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## GROUNDWATER COUNCIL

### ZOOM MEETING INFORMATION

<https://sbvmwd.zoom.us/j/85651546434>

Meeting ID: 856 5154 6434

Passcode: 3802020

Dial in at:

+1 669 900 6833 US

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Online participants MUST log in with a Zoom account. The Zoom app is a free download.  
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## **GROUNDWATER COUNCIL MEETING AGENDA**

**MONDAY, FEBRUARY 14, 2022 – 10:00 AM**

### **CALL TO ORDER**

### **ROLL CALL FOR QUORUM**

Bear Valley Mutual Water Company (0), City of Colton (3), City of Loma Linda (8), City of Redlands (8), City of Rialto (10), East Valley Water District (3), Fontana Union Water Company (4), Loma Linda University (1), San Bernardino Municipal Water Department (47), San Bernardino Valley Municipal Water District (0), San Bernardino Valley Water Conservation District (0), West Valley Water District (16), Yucaipa Valley Water District (0)

### **INTRODUCTIONS**

#### **1. APPROVAL OF MINUTES**

- 1.1 *December 13, 2021, Meeting Minutes*  
*[Groundwater Council Meeting Minutes 12-13-2021](#)*

#### **2. NEW BUSINESS**

- 2.1 *Consider approval of the Draft 2022-2023 Equitable Allocation Model budget*  
*[EAM Budget FY22-23 DRAFT FEB2022](#)*
- 2.2 *Consider approval of the Budget Committee Recommendation related to the City of Redlands - Bear Valley Mutual Water Company Credit Request*  
*[City of Redlands GC Recharge Credit Request - February 8, 2022](#)*  
*[Calendar Year 2017 Mill Creek Recharge Redlands data](#)*  
*[Calendar Year 2018 Mill Creek Recharge Redlands data](#)*  
*[2019 DFR Database Recharge data](#)*  
*[2020 DFR Database Recharge data](#)*  
*[2021 DFR Database recharge data](#)*
- 2.3 *Consider creating a GC Agreement Renewal Committee - to consider policy and technical changes to the GC Agreement and EAM*

*2.4 Status Update on 2022 SWP Water Availability*

**3. OLD BUSINESS**

**4. OTHER BUSINESS**

**5. SET DATE FOR NEXT MEETING**

The next regularly scheduled Groundwater Council meeting will be on April 11, 2022, at 10:00am.

**6. ADJOURNMENT**

**MINUTES  
OF  
THE  
GROUNDWATER COUNCIL**

**December 13, 2021**

**Registered Guests:**

Thomas Crowley, City of Rialto

Daniel Cozad, San Bernardino Valley Water Conservation District

Jeff Noelte, East Valley Water District

T.Milford Harrison, San Bernardino Municipal Water Department

Miguel Guerrero, San Bernardino Municipal Water Department

Bob Tincher, San Bernardino Valley Municipal Water District

Melissa Zoba, San Bernardino Valley Municipal Water District

Wen Huang, San Bernardino Valley Municipal Water District

Adekunle Ojo, San Bernardino Valley Municipal Water District

Jose Macedo, San Bernardino Valley Municipal Water District

Sam Fuller, Bear Valley Mutual Water Company

Jarb Thaipejr, City of Loma Linda

Katelyn Scholte, San Bernardino Valley Water

Linda Jadeski, West Valley Water District

Joseph Zoba, Yucaipa Valley Water District

Jennifer Ares, Yucaipa Valley Water District

Madeline Blua, Yucaipa Valley Water District

Brian Dickinson, City of Colton

Cris Fealy, Fontana Water Company

Mallory Gandara, Western Municipal Water District

Kevin Watson, City of Redlands

John Harris, City of Redlands

Leo Ferrando, Riverside Public Utilities

Marco Bravo, West Valley Water District

Sam Fuller, Bear Valley Mutual Water Company

Michael Plinski, City of Riverside

Paul Mariscal

Russ Handy

The Groundwater Council meeting was called to order by Chairman, Thomas Crowley at 10:03 a.m. by teleconference.

Roll Call was taken and there was a quorum for voting purposes. The meeting proceeded with the following agenda items.

## **1. Approval of Minutes.**

### **1.1 October 11, 2021, Meeting.**

Bob Tincher moved to approve the minutes of the October 11, 2021, Groundwater Council meeting. Daniel Cozad seconded. The motion was adopted unanimously by a non-roll-call vote.

## **2. New Business.**

### **2.1 Review draft FY 22-23 Groundwater Council Budget**

Daniel Cozad introduced the FY 22-23 budget. Bob Tincher reminded the group that the current methodology used to establish a recharge amount would yield no annual recharge over the next 5 years. Instead, the group decided on 29000 af until further notice. This change was approved by the required margin of, at least, 80% of the Groundwater council.

Katelyn Scholte provided an overview of the Groundwater Council budget for 2022-2023 and highlighted changes from the previous year.

Mr. Sam Fuller requested an update to the recharge for Bear Valley Mutual Water company. Ms. Katelyn Scholte said she would work with Bear Valley on the potential change.

Ms. Scholte offered to send the detailed spreadsheets out to anyone who would like them, and/or to personally review the data with anyone interested. Mr. Crowley requested the data be sent to the entire council.

Chair Crowley announced the item would be Received and Filed, and a motion by Daniel Cozad was made referencing item 2.3

Mr. Cozad moved that pursuant to section 4.6.3 of the groundwater Council agreement that the budget now be based on the goal of purchasing 29,000-acre feet each year and that the groundwater Council proceed pursuant to section 5.2.2 of the agreement to collect the charges from the groundwater Council members as authorized pursuant to the agreement.

The motion was seconded by Bob Tincher and approved.

## **2.2 Consider Request from the City of Redlands and Bear Valley Mutual Water Company to Receive Credit for Recharge in the San Bernardino Basin**

Mr. John Harris with the City of Redlands requested credit for recharge water retroactively back to 2018 when the city joined the GC.

Mr. Fuller, with Bear Valley, then reviewed the Redlands annual recharge of Mill creek and Santa Ana River water. Miguel Guerrero questioned whether this water was “new” to the basin or whether it would have recharged anyway.

Mr. Cozad proposed this issue be discussed during the next budget committee. Any recommendations would be brought back to the GC for consideration.

## **2.3 Update on the Groundwater Council Membership for Non-Council Producers in the San Bernardino Basin**

I do not recall any updates under this item

## **2.4 State Water Project Supply Update**

Bob Tincher notified the council the current allocation is zero based upon low reservoir levels and dry conditions in Northern California. The allocation will continue to change as we receive rain and snow in Northern California. October was the wettest on record which is a good start to the water year.

## **3. Old Business.**

None mentioned.

## **4. Other Business.**

None mentioned.

## **5. Set Date for Next Meeting**

The next regularly scheduled Groundwater Council Meeting will be on February 14, 2021, at 10:00 a.m.

## **Agenda Item 4. Adjournment.**

Miguel Guerrero motioned to adjourn the meeting, Bob Tincher Seconded the motion, Chairman Crowley adjourned the meeting 11:08 a.m.

**APPROVAL CERTIFICATION**

I hereby certify to approval of the foregoing Minutes of the Groundwater Council.

\_\_\_\_\_  
**Secretary**

Date \_\_\_\_\_

Respectfully submitted,

Jose Macedo  
Chief of Staff/Clerk of the Board

## DRAFT Groundwater Council Equitable Allocation Budget for FY 2022-23

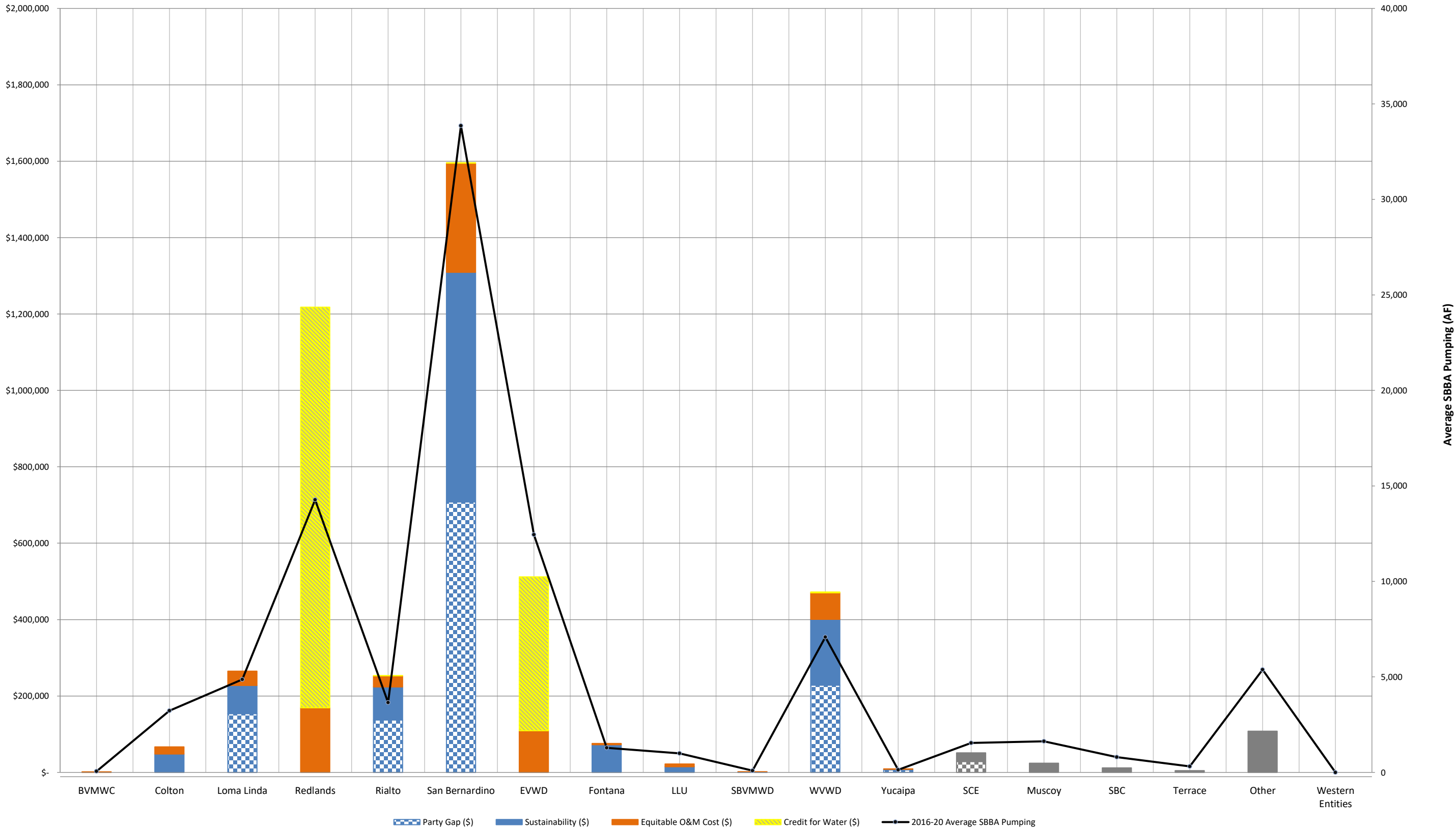
Agency	Party Gap FY22-23 (AF)	Sustainability FY22-23 (AF)	Credit for Water brought to the Basin (AF)	Total Equitable Water Cost FY22-23 (\$)	Water Corrections for Previous Years (\$)	Total Water Cost with Corrections (\$)	Total Water with Corrections (AF)	Equitable O&M Costs FY22-23 (\$)	O&M Corrections for Previous Years (\$)	Total O&M Cost with Corrections (\$)	Total Party Costs FY22- 23 (\$)	Voting Weight 2022-23
Bear Valley Mutual Water Company	-	7	(2,618)	\$ -	\$ -	\$ -	0	\$ 1,493	\$ -	\$ 1,493	\$ 1,493	0.05%
City of Colton	-	405	-	\$ 47,928	\$ 2,805	\$ 50,733	428	\$ 18,835	\$ -	\$ 18,835	\$ 69,567	2.2%
City of Loma Linda	1,301	623	-	\$ 227,749	\$ 3,358	\$ 231,107	1952	\$ 37,196	\$ -	\$ 37,196	\$ 268,303	8.7%
City of Redlands	1,513	3,679	(8,857)	\$ -	\$ 22,439	\$ 22,439	190	\$ 169,067	\$ -	\$ 169,067	\$ 191,507	5.6%
City of Rialto	1,157	741	(8)	\$ 223,782	\$ 4,154	\$ 227,936	1925	\$ 28,956	\$ -	\$ 28,956	\$ 256,892	8.3%
City of San Bernardino	5,979	5,088	(11)	\$1,309,038	\$ 28,048	\$ 1,337,086	11293	\$ 285,837	\$ -	\$ 285,837	\$ 1,622,923	52.5%
East Valley Water District	-	2,599	(3,404)	\$ -	\$ -	\$ -	0	\$ 108,881	\$ -	\$ 108,881	\$ 108,881	3.6%
Fontana Union Water Company	-	611	-	\$ 72,355	\$ 3,397	\$ 75,752	640	\$ 3,632	\$ -	\$ 3,632	\$ 79,384	2.5%
Loma Linda University	-	125	-	\$ 14,799	\$ 801	\$ 15,600	132	\$ 7,393	\$ -	\$ 7,393	\$ 22,993	0.7%
San Bernardino Valley M.W.D.	-	11	-	\$ 1,340	\$ -	\$ 1,340	11	\$ 7	\$ -	\$ 7	\$ 1,347	0.0%
West Valley Water District	1,931	1,471	(18)	\$ 400,637	\$ (90,646)	\$ 309,992	2618	\$ 69,388	\$ -	\$ 69,388	\$ 379,380	15.5%
Yucaipa Valley Water District	53	17	-	\$ 8,243	\$ 76	\$ 8,319	70	\$ 955	\$ -	\$ 955	\$ 9,274	0.3%
<b>Total GC Parties:</b>	<b>11,934</b>	<b>15,377</b>	<b>\$ (14,916)</b>	<b>\$2,305,872</b>	<b>\$ (25,569)</b>	<b>\$ 2,280,303</b>	<b>19259</b>	<b>\$ 731,640</b>	<b>\$ -</b>	<b>\$ 731,640</b>	<b>\$ 3,011,943</b>	<b>100%</b>
Mountain View Power Co.	240	193	-	\$ 51,246	\$ 1,344	\$ 52,590	444	#N/A	\$ -	#N/A	\$ 52,590	#N/A
Muscoy Mutual Water Company No. 1	-	204	-	\$ 24,175	\$ 1,251	\$ 25,426	215	#N/A	\$ -	#N/A	\$ 25,426	#N/A
San Bernardino County - Facility Management	-	100	-	\$ 11,896	\$ 557	\$ 12,453	105	#N/A	\$ -	#N/A	\$ 12,453	#N/A
Terrace Water Company	-	39	-	\$ 4,669	\$ 298	\$ 4,967	42	#N/A	\$ -	#N/A	\$ 4,967	#N/A
Other Inside SBVWCD	-	764	-	\$ 90,449	\$ 5,105	\$ 95,554	807	#N/A	\$ -	#N/A	\$ 95,554	#N/A
Other Outside SBVWCD	-	148	-	\$ 17,520	\$ 952	\$ 18,472	156	#N/A	\$ -	#N/A	\$ 18,472	#N/A
<b>San Bernardino Non-Parties Total:</b>	<b>240.05</b>	<b>1,449</b>	<b>-</b>	<b>\$ 199,955</b>	<b>\$ 9,507</b>	<b>\$ 209,462</b>	<b>1769</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 209,462</b>	<b>0%</b>
<b>Western Entities Total:</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>\$ -</b>	<b>-</b>	<b>-</b>	<b>\$ -</b>	<b>0%</b>
<b>Total:</b>	<b>12,174</b>	<b>16,826</b>	<b>(14,916)</b>	<b>\$2,505,827</b>	<b>\$ (16,062)</b>	<b>\$ 2,489,765</b>	<b>21028</b>	<b>\$ 731,640</b>	<b>\$ -</b>	<b>\$ 731,640</b>	<b>\$ 3,221,405</b>	<b>100%</b>



### Calculation for FY 2022-23

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	
1	Calculation for 2022-23																							
2																								
3		Precipitation Adjustment	0%		Sustainable Amount (AF)	29,000																		
4		Recharge	95%		Budgeted Water Cost	\$ 3,433,600																		
5		Direct Use	100%		Budgeted O&M Cost SBVWCD	\$ 655,200		Non-Plaintiff																
6		SWP Cost Recharge (\$/AF)	\$ 118		Budgeted O&M Cost SBCFCD	\$ 76,440		Plaintiff																
7					Budgeted Admin Costs	\$ -																		
8																								
9	Base Period		1959-63	1959-1963 Base Period SBBA Production (AF)						Total Average Use, 1959-1963				Safe Yield Distribution				Total SBBA Demand	Groundwater	Average Surface Water	Total Base Period			
10		Agency	Abbreviation	1959	1960	1961	1962	1963	1959-63 Average GW + SW (AF)	Other Distribution	Recycled Water <sup>1959</sup> (AF)	1959-1963 Total Average Use (AF)	% of Total	Safe Yield <sup>1959-63</sup> (AF)	Safe Yield % of Total	SW <sup>1959-63</sup> (AF)	GWSY <sup>1959-63</sup> (AF)	Demand <sup>Previous Year</sup> (2020)	GWSY <sup>1959-63</sup> (AF)	SW <sup>1959-63</sup> (AF)	Gap <sup>1959-63</sup>			
11		Bear Valley Mutual Water Company	BVMWC	16,855	13,583	14,273	11,626	9,831	13,234	574	-	13,807	7.76%	12,976	5.59%	8,344	4,632	(12,383)	4,632	8,344	593			
12		City of Colton	Colton	2,814	3,606	3,305	3,743	3,267	3,347	-	-	3,347	1.88%	3,146	1.36%	-	3,146	(2,624)	3,146	-	522			
13		City of Loma Linda	Loma Linda	0	0	0	0	0	-	1,735	235	1,970	1.11%	1,852	0.80%	-	1,852	(5,182)	1,852	-	(3,330)			
14		City of Redlands	Redlands	19,378	19,941	18,736	20,758	16,676	19,098	7,092	2,068	28,258	15.88%	26,558	11.44%	6,864	19,694	(34,511)	19,694	6,864	(7,953)			
15		City of Rialto	Rialto	1,659	795	959	1,068	1,397	1,176	833	-	2,008	1.13%	1,888	0.81%	617	1,270	(5,617)	1,270	617	(3,729)			
16		City of San Bernardino	SBMWWD	17,268	16,099	18,448	17,575	16,456	17,169	3,468	-	20,637	11.60%	19,395	8.36%	1,206	18,189	(39,822)	18,189	1,206	(20,427)			
17		East Valley Water District	EVWD	6,545	6,900	7,674	7,144	7,540	7,161	7,562	-	14,723	8.27%	13,837	5.96%	57	13,779	(18,372)	13,779	57	(4,536)			
18		Fontana Union Water Company	FWC	19,841	15,649	13,295	14,674	12,086	15,109	-	-	15,109	8.49%	14,200	6.12%	6,688	7,512	(6,424)	7,512	6,688	7,776			
19		Loma Linda University	LLU	1,011	1,116	1,166	1,202	901	1,079	-	-	1,079	0.61%	1,014	0.44%	-	1,014	(1,030)	1,014	-	(16)			
20		Mountain View Power Co.	SCE	1,410	1,219	1,425	726	744	1,105	-	-	1,105	0.62%	1,038	0.45%	-	1,038	(1,674)	1,038	-	(636)			
21		Muscoy Mutual Water Company No. 1	MMWC	1,943	1,870	2,028	1,863	1,684	1,878	-	-	1,878	1.06%	1,765	0.76%	-	1,765	(1,739)	1,765	-	26			
22		San Bernardino County - Facility Management	SBC	636	615	809	564	386	602	825	-	1,427	0.80%	1,341	0.58%	-	1,341	(1,093)	1,341	-	248			
23		San Bernardino Valley M.W.D.	SBVMWD	0	0	0	0	0	-	-	-	-	0%	-	0.00%	-	-	(1)	-	-	(1)			
24		Terrace Water Company	Terrace	1,318	921	1,077	1,012	899	1,045	-	-	1,045	0.59%	982	0.42%	-	982	(141)	982	-	841			
25		West Valley Water District	WVWD	13,584	12,090	13,587	11,331	11,837	12,486	-	-	12,486	7.02%	11,734	5.06%	3,588	8,147	(14,779)	8,147	3,588	(3,045)			
26		Yucaipa Valley Water District	YVWD	0	0	0	0	0	-	-	-	-	0.00%	-	0.00%	-	-	(133)	-	-	(133)			
27		Other Inside SBVWCD	Other	74,763	71,141	75,229	71,613	65,461	71,642	(19,164)	-	52,477	29.49%	49,319	21.25%	5,886	43,433	(5,235)	43,433	5,886	44,084			
28		Other Outside SBVWCD	Other	11,218	8,562	8,989	8,240	8,563	9,514	(2,925)	-	6,590	3.70%	6,193	2.67%	-	6,193	(843)	6,193	-	5,350			
29		Non-Plaintiff Total:		190,243	174,107	181,037	175,103	157,729	175,644	-	2,303	177,947	100%	167,238	72.05%	33,250	133,988	(151,603)	133,988	33,250	15,635			
30																								
31		Plaintiff Total:		70,373	64,867	70,944	65,102	60,983	64,862	-	-	-	-	64,862	27.95%	-	-	-	-	-	-	-		
32																								
33		Total:		260,616	238,974	251,981	240,205	218,712	240,506	-	-	-	-	232,100	100%	33,250	198,850							
34																								
35																								
36																								
37	Current (last 5 years)		2016-20 (5 years)	Present Period Net SBBA GW + SW Production (AF)						Total Average Use, 2016-20(AF)				Safe Yield Distribution				Total SBBA Demand	Groundwater	Average Surface Water	Recycled Water			Total Present Period
38		Agency	Abbreviation	2016	2017	2018	2019	2020	Average SBBA Use 2016-20 (AF)	SWP (AF)	Recycled Water <sup>Previous Year</sup> (AF)	Party Water Use (AF)	% of Total	Safe Yield <sup>Last 5 Years</sup> (AF)	Safe Yield % of Total	SW <sup>Last 5 Years</sup> (AF)	GWSY <sup>Last 5 Years</sup> (AF)	Demand <sup>Previous Year</sup> (2020)	GWSY <sup>Last 5 Years</sup> (AF)	SW <sup>Last 5 Years</sup> (AF)	New Direct Recycled (AF)	New Recharge Recycled (AF)	Net New Recycled <sup>Previous Year</sup> (AF)	Gap <sup>Last 5 Years</sup>
39		Bear Valley Mutual Water Company	BVMWC	8,928	10,332	10,220	6,856	12,383	9,744	1,288	-	11,032	7.6%	13,123	5.47%	9,686	3,437	(12,383)	3,437	9,686	-	-	-	740
40		City of Colton	Colton	3,044	3,842	3,695	2,943	2,624	3,230	-	-	3,230	2.2%	3,842	1.60%	-	3,842	(2,624)	3,842	-	-	-	-	1,218
41		City of Loma Linda	Loma Linda	4,208	5,070	5,158	4,725	5,182	4,869	100	-	4,969	3.4%	5,911	2.47%	-	5,911	(5,182)	5,911	-	-	-	-	729
42		City of Redlands	Redlands	22,031	25,528	25,675	23,597	25,573	24,481	350	4,521	29,352	20.2%	34,916	14.56%	10,205	24,712	(34,511)	24,712	10,205	6,589	-	4,521	4,926
43		City of Rialto	Rialto	4,429	3,149	6,411	5,406	5,091	4,897	1,014	-	5,911	4.1%	7,032	2.93%	1,244	5,788	(5,617)	5,788	1,244	-	-	-	1,415
44		City of San Bernardino	SBMWWD	23,588	29,154	39,523	37,206	39,822	33,859	6,736	-	40,595	28.0%	48,291	20.14%	-	48,291	(39,822)	48,291	-	-	-	-	8,469
45		East Valley Water District	EVWD	13,014	20,103	19,989	17,143	20,828	18,216	2,518	-	20,733	14.3%	24,664	10.29%	5,771	18,893	(18,372)	18,893	5,771	-	-	-	6,292
46		Fontana Union Water Company	FWC	2,650	4,112	5,147	6,045	6,424	4,876	-	-	4,876	3.4%	5,800	2.42%	3,587	2,213	(6,424)	2,213	3,587	-	-	-	(624)
47		Loma Linda University	LLU	1,019	990	986	961	1,030	997	-	-	997	0.7%	1,186	0.49%	-	1,186	(1,030)	1,186	-	-	-	-	156
48		Mountain View Power Co.	SCE	2,013	1,889	863	1,251	1,674	1,538	-	-	1,538	1.1%	1,830	0.76%	-	1,830	(1,674)	1,830	-	-	-	-	156
49		Muscoy Mutual Water Company No. 1	MMWC	1,534	1,652	1,649	1,571	1,739	1,629	-	-	1,629	1.1%	1,938	0.81%	-	1,938	(1,739)	1,938	-	-	-	-	199
50		San Bernardino County - Facility Management	SBC	458	841	846	770	1,093	802	-	-	802	0.6%	954	0.40%	-	954	(1,093)	954	-	-	-	-	(139)
51		San Bernardino Valley M.W.D.	SBVMWD	-	-	449	1	1	90	-	-	90	0.1%	107	0.04%	-	107	(1)	107	-	-	-	-	106
52		Terrace Water Company	Terrace	420	464	343	205	141	315	-	-	315	0.2%	374	0.16%	-	374	(141)	374	-	-	-	-	233
53		West Valley Water District	WVWD	6,749	9,226	11,006	12,216	13,875	10,615	1,122	-	11,736	8.1%	13,961	5.82%	3,534	10,428	(14,779)	10,428	3,534	-	-	-	(818)
54		Yucaipa Valley Water District	YVWD	162	110	178	92	133	135	-	-	135	0.1%	161	0.07%	-	161	(133)	161	-	-	-	-	28
55		Other Inside SBVWCD	Other	6,413	5,473	5,915	5,836	5,203	5,768	327	-	6,095	4.2%	7,250	3.02%	919	6,332	(5,235)	6,332	919	-	-	-	2,015
56		Other Outside SBVWCD	Other	1,820	1,323	995	922	843	1,181	-	-	1,181	0.8%	1,404	0.59%	653	751	(843)	751	653	-	-	-	561
57		San Bernardino Entities Total:		102,480	123,258	139,048	127,747	143,659	127,238	13,454	4,521	145,214	100%	172,745	72.05%	35,598	137,147	(151,603)	137,147	35,598	6,589	-	4,521	25,662
58		Western Entities Total:		-	-	-	-	-	66,998	-	-	-	-	66,998	27.95%	-	-	-	-	-	-	-	-	-
59																								
60		Total:		102,480	123,258	139,048	127,747	143,659	194,237	-	-	-	-	239,743	100%	35,598	137,147							
61																								
62																								
63		DRAFT BUDGET - FY2022-23 Calculation																						
64				Equitable Water Costs						Equitable O&M Costs				Total (2022-23)										
65		Agency	Party Gap (AF) (Gap <sup>1959-63</sup> + Gap <sup>Last 5 Years</sup> )/2	Water Use (%)	Sustainability (AF)	Total Water (AF)	Credit for Water (AF)	Total Water after Credit (AF)	Estimated Total Water Cost (\$)	Proportion of Total Pumping	Equitable O&M Costs	Equitable Admin Costs	Estimated Total Party Costs (\$)	Voting Weight 2022-2023										
66		Bear Valley Mutual Water Company	0	0.0%	7	7	2,618	-	\$ -	0.13%	\$ 1,493	\$ -	\$ 1,493	0.0%										
67		City of Colton	0	2.4%	405	405	-	405	\$ 47,928	1.7%	\$ 18,835	\$ -	\$ 66,763	2.2%										
68		City of Loma Linda	1,301	3.7%	623	1,924	-	1,924	\$ 227,749	3.3%	\$ 37,196	\$ -	\$ 264,945	8.7%										
69		City of Redlands	1,513	21.9%	3,679	5,192	8,857	-	\$ -	15.2%	\$ 169,067	\$ -	\$ 169,067	5.6%										
70		City of Rialto	1,157	4.4%	741	1,898	8	1,890	\$ 223,782	2.6%	\$ 28,956	\$ -	\$ 252,738	8.3%										
71		City of San Bernardino	5,979	30.2%	5,088	11,067	11	11,056	\$ 1,309,038	25.6%	\$ 285,837	\$ -	\$ 1,594,875	52.5%										
72		East Valley Water District	0	15.4%	2,599	2,599	3,404	-	\$ -	9.8%	\$ 108,881	\$ -	\$ 108,881	3.6%										
73		Fontana Union Water Company	0	3.6%	611	611	-	611	\$ 72,355	0.3%	\$ 3,632	\$ -	\$ 75,987	2.5%										
74		Loma Linda University	0	0.7%	125	125	-	125	\$ 14,799	0.7%	\$ 7,393	\$ -	\$ 22,1											

GC EAM 2022-2023 Fiscal Year  
Annual O&M and SWP for Ultimate Sustainability (2040)



Corrections for Previous Years	
Agency	<sup>1</sup> WVWD Lytle Creek Watermaster Data Error FY21-22
Bear Valley Mutual Water Company	\$ -
City of Colton	\$ 2,805
City of Loma Linda	\$ 3,358
City of Redlands	\$ 22,439
City of Rialto	\$ 4,154
City of San Bernardino	\$ 28,048
East Valley Water District	\$ -
Fontana Union Water Company	\$ 3,397
Loma Linda University	\$ 801
San Bernardino Valley M.W.D.	\$ -
West Valley Water District	\$ (90,646)
Yucaipa Valley Water District	\$ 76
Total GC Parties:	\$ (25,569)
Mountain View Power Co.	\$ 1,344
Muscoy Mutual Water Company No. 1	\$ 1,251
San Bernardino County - Facility Management	\$ 557
Terrace Water Company	\$ 298
Other Inside SBVWCD	\$ 5,105
Other Outside SBVWCD	\$ 952
San Bernardino Non-Parties Total:	\$ 9,507
Western Entities Total:	\$ -
Total:	\$ (16,062)

Notes

1- Data for WVWD's Lytle Creek diversion was over reported in the 2020 Watermaster report

Credit for Water Brought to the Basin		
Agency	New Recycled Water (AF)	Surface Water for Recharge (AF)
Bear Valley Mutual Water Company	-	2,618
City of Colton	-	-
City of Loma Linda	-	-
City of Redlands	4,521	4,336
City of Rialto	-	8
City of San Bernardino	-	11
East Valley Water District	-	3,404
Fontana Union Water Company	-	-
Loma Linda University	-	-
San Bernardino Valley M.W.D.	-	-
West Valley Water District	-	-
Yucaipa Valley Water District	-	-
Total GC Parties:	4,521	10,377
Mountain View Power Co.	-	-
Muscoy Mutual Water Company No. 1	-	-
San Bernardino County - Facility Management	-	-
Terrace Water Company	-	-
Other Inside SBVWCD	-	-
Other Outside SBVWCD	-	-
San Bernardino Non-Parties Total:	-	-
Western Entities Total:	-	-
Total:	4,521	10,377

**Recycled Water**  
Redlands - Credit for Recycled water either for recharge or delivered to Edison. 2,068AF of recycled water was present in the base period and is subtracted from the total. Data provided by the agency.

**Surface Water for Recharge**  
BVMWC/Redlands- Recharge of Santa Ana River water at the Redlands Aqueduct Sandbox, the Lower Mill Creek Ponds, the Mentone Reservoir, the Airport Ponds, the Highline Upper Mill Creek, Gun's Pond, and Fifth Ave Sand Canyon. Mill Creek water recharged at the East Weir  
Rialto - Water delivered for spreading from Lytle Creek per calculations performed by WVWD  
San Bernardino - Water delivered for spreading from Lytle Creek per calculations performed by WVWD  
EVWD- Water within EVWD Northfork rights that is diverted by Northfork and then sent for spreading either at the ConservationDistrict facility or in Plunge Creek. Data from the Exchange Plan Daily Flow Report and EVWD Northfork Parshall flume meter.  
WVWD - Water delivered for spreading from Lytle Creek per calculations performed by WVWD

Extraction Data and Adjustments

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1		Verified Total Extractions										Pumping Adjustments						Other Distribution Verified Extractions						Credits for Water to the Basin							
2		Source: 1971 Watermaster Report Summary of Extractions (Filed and Nonfiled) in the SBBA by Non-Plaintiffs for use in SB County					Source: 2020 Watermaster Report Volume 1 Table 3 (BVMWC Volume 1 Table 1, Volume 1A Table 1, BVMWC Report)					Source: Performed by SBVMWD						Source: 2020 Watermaster Report Volume 1 Change in Ownership from Base Period						Recycled Water (Data provided by agencies)		Recycled Water (Base period)		Surface Water for Recharge (Data Watermaster Volume 1 Table 1 and only)		Total 2020	
3	Agency	1959	1960	1961	1962	1963	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	1959	1960	1961	1962	1963	AVG	2020	1959-63	2020	2020					
4	Bear Valley Mutual Water Company	24,597	20,706	19,405	18,864	15,632	9,341	16,396	11,550	14,414	18,526	-	-	-	-	-	-	-	1,012	974	882	574	-	-	2,618	2,618					
5	City of Colton	2,814	3,606	3,305	3,743	3,267	3,044	3,842	3,695	2,943	2,624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
6	City of Loma Linda	-	-	-	-	-	4,708	5,070	5,158	4,725	5,182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
7	City of Redlands	18,717	19,264	18,365	19,901	15,922	16,319	24,216	21,710	25,739	28,424	-	-	448	1	1	-	-	-	-	-	-	-	-	-	-					
8	City of Rialto	1,659	795	959	1,068	1,397	4,291	3,885	4,413	3,560	3,897	1,727	1,692	1,998	2,372	1,720	959	827	875	1,033	470	833	-	235	-						
9	City of San Bernardino	17,268	16,099	18,448	17,575	16,456	36,519	38,478	40,158	37,875	40,504	(216)	(139)	(635)	(669)	(682)	4,111	3,704	3,633	3,070	2,821	3,468	-	-	11	11					
10	East Valley Water District	6,545	6,891	7,632	7,022	7,427	12,791	15,214	14,545	12,276	15,169	-	-	-	-	-	7,003	7,044	8,519	8,352	7,621	7,562	-	-	3,404	3,404					
11	Fontana Union Water Company	19,841	15,649	13,295	14,674	12,086	2,650	4,112	5,147	6,045	6,424	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
12	Loma Linda University	1,011	1,116	1,202	1,166	901	1,019	990	986	961	1,030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
13	Mountain View Power Co.	1,410	1,219	1,425	726	744	2,013	1,889	863	1,251	1,674	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
14	Muscoy Mutual Water Company No. 1	1,943	1,870	2,028	1,863	1,684	1,534	1,652	1,649	1,571	1,739	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
15	San Bernardino County - Facility Management	636	615	809	564	386	458	841	846	770	1,093	-	-	-	-	-	1,045	733	823	871	655	825	-	-	-	-					
16	San Bernardino Valley M.W.D.	-	-	-	-	-	5,643	4,921	6,421	6,321	6,100	(5,643)	(4,921)	(5,972)	(6,320)	(6,099)	-	-	-	-	-	-	-	-	-	-					
17	Terrace Water Company	1,318	921	1,077	1,012	899	420	464	343	205	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
18	West Valley Water District	13,584	12,090	13,587	11,331	11,837	4,862	7,108	6,966	9,361	10,066	4,132	3,368	4,040	4,065	4,713	-	-	-	-	-	-	-	-	18	18					
19	Yucaipa Valley Water District	-	-	-	-	-	162	110	178	92	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
20	Other Inside SBVWCD	67,682	64,704	70,511	65,354	60,528	6,413	5,473	5,915	5,836	5,203	-	-	-	-	-	(18,509)	(17,282)	(22,440)	(19,856)	(17,735)	(19,164)	-	-	-	-					
21	Other Outside SBVWCD	11,218	8,562	8,989	10,240	8,563	1,820	1,323	995	922	843	-	-	-	-	-	(3,638)	(3,111)	(2,967)	(3,195)	(2,443)	(2,925)	-	-	-	-					
22	Santa Ana River Recharge Balance (difference between BVMWC diversion and use of SAR water)	-	-	-	-	-	3,405	17,472	3,422	492	2,561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
23	San Bernardino Entities Total:	190,243	174,107	181,037	175,103	157,729	117,412	153,456	134,960	135,359	151,333	-	-	(121)	(550)	(347)	-	-	-	-	-	(0)	6,589	2,303	10,395	14,916					
24																															
25	City of Riverside	25,983	23,024	24,682	24,391	22,379	16,341	21,829	18,995	15,752	21,730		TOTAL SWP Water						Source: SBVMWD SWP Orders and Accounting						Source: SBVMWD SWP Orders and Accounting						
26	City of Riverside - Gage Canal	31,805	29,019	30,670	28,440	26,999	30,291	28,627	30,893	26,775	27,780		2016	2017	2018	2019	2020		2016	2017	2018	2019	2020		2016	2017	2018	2019	2020		
27	Weeks & Daley Water Company	7,282	8,037	9,399	7,560	7,854	7,220	7,218	7,217	7,444	6,537		5,209	466	144	101	518		5,209	466	144	101	518		5,209	466	144	101	518		
28	Regents of University of California	558	546	658	564	425	554	554	554	554	554		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
29	Riverside Highland Water Co.	4,745	4,241	5,535	4,147	3,326	3,040	1,903	2,072	2,326	2,947		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
30	Western Entities Total:	70,373	64,867	70,944	65,102	60,983	57,446	60,131	59,731	52,851	59,548		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
31													-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
32	Total:	260,616	238,974	251,981	240,205	218,712	174,858	213,587	194,691	188,210	210,881																				
33													SWP Spreading Delivery						Source: SBVMWD SWP Orders and Accounting						Source: SBVMWD SWP Orders and Accounting						
34													2016	2017	2018	2019	2020		2016	2017	2018	2019	2020		2016	2017	2018	2019	2020		
35	Agency	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		
36	Bear Valley Mutual Water Company	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		
37	City of Colton	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		
38	City of Loma Linda	500	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		
39	City of Redlands	550	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
40	City of Rialto	1,590	2,428	-	526	526	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
41	City of San Bernardino	12,715	9,185	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
42	City of San Bernardino	12,715	9,185	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
43	East Valley Water District	6,068	1,704	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
44	Fontana Union Water Company	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
45	Loma Linda University	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
46	Mountain View Power Co.	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
47	Muscoy Mutual Water Company No. 1	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
48	San Bernardino County - Facility Management	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
49	San Bernardino Valley M.W.D.	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
50	Terrace Water Company	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
51	West Valley Water District	2,245	1,250	-	1,210	904	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
52	Yucaipa Valley Water District	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
53	Other Inside SBVWCD	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	-	-	-	-	-			
54	Other Outside SBVWCD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
55	San Bernardino Entities Total:	23,667	14,567	-	1,736	1,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
56																															
57																															
58																															
59		Lytle Creek										Mill Creek																			
60	Agency	1959	1960	1961	1962	1963	2016	2017	2018	2019	2020	1959	1960	1961	1962	1963	2016	2017	2018	2019	2020	1959	1960	1961	1962	1963					
61	Bear Valley Mutual Water Company	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
62	City of Colton	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
63	City of Loma Linda	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-															

SBB GC Water Charge FY2022-23		
GC Parties	FY22-23 Water Cost (\$)	FY22-23 Water Cost (AF)
Bear Valley Mutual Water Company	\$ -	0
City of Colton	\$ 50,733	428
City of Loma Linda	\$ 231,107	1952
City of Redlands	\$ 22,439	190
City of Rialto	\$ 227,936	1925
City of San Bernardino	\$ 1,337,086	11293
East Valley Water District	\$ -	0
Fontana Union Water Company	\$ 75,752	640
Loma Linda University	\$ 15,600	132
San Bernardino Valley M.W.D.	\$ 1,340	11
West Valley Water District	\$ 309,992	2618
Yucaipa Valley Water District	\$ 8,319	70
<b>Total GC Parties:</b>	<b>\$2,280,303</b>	<b>19259</b>

SBB GC O&M Charge FY2022-23	
GC Parties	FY22-23 O&M Cost (AF)
Bear Valley Mutual Water Company	\$ 1,493
City of Colton	\$ 18,835
City of Loma Linda	\$ 37,196
City of Redlands	\$ 169,067
City of Rialto	\$ 28,956
City of San Bernardino	\$ 285,837
East Valley Water District	\$ 108,881
Fontana Union Water Company	\$ 3,632
Loma Linda University	\$ 7,393
San Bernardino Valley M.W.D.	\$ 7
West Valley Water District	\$ 69,388
Yucaipa Valley Water District	\$ 955
<b>Total GC Parties:</b>	<b>\$ 731,640</b>





City of  
**REDLANDS**

Incorporated 1888  
Municipal Utilities & Engineering Department  
35 Cajon Street, Suite 15A  
Redlands, CA 92373  
909-798-7698

JOHN R. HARRIS  
Director

**To:** Tom Crowley, San Bernardino Basin Groundwater Council President

**From:** John Harris, MUED Director

**Date:** February 8, 2022

**Re:** Groundwater Recharge Credit Request

---

The City of Redlands became a member of the San Bernardino Basin Groundwater Council (SBBGC) in 2021 when, on March 2<sup>nd</sup>, our City Council approved language in the Framework Agreement, appropriated additional funding, and authorized staff to take the steps necessary to finalize our membership. We are excited to partner with other local groundwater producers to sustain our valuable water source, and look forward to actively participating on the SBBGC.

As a condition of membership, Redlands was required to remit “catch-up” membership fees for Fiscal Years 2018/19 and 2019/2020, as well as our annual membership fee for Fiscal Year 2021/22. We have done so, and will remit annual membership fees promptly in the future. Now, Redlands wishes to maximize the value of our SBBGC membership by receiving appropriate credit for our basin recharging efforts, just as the West Valley Water District and East Valley Water District have.

Redlands has actively contributed to the replenishment of the basin by applying water diverted pursuant to Redlands’ water rights and water provided to Redlands pursuant to the Redlands’ direct and indirect ownership of shares of Bear Valley Mutual Water Company and Crafton Water Company to local spreading basins. This effort meets the Framework Agreement definition for “Water Provided For Basin Benefit” since this water is *“controlled by that agency and intentionally delivered for groundwater recharge into the SBBA”* (Framework Agreement Exhibit B, Section II).

In December 2021, the City of Redlands requested credit for groundwater recharge, retroactive to formation of the SBBGC, following the West Valley Water District and East Valley Water District models. This request was submitted based on Redlands’ ownership of facilities and water rights in Mill Creek and direct and indirect ownership of numerous shares in Bear Valley Mutual Water Company and Crafton Water Company. A historic water recharge tabulation for each facility was provided, and our request was discussed with the Groundwater Council Budget Committee on January 27, 2022.



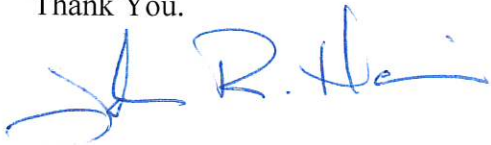
The general consensus of the committee was to recommend approval of our request, although the committee did request a revised annual groundwater recharge worksheet based on Redlands' share ownership in various water companies. A revised worksheet is attached, and Katelyn Scholte has reviewed the methodology used to calculate the Mill Creek recharge credit. Additional supporting data, based on Redlands' thirty-six percent (36%) share ownership in Bear Valley Mutual Water Company, is provided to substantiate the methodology used to calculate the Santa Ana River recharge credit.

Additionally, the committee requested the installation of more accurate metering/monitoring equipment at the Cooley Hat diversion in the near future. During the discussion, I mentioned that this site is already scheduled for a SCADA system upgrade in 2022. After the meeting, I asked my staff to prioritize this installation ahead of other SCADA system upgrade sites. Redlands is committed to accelerating this portion of the larger SCADA system upgrade project.

I respectfully request this item be included on the February 14, 2022 Groundwater Council meeting agenda for discussion and action.

Feel free to contact me if additional information is needed.

Thank You.



John R. Harris  
City of Redlands Municipal Utilities and Engineering Department Director  
(909) 798-7658  
[jharris@cityofredlands.org](mailto:jharris@cityofredlands.org)

Cc: Katelyn Scholte, SBVWCD Assistant Engineer;  
Matt Howard, SBVMWD Water Resources Senior Planner;  
George Hanson, Bear Valley Mutual Water Company/Crafton Water Company General Manager

**REDLANDS ANNUAL GROUNDWATER RECHARGE - MILL CREEK & SANTA ANA RIVER**



**Recharge from Mill Creek Diversions**

	East Weir Discharge to Mill Crk (AF)	East Weir to Zanis -- West Weir (AF)	
	Gross	Redlands Net	Redlands Net
2017 Total	3299	2119	647
2018 Total	1130	1064	419
2019 Total	2263	1265	1328
2020 Total	3871	2781	571
2021 Total	1305	929	874

**Recharge from Santa Ana River Redlands Aqueduct Diversions**

	Redlands Aqueduct Sandbox (AF)		Lower Mill Creek Ponds (AF)		Merritt Reservoir (AF)		Airport Ponds (AF)	
	Gross	Redlands Net	Gross	Redlands Net	Gross	Redlands Net	Gross	Redlands Net
2017 Total	0	0	0	0	0	0	1517	552
2018 Total	60	22	0	0	0	0	709	258
2019 Total	1013	368	0	0	22	8	2867	1042
2020 Total	59	21	1582	575	0	0	2379	865
2021 Total	75	27	687	250	0	0	1082	393

**Recharge from Santa Ana River Highline Diversions**

	Highline Upper Mill Creek (AF)		Gun's Ponds (AF)		Fifth Ave Sand Canyon (AF)	
	Gross	Redlands Net	Gross	Redlands Net	Gross	Redlands Net
2017 Total	184	67	5	2	5	2
2018 Total	84	31	6	2	1	0
2019 Total	134	49	19	7	377	137
2020 Total	59	21	26	9	7	3
2021 Total	89	32	21	8	0	0

**14272**

See separate analysis for determination of City of Redlands Mill Creek recharge as transmitted by email to Katelyn Schalte, George Hanson and Daniel Cozad  
 Wednesday February 2, 2022 10:19 PM

City of Redlands reports that City of Redlands owns 90,852 shares of Bear Valley Mutual Water Company  
 Bear Valley Mutual Water Company reports that Bear Valley Mutual Water Company has 250,137 shares outstanding  
 The "Gross" quantities shown are from records of Bear Valley Mutual Water Company  
 The "Net" recharge quantities have been proportioned based on City of Redlands ownership of Bear Valley Mutual Water Company shares

## Introduction to Following Table

### Mill Creek —

Mill Creek is diverted by Southern California Edison Company near Forest Falls and at the Highway 38 bridge. Southern California Edison Company has no water rights. Mill Creek Owners hold the water rights. Southern California Edison Company returns possession of the water to the Mill Creek Owners at the afterbay of Southern California Edison Company Mill Creek Powerhouse Number 1. Mill Creek Owners operate and maintain the conveyance facilities from Southern California Edison Company Mill Creek Powerhouse Number 1 to the Cooley Hat and Henry Tate Water Treatment Plant and the East Weir.

The City of Redlands (City) and Crafton Water Company (CWC) are partners in the Mill Creek Owners. The City also owns CWC shares directly and indirectly. CWC delivers water to meet the needs of its shareholders, and the City becomes the possessor of water requested from CWC. The City can elect to direct water from the Mill Creek Diversion works through the East Weir to Mill Creek for recharge, and may also direct water from the Mill Creek diversion works through the East Weir to the Zanja where water percolates into the ground and becomes recharge unless the water is re-diverted into the Crafton Canal at the West Weir on the Zanja by CWC.

### Santa Ana River —

The City owns numerous water company shares including prior right companies, Redlands Water Company and Lugonia Water Company. The City also owns numerous shares of Bear Valley Mutual Water Company. The City is also the beneficiary of shares of companies with which the City has delivery agreements. These water companies deliver water to meet the needs of their shareholders.

Southern California Edison Company diverts the waters of the Santa Ana River at numerous locations. Southern California Edison Company does not own the water rights and returns the diverted Santa Ana River water to Bear Valley Mutual Water Company. Bear Valley Mutual Water Company operates diversion and conveyance works on the Santa Ana River. The City may request that water diverted from the Santa Ana River be delivered into numerous ground water recharge facilities from the Santa Ana River diversion and conveyance facilities.

The attached data illustrates the deliveries of water diverted for groundwater recharge by the City and by mutual water companies as requested by the City.



NOTES:

Coolley Hat Flow

This column contains daily flow copied from the DFR Column T3

Mill Creek Users

This column contains the determination of the 44.7 percent ownership of the diverted flow of Mill Creek that City of Redlands owns as a Mill Creek User

Crafton Water Company

This column contains the daily equivalent flow of 156 shares of Crafton Water Company that is delivered to City of Redlands Tate Treatment

Redlands Heights

Redlands owns 982.5 shares of Redlands Heights and provides service to 296 shares of Redlands Heights Water Company

Mill Creek water is delivered to Tate Treatment Plant for 1278.5 shares of Redlands Heights Water Company

Total Flow Available to Redlands

The data in this column is the sum of the flow rates in the preceding three columns. Mill Creek Users, Crafton Water Company and Redlands Heights Water Company

This quantity is the total daily flow allocated to City of Redlands from the diverted flows of Mill Creek

subtract flow delivered to Tate Treatment

The values in this column are extracted from the Daily Flow Report item P3

Flow delivered to Henry Tate Water Treatment Plant is purified and flows into the City of Redlands drinking water distribution system for consumptive use

leaves allocation deliverable for recharge

subtraction of deliveries to Tate Water Treatment Plant leaves a numeric value of the water resources of Mill Creek that City of Redlands can continue to claim as its water resource that City of Redlands may divert to the East Weir for groundwater recharge.

allocation deliverable greater than zero

infrequently City of Redlands takes more than its allocated flow to the Henry Tate Water Treatment Plant. When this event occurs, City of Redlands no longer has water resource claim to water that might be diverted to the East Weir for groundwater recharge uses. The method used in preceding columns generates a negative number value when City of Redlands takes more water than its allocation. The subsequent columns do not work with negative numeric values.

East Weir delivery to Mill Creek

The data in this column are copied from Daily Flow Report Column P3

Redlands allocation remaining

The data in this column contains a simple subtraction: Allocation deliverable greater than zero column entries minus East Weir delivery to Mill Creek entries  
The entry is the quantity of allocation that City of Redlands has not yet received but may recover from recharge in the Zanja

Recharge equals lesser of allocation or actual flow

The data is the lesser amount of the Allocation deliverable greater than zero or the east Weir delivery to Mill Creek

Redlands Unmet allocation portion

City of Redlands may have unused allocation after deliveries to Tate Treatment Plant and East Weir to Mill Creek.  
The data in this column are the same as in the above column labeled Redlands allocation remaining

East Weir to Zanja

The values in this column are extracted from the Daily Flow Report item S3

West Weir diversion to Crafton Water Company

The values in this column are extracted from the Daily Flow Report item V3

apparent recharge in Zanja

The values in this column are East Weir to Zanja minus West Weir diversion to Crafton Water Company  
The values can be negative when more water is diverted at West Weir that did not flow from the East Weir (when SWP is delivered at Unger Lane)

Zanja available recharge

These data are the same as the apparent recharge in Zanja with negative numbers being corrected to zero

Remaining unmet allocation

These data are determined by subtracting the Zanja available recharge from the Redlands unmet allocation portion

Recharge equals lesser of allocation or actual flow