historically used well below the 6 MGD amount due to the cost to treat the water. In addition, CCWD notified the City that it intends to reduce their annual allotment by 15 percent (relative to last fiscal year [FY]) and that it would only make 2,203 AF (1.97 MGD) available for the City this upcoming FY (see Appendix A for the letter that was provided by CCWD). Based on expected development and current demands within the CCWD overlap area, the City anticipates only utilizing 1,902 AF (1.7 MGD or 620 MGY) for this Current Year.

The COBWTP was built in 2008 and can treat up to 16.5 MGD (6,023 MGY) of surface water. The COBWTP is designed so that it can be expanded to an ultimate capacity of 33 MGD (12,045 MGY) to serve a portion of the City's projected water demands through 2045. For this assessment, it was assumed that 3,656 MG of water would be made available through the COBWTP and that approximately 546 MG would be made available as raw surface water for non-potable landscape irrigation.

3.2.3 Recycled Water

Recycled water is an important part of the City's water resources. Recycled water allows the City to conserve potable water, thereby ensuring a reliable water supply for current and future demand. The City has developed preliminary planning documents to identify uses for recycled wastewater at both existing and future sites. Recycled water demands are estimated to be 2,111 AF (688 MGY) at buildout (City of Brentwood, 2013b). However, expansion of the recycled water system to meet the demand for some of these customers will likely come at a high cost per acre foot of demand added (City of Brentwood, 2013b). A buildout demand totaling 1,560 AF (508 MGY) is deemed more feasible (City of Brentwood, 2013b). It is anticipated that up to 913 MG recycled water could be available for the Current Year.

3.2.4 Constraints on Surface Water Resources

The City's surface water supply is from the San Joaquin River Delta. Due to weather variations, storm events, and diurnal patterns, water quality for each of the three sources of surface water (Old River, Middle River, and Rock Slough) in the Contra Costa Canal can fluctuate from year to year, seasonally, daily, and even hourly. Raw water from the Delta is characterized by low to moderate levels of turbidity, minerals, and natural organic matter. Pathogenic organisms tend to be present in low concentrations as well (City of Brentwood, 2016). Water from the Contra Costa Canal is routinely monitored for pesticides and other contaminants (e.g., synthetic organic compounds, nitrate, radionuclides, perchlorate, arsenic). These constituents are typically not detected (City of Brentwood, 2019). Both the COBWTP and RBWTP are amply equipped to handle the fluctuations in raw water quality and consistently produce a high-quality treated water.

3.2.5 Constraints on Groundwater Sources

While DWR has not designated the ECC Subbasin in overdraft and current groundwater levels and raw water delivery rates are assumed to be constant for the 2020 UWMP, the City is aware that

future conditions may vary. Environmental factors, such as drought conditions, and water quality factors, such as groundwater contamination, have the potential to affect this resource adversely. The City is prepared to manage any changes that may occur due to extended drought or potential effects of climate change adaptively via conservation measures and an increased use of recycled water.

3.2.6 Summary of Available Water Supply

Table 3 presents the water supplies anticipated to be available for the Current Year.

Table 3-3. (DWR Table 3) Water Supplies[a]

Water Supply	Additional Detail on Water Supply	Start Year: 2022 Volumetric Unit Used: million gallons													Water Quality	Total Right or Safe Yield (Optional)
		Projected Water Supplies - Volume														
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Demand Type		
Potable Supplies																
Groundwater (not desal.)	ECC Subbasin 5-22.19	215	214	194	165	100	110	119	109	96	140	172	192	1,825	--	See notes below
Surface water (not desal.)	COBWTP Supply (ECCID)	500	520	482	318	307	165	0	40	225	206	402	491	3,656	--	See notes below
Purchased / Imported Water	RBWTP Supply (ECCID)	32	30	20	47	16	35	153	116	27	60	63	20	620	--	See notes below
Surface water (not desal.)	ECCID Non-Potable Supply	85	88	79	62	25	7	4	15	18	32	59	72	546	--	See notes below
Total by Month (Potable)		831	853	775	593	448	317	276	280	367	438	697	775	6,648	--	--
Non-Potable Supplies																
Recycled Water	City WWTP Supply	146	136	118	84	50	13	13	18	30	57	115	132	913	Tertiary	See notes below
Total by Month (Non-Potable)		146	136	118	84	50	13	13	18	30	57	115	132	913	--	--

Notes:

Values in green cells are auto calculated using water supply and demand data.

Units: million gallons (MG)

--: not applicable

a. Projections are based on best available data at time of submitting the report and actual supply volumes could be different due to many factors.

Groundwater (ECC Subbasin 5-22.19): *The firm design capacity of the City's wells is 5.18 mgd, this total assumes wells are pumping 5 mgd.*

City Water Entitlement: *The total ECCID purchase entitlement is that of 4,823 MGY (14,800 AFY). A portion of this water is treated at RBWTP and the rest of the total was split between potable and non-potable supplies based on an average of actual 2018 to 2020 water use. 87 percent of the total supply was allotted for potable use and 13 percent was allotted for non-potable use.*

RBWTP Supply: *The City has a permanent treatment capacity share of 6 mgd. The 6 mgd that is treated at RBWTP comes from the total ECCID purchase entitlement of 4,823 MGY. However, the City has historically used well below the 6 mgd amount due to the cost to treat the water. CCWD notified the City that it intends to reduce their annual allotment by 15% (relative to last FY) and that it would only make 2,203 AF (1.97 MGD) available for the City this upcoming FY. Based on expected development and current demands within the CCWD overlap area, the City anticipates only utilizing 1,902 AF (1.7 MGD) this upcoming FY.*

Recycled Water: *It is assumed that 50% of the WWTP capacity is available for future recycled water use.*

3.3 Water Supply and Demand Comparison

The water supply and demand comparison for the Current Year potable and non-potable water is presented in the Tables 4a and 4b, respectively. Water supply for potable water use is sufficient every month for the time period covered by this Annual Assessment. Note that no shortage condition has been triggered and no shortage response actions are anticipated during the assessment period.

Table 3-4a. (DWR Table 4P) Potable Water Shortage Assessment[a]

	Start Year: 2022											Volumetric Unit Used: million gallons	
	Projected Water Demands - Volume												
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Anticipated Unconstrained Demand	450.0	461.1	443.5	369.9	277.1	185.9	165.7	158.5	177.6	255.3	343.6	422.8	3,711.1
Anticipated Total Water Supply	831.4	852.5	775.0	592.5	448.1	316.5	276.0	279.5	366.6	438.1	696.7	774.7	6,647.6
Surplus/Shortage without WSCP Action	381.3	391.4	331.5	222.6	171.0	130.7	110.3	121.0	188.9	182.8	353.1	351.9	2,936.5
Percent Surplus/ Shortage without WSCP Action	85%	85%	75%	60%	62%	70%	67%	76%	106%	72%	103%	83%	79%
State Standard Shortage Level	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation	--	--	--	--	--	--	--	--	--	--	--	--	0
Benefit from WSCP: Demand Reduction	--	--	--	--	--	--	--	--	--	--	--	--	0
Revised Surplus/Shortage with WSCP	381.3	391.4	331.5	222.6	171.0	130.7	110.3	121.0	188.9	182.8	353.1	351.9	2,936.5
Percent Revised Surplus/Shortage with WSCP	85%	85%	75%	60%	62%	70%	67%	76%	106%	72%	103%	83%	79%

Notes:
Values in orange cells were pulled from Tables 1 and 2.
Values in green cells are auto calculated using water supply and demand data.
Units: million gallons (MG)
--: not applicable
a. Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.

As shown in Table 4b, the City's non-potable water supply is anticipated to be adequate to meet the projected non-potable demand. No shortage response actions are expected to be needed for the current year, much like what was observed for the potable water use assessment.

Table 3-4b. (DWR Table 4NP) Non-Potable Water Shortage Assessment[a]

	Start Year: 2022										Volumetric Unit Used: million gallons		
	Projected Water Demands - Volume												
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Anticipated Unconstrained Demand: Non-Potable	53.4	49.7	43.2	30.8	18.4	4.8	5.1	6.7	11.5	21.6	43.3	49.6	338.3
Anticipated Total Water Supply: Non-Potable	145.9	135.9	118.0	84.2	50.2	13.0	13.5	17.8	30.4	57.4	115.0	131.7	913.0
Surplus/Shortage without WSCP Action: Non-Potable	92.5	86.1	74.8	53.4	31.8	8.3	8.4	11.1	19.0	35.8	71.6	82.0	574.7
Percent Surplus/Shortage without WSCP Action: Non-Potable	173%	173%	173%	173%	173%	173%	165%	165%	165%	165%	165%	165%	170%
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation	--	--	--	--	--	--	--	--	--	--	--	--	0
Benefit from WSCP: Demand Reduction	--	--	--	--	--	--	--	--	--	--	--	--	0
Revised Surplus/Shortage with WSCP	92.5	86.1	74.8	53.4	31.8	8.3	8.4	11.1	19.0	35.8	71.6	82.0	574.7
Percent Revised Surplus/Shortage with WSCP	173%	173%	173%	173%	173%	173%	165%	165%	165%	165%	165%	165%	170%

Notes:
Values in orange cells were pulled from Tables 1 and 2.
Values in green cells are auto calculated using water supply and demand data.
Units: million gallons (MG)
--: not applicable
a. Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.

It is important to note that the "Anticipated Total Water Supply" and "Anticipated Total Non-Potable Supply" totals shown in Table 4a and 4b, respectively, follow patterns established by historical production data to meet monthly water demands. The City has the ability and water supplies available to adjust the amount of water produced in any given month to meet potential demand variations.

Section 4

Planned Shortage Response Actions

Even though the Annual Assessment does not project a shortage for the Current Year, the Governor's EO N-7-22 calls for water agencies to enact demand reduction actions to reduce water "for a shortage level of up to twenty percent (Level 2)." The shortage response actions listed in Table 5 will help the City meet this requirement. In addition to the shortage response actions included in Table 5, the City will continue its local outreach and conservation efforts. The City will continue to monitor the drought situation to reassess shortage conditions and adjust response actions, if needed.

Table 4-1. (DWR Table 5) Planned Water Shortage Response Actions

Anticipated Shortage Level	Actions: Demand Reduction, Supply Augmentation, and other Actions	Is action already being implemented	July 1, 2022 to June 30, 2023			
			How much is action going to reduce the shortage gap?		When is the shortage response action anticipated to be implemented?	
			Enter Amount	Select % or Volume Unit	Start Month	End Month
2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	No	1	%	July	June
2	Landscape - Prohibit certain types of landscape irrigation	No	6	%	July	June
2	Landscape - Limit landscape irrigation to specific times	No	6	%	July	June
2	Other Actions (describe in Notes at bottom of Table)	No	5	%	July	June
2	Other Actions (describe in Notes at bottom of Table)	No	4	%	July	June
2	Offer Water Use Surveys	No	4	%	July	June
2	Water Features - Restrict water use for decorative water features, such as fountains	No	2	%	July	June

Notes:

Other Actions (describe in Notes at bottom of Table) - Irrigation of non-permanent agriculture is prohibited. (Row 4)

Other Actions (describe in Notes at bottom of Table) - Excessive watering resulting in gutter flooding is prohibited. (Row 5)

Since 2016, the City permanently adopted several water shortage response actions that support water conservation. The City maintains an ongoing public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers and on the City's internet web page. The drought situation is explained to public and governmental bodies. The City explains other stages and forecasts future actions. Also, the City requests voluntary water conservation. Educational programs in area schools are ongoing.

While the water supply and demand assessment does not forecast a water supply shortage, the Governor's Executive Order N-7-22 requires water agencies enact "at a minimum, the demand reduction actions identified in the supplier's water shortage contingency plan adopted under Water Code 10632 for a shortage level of up to twenty percent (Level 2)." The listed water shortage response actions would help the City meet this requirement.

Section 5

Limitations

Brown and Caldwell prepared this document solely for the City of Brentwood in accordance with professional standards at the time the services were performed and in accordance with the contract between the City of Brentwood and Brown and Caldwell dated April 12, 2022. This document is governed by the specific scope of work authorized by the City of Brentwood; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by the City of Brentwood and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Section 6

References

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Appendix A: CCWD 2022 Annual Water Supply and Demand Assessment – Supply Allocations Letter

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