



Water Rate Study

Revised Tables

12/06/22



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

Joshua Basin Water District Water Rate Study Draft Schedule

JULY							AUGUST							SEPTEMBER							OCTOBER							
S	M	T	W	R	F	S	S	M	T	W	R	F	S	S	M	T	W	R	F	S	S	M	T	W	R	F	S	
					1	2	31	1	2	3	4	5	6						1	2	3	2	3	4	5	6	7	8
3	4	5	6	7	8	9	7	8	9	10	11	12	13	4	5	6	7	8	9	10	9	10	11	12	13	14	15	
10	11	12	13	14	15	16	14	15	16	17	18	19	20	11	12	13	14	15	16	17	16	17	18	19	20	21	22	
17	18	19	20	21	22	23	21	22	23	24	25	26	27	18	19	20	21	22	23	24	23	24	25	26	27	28	29	
24	25	26	27	28	29	30	28	29	30	31	25	26	27	28	29	30	1	30	31									

NOVEMBER							DECEMBER							JANUARY							FEBRUARY								
S	M	T	W	R	F	S	S	M	T	W	R	F	S	S	M	T	W	R	F	S	S	M	T	W	R	F	S		
		1	2	3	4	5						1	2	3	1	2	3	4	5	6	7					1	2	3	4
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11		
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18		
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25		
27	28	29	30	25	26	27	28	29	30	31	29	30	31	26	27	28													

- AUG-31 Board Meeting - Introduce rate study & preliminary findings, receive initial input
- SEP-13 CAC Meeting - Discuss preliminary findings & alternatives, receive input
- OCT-12 Special Board Meeting with CAC - Discuss alternatives, receive input
- NOV-8 CAC Meeting - Continuing honing recommendations
- NOV-9 Special Board Meeting with CAC - Continuing honing recommendations (agendaize as special meeting)
- DEC-14 tbd Special Board Meeting - Review recommendations, seek direction to proceed w/ Prop 218 process
- DEC-23 Mail Prop 218 Notices (must be mailed by Dec-31, at least 45 days prior to Public Hearing)
- JAN-10 Community Workshop at the Joshua Tree Community Center
- FEB-15 Board Meeting - Public Hearing & consider adoption of proposed rates
- MAR-1 New rates become effective (with future year rate increases effective Jan-1)
- JUL-1 New rates become effective (if billing via County property tax rolls)

Water Rates & Usage

DRAFT

Table 1
 Joshua Basin Water District
 Current Water Rates

Current Water rates			
BASIC MONTHLY FEE (FIXED CHARGE)			
<u>Meter Size</u>	<u>Capacity (gpm)</u>	<u>Monthly Rate</u>	<u>Per Day</u>
3/4" & 1"	30	\$41.35	\$1.36
1-1/2"	100	137.83	4.53
2"	160	220.53	7.25
3"	300	413.50	13.59
MONTHLY WATER USAGE CHARGES (PER HCF)			
For 3/4" & 1" Meters			
<u>Consumption</u>		<u>Rate per hcf</u>	<u>Per 100 gallons</u>
0 - 5 units		\$6.20	\$0.83
5.01 - 10 units		7.70	1.03
10.01 - 20 units		9.20	1.23
20.01 + units		10.70	1.43
For 1-1/2", 2" and 3" Meters			
		<u>Rate per hcf</u>	
Unit rate per all water use		\$7.70	1.03

1 unit = 1 hcf = one hundred cubic feet = 748 gallons

Table 2
 Joshua Basin Water District
 Historical Water Rates

Historical Water Rates														
	Jan-1 2007	Jan-1 2008	Jan-1 2009	Jan-1 2010	Jan-1 2011	Mar-1 2014	Jan-1 2015	Jan-1 2016	Jan-1 2017	Mar-1 2018	Jan-1 2019	Jan-1 2020	Jan-1 2021	Jan-1 2022
Overall Rate Increases	6%	6%	3%	6%	3%	7%	7%	7%	7%	18%	16%	14%	12%	10%
BASIC MONTHLY FEE														
<i>Fixed monthly charge based on meter size</i>														
<u>Meter Size</u>														
3/4 & 1 inch	\$20.00	\$21.20	\$21.84	\$23.15	\$23.82	\$24.31	\$24.80	\$25.29	\$25.78	\$26.96	\$30.70	\$34.43	\$38.03	\$41.35
1 inch	\$33.30	\$35.30	\$36.36	\$38.55	\$39.70	-	-	-	-	-	-	-	-	-
1-1/2 inches	66.60	70.70	72.83	77.20	79.40	81.03	82.67	84.30	85.93	89.87	102.33	114.77	126.77	137.83
2 inches	106.60	113.10	116.50	123.49	127.00	129.65	132.27	134.88	137.49	143.79	163.73	183.63	202.83	220.53
3 inches	213.40	212.00	218.40	231.51	238.20	243.09	248.01	252.90	257.79	269.60	307.00	344.30	380.30	413.50
MONTHLY WATER FLOW CHARGES														
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>														
For 3/4" and 1" Meters														
Tier 1 0 - 5 units	\$1.80	\$1.91	\$1.97	\$2.09	\$2.14	\$2.30	\$2.50	\$2.75	\$3.00	\$3.70	\$4.40	\$5.05	\$5.70	\$6.20
Tier 2 5.01 - 10 units	2.00	2.12	2.19	2.33	2.39	2.60	2.90	3.20	3.50	4.40	5.30	6.15	7.00	7.70
Tier 3 10.01 - 20 units	2.10	2.25	2.32	2.46	2.57	2.90	3.30	3.65	4.00	5.10	6.20	7.25	8.30	9.20
Tier 4 20.01 + units	2.15	2.35	2.42	2.57	2.75	3.20	3.70	4.10	4.50	5.80	7.10	8.35	9.60	10.70
For 1-1/2", 2" and 3" Meters														
Unit rate for all water use	\$2.00	\$2.12	\$2.19	\$2.33	\$2.39	\$2.71	\$3.07	\$3.43	\$3.79	\$4.60	\$5.40	\$6.20	\$7.00	\$7.70
<i>Note: 1 unit = one hundred cubic feet, or approximately 748 gallons.</i>														
PRIVATE FIRE PROTECTION CHARGES														
<i>Fixed monthly charge based on size of service connection</i>														
<u>Service Size</u>														
2 inches	\$10.60	\$11.24	\$11.58	\$12.28	\$12.62	\$13.50	\$11.58	\$12.28	\$12.62	\$14.38	\$16.37	\$18.36	\$20.28	\$22.05
3 inches	21.20	22.47	23.15	24.54	25.25	27.02	23.15	24.54	25.25	26.96	30.69	34.43	38.03	41.34
4 inches	42.40	44.94	46.29	49.07	50.50	54.04	46.29	49.07	50.50	44.94	51.16	57.38	63.38	68.91
6 inches	63.60	67.42	69.45	73.62	75.76	81.06	69.45	73.62	75.76	89.88	102.31	114.75	126.75	137.81
8 inches	95.40	101.12	104.60	110.41	113.62	121.57	104.60	110.41	113.62	143.80	163.70	183.60	202.80	220.50

Table 4
 Joshua Basin Water District
 Historical Water Use by Tier

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Billed Use by Tier (hcf)											
Tier 1	192,465	192,245	190,677	189,011	186,071	188,189	190,662	184,407	183,425	198,072	193,435
Tier 2	106,540	106,439	102,652	98,576	88,862	91,526	92,136	84,032	81,238	95,113	89,580
Tier 3	93,798	94,917	89,782	84,359	71,709	76,742	75,757	67,463	62,110	76,446	73,530
Tier 4	97,275	101,151	99,771	85,333	64,707	86,482	79,322	67,687	61,419	80,096	85,150
Subtotal	490,078	494,752	482,882	457,279	411,349	442,939	437,877	403,589	388,192	449,727	441,695
All Other	98,639	88,724	96,261	93,150	71,731	85,275	79,555	77,261	75,678	75,143	79,414
Total (hcf)	588,717	583,476	579,143	550,429	483,080	528,214	517,432	480,850	463,870	524,870	521,109
Total (AF)	1,352	1,339	1,330	1,264	1,109	1,213	1,188	1,104	1,065	1,205	1,196
Annual Change		-0.9%	-0.7%	-5.0%	-12.2%	9.3%	-2.0%	-7.1%	-3.5%	13.2%	-0.7%

Joshua Basin Water District Historical Water Use (hcf)

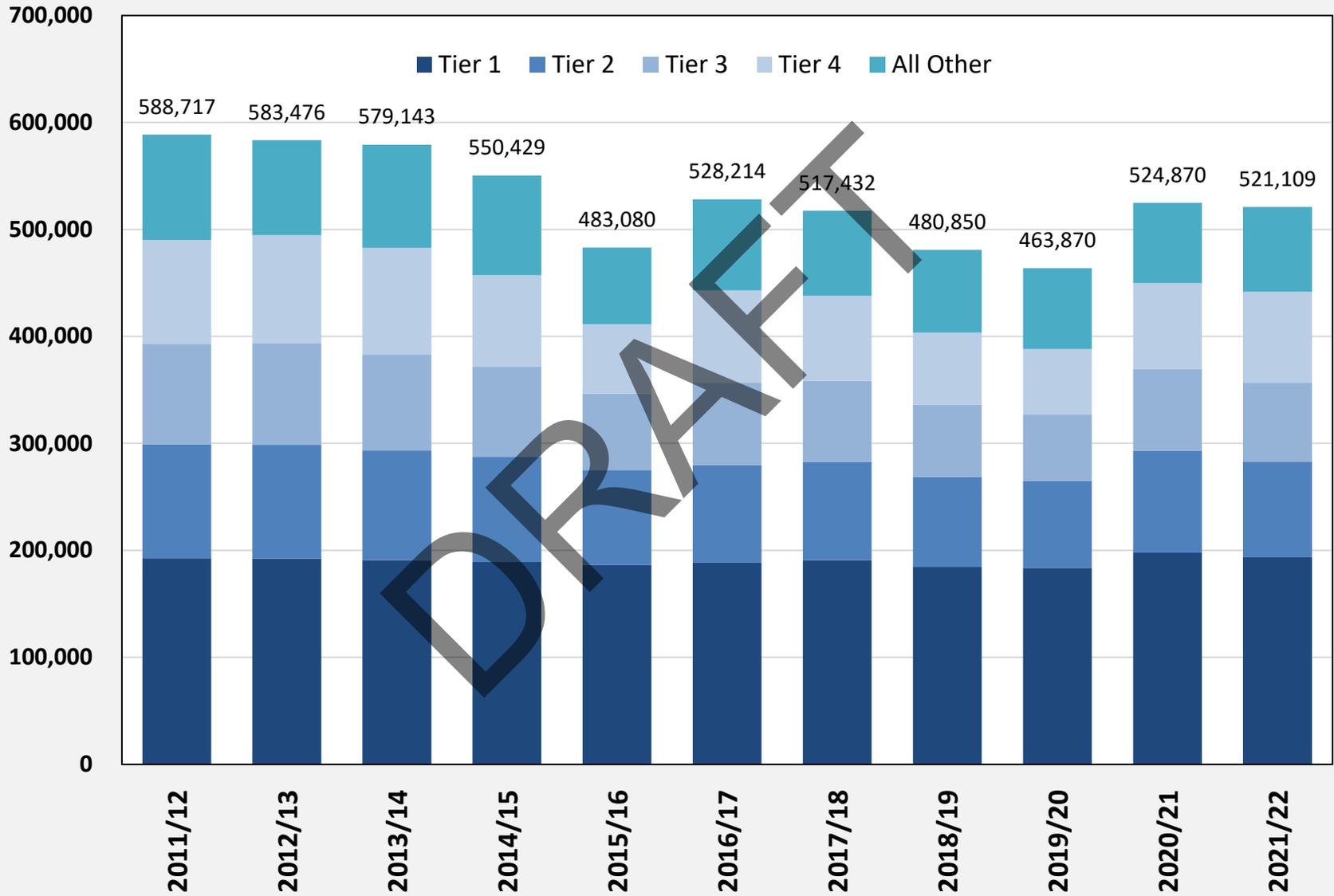


Table 5
 Joshua Basin Water District
 Bills & Use by Tier 2021/22
 For 3/4" & 1" Meters

Bills & Use in Tier 2021/22			
	Monthly Use	Bills Ending in Tier %	Water Use in Tier
Tier 1	0 - 5 hcf	54.0%	43.8%
Tier 2	5.01 - 10 hcf	23.9%	20.3%
Tier 3	10.01 - 20 hcf	14.4%	16.6%
Tier 4	20.01 + hcf	7.7%	19.3%

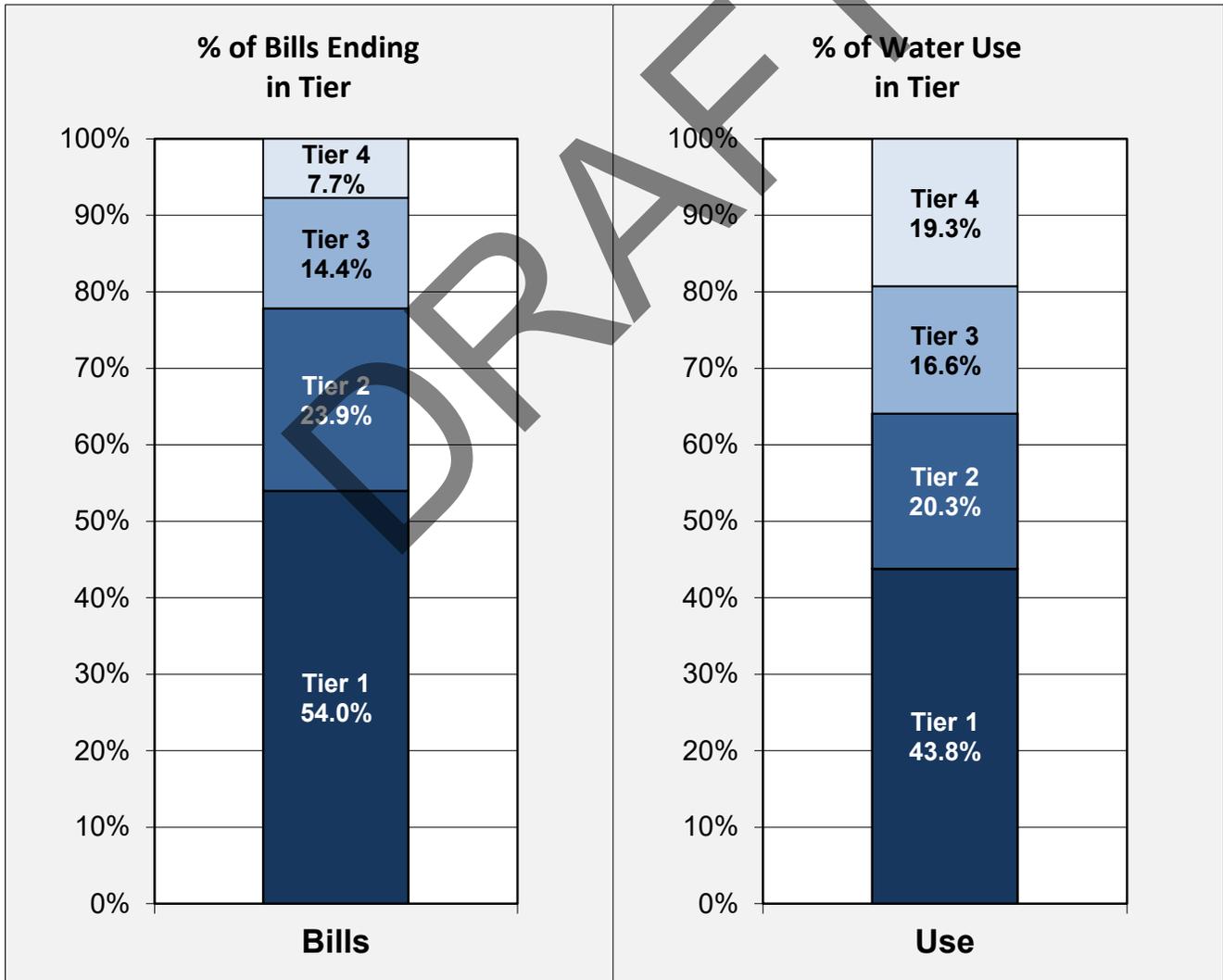


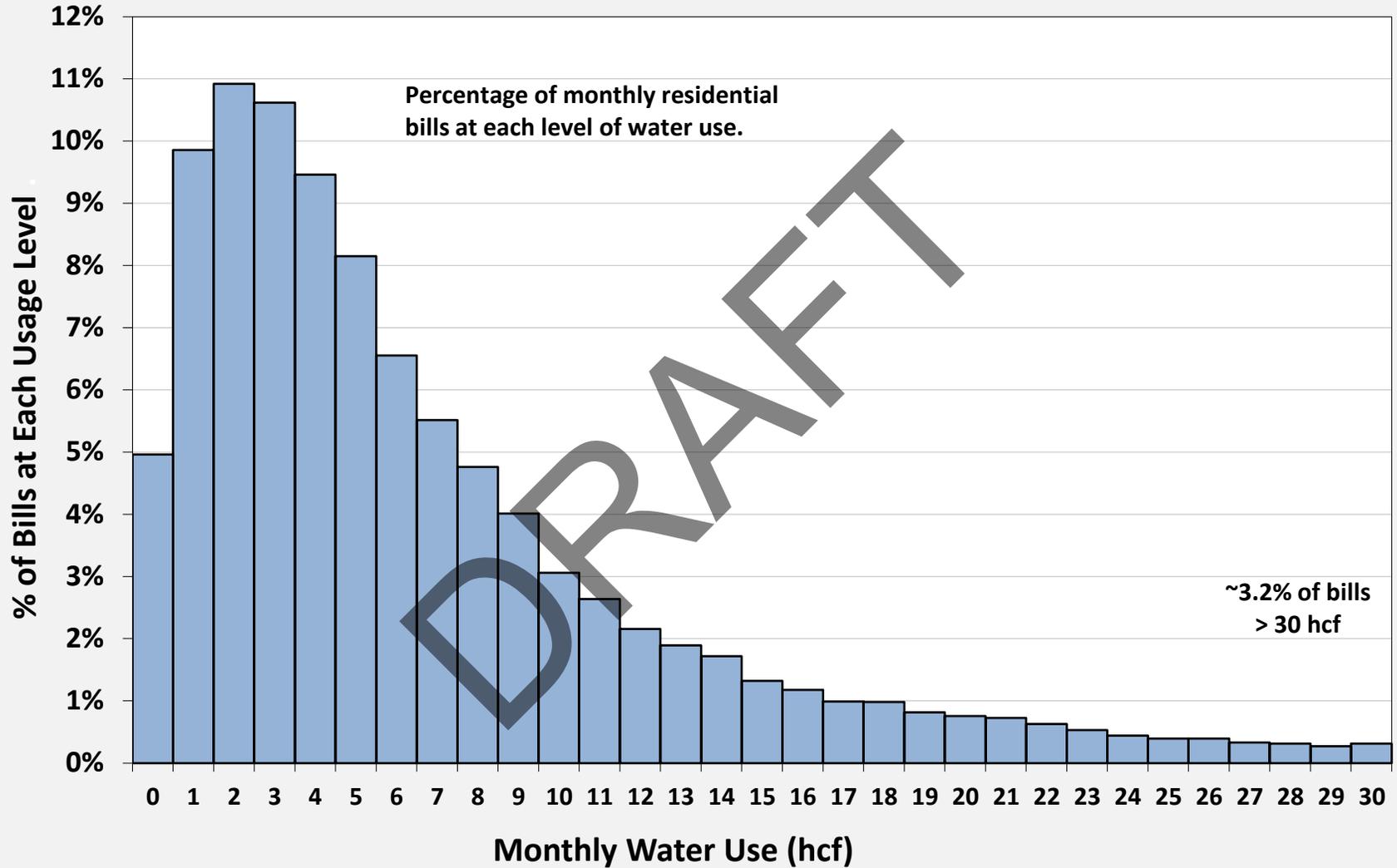
Table 6
 Joshua Basin Water District
 Consumption Block Analysis: Residential 3/4" & 1" FY2021/22

Median Monthly Use (Excl Zeros): 5.0 hcf
 Avg Monthly Use for Annual Median Acct: 6.2 hcf
 Average Monthly Use: 8.3 hcf

Monthly Use (hcf)	Number of Bills				Water Use (hcf)		Use Through Break	
	In Block	% of Total	Cumulative	Cumulative %	In Block	% of Ttl	Use (hcf)	% of Ttl
0	2,000	5.0%	2,000	5.0%	0	0.0%	0	0.0%
1	3,975	9.9%	5,975	14.8%	3,975	1.2%	38,334	11.5%
2	4,405	10.9%	10,380	25.7%	8,810	2.6%	72,693	21.8%
3	4,282	10.6%	14,662	36.4%	12,846	3.9%	102,647	30.8%
4	3,815	9.5%	18,477	45.8%	15,260	4.6%	128,319	38.5%
5	3,287	8.1%	21,764	54.0%	16,435	4.9%	150,176	45.1%
6	2,642	6.6%	24,406	60.5%	15,852	4.8%	168,746	50.7%
7	2,224	5.5%	26,630	66.0%	15,568	4.7%	184,674	55.5%
8	1,920	4.8%	28,550	70.8%	15,360	4.6%	198,378	59.6%
9	1,617	4.0%	30,167	74.8%	14,553	4.4%	210,162	63.1%
10	1,233	3.1%	31,400	77.8%	12,330	3.7%	220,329	66.2%
11	1,063	2.6%	32,463	80.5%	11,693	3.5%	229,263	68.9%
12	869	2.2%	33,332	82.6%	10,428	3.1%	237,134	71.2%
13	762	1.9%	34,094	84.5%	9,906	3.0%	244,136	73.3%
14	693	1.7%	34,787	86.2%	9,702	2.9%	250,376	75.2%
15	532	1.3%	35,319	87.6%	7,980	2.4%	255,923	76.9%
16	474	1.2%	35,793	88.7%	7,584	2.3%	260,938	78.4%
17	398	1.0%	36,191	89.7%	6,766	2.0%	265,479	79.8%
18	395	1.0%	36,586	90.7%	7,110	2.1%	269,622	81.0%
19	329	0.8%	36,915	91.5%	6,251	1.9%	273,370	82.1%
20	305	0.8%	37,220	92.3%	6,100	1.8%	276,789	83.2%
21	292	0.7%	37,512	93.0%	6,132	1.8%	279,903	84.1%
22	253	0.6%	37,765	93.6%	5,566	1.7%	282,725	84.9%
23	213	0.5%	37,978	94.2%	4,899	1.5%	285,294	85.7%
24	178	0.4%	38,156	94.6%	4,272	1.3%	287,650	86.4%
25	158	0.4%	38,314	95.0%	3,950	1.2%	289,828	87.1%
26	159	0.4%	38,473	95.4%	4,134	1.2%	291,848	87.7%
27	132	0.3%	38,605	95.7%	3,564	1.1%	293,709	88.2%
28	126	0.3%	38,731	96.0%	3,528	1.1%	295,438	88.8%
29	109	0.3%	38,840	96.3%	3,161	0.9%	297,041	89.2%
30	125	0.3%	38,965	96.6%	3,750	1.1%	298,535	89.7%
31	84	0.2%	39,049	96.8%	2,604	0.8%	299,904	90.1%
32	79	0.2%	39,128	97.0%	2,528	0.8%	301,189	90.5%
33	63	0.2%	39,191	97.2%	2,079	0.6%	302,395	90.8%
34	75	0.2%	39,266	97.4%	2,550	0.8%	303,538	91.2%
35	62	0.2%	39,328	97.5%	2,170	0.7%	304,606	91.5%
36	65	0.2%	39,393	97.7%	2,340	0.7%	305,612	91.8%
37	55	0.1%	39,448	97.8%	2,035	0.6%	306,553	92.1%
38	62	0.2%	39,510	98.0%	2,356	0.7%	307,439	92.4%
39	43	0.1%	39,553	98.1%	1,677	0.5%	308,263	92.6%
40	32	0.1%	39,585	98.1%	1,280	0.4%	309,044	92.8%
41	32	0.1%	39,617	98.2%	1,312	0.4%	309,793	93.1%
42	46	0.1%	39,663	98.3%	1,932	0.6%	310,510	93.3%
43	34	0.1%	39,697	98.4%	1,462	0.4%	311,181	93.5%
44	28	0.1%	39,725	98.5%	1,232	0.4%	311,818	93.7%
45	25	0.1%	39,750	98.6%	1,125	0.3%	312,427	93.9%
46	34	0.1%	39,784	98.6%	1,564	0.5%	313,011	94.0%
47	28	0.1%	39,812	98.7%	1,316	0.4%	313,561	94.2%
48	25	0.1%	39,837	98.8%	1,200	0.4%	314,083	94.4%
49	17	0.0%	39,854	98.8%	833	0.3%	314,580	94.5%
50	25	0.1%	39,879	98.9%	1,250	0.4%	315,060	94.6%
51-100	347	0.9%	40,226	99.7%	23,376	7.0%	323,786	97.3%
101-200	91	0.2%	40,317	100.0%	12,343	3.7%	329,729	99.1%
>200	17	0.0%	40,334	100.0%	4,849	1.5%	332,878	100.0%
Total	40,334	100.0%			332,878	100.0%		

Joshua Basin Water District

Distribution of Monthly Bills for 3/4" & 1" Meters 2021/22



Scenario A

Best Management Practice with Cost Reductions

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Table A1 JBWD Cash Flow Projections A - Best Mgmt Practice with Reduced Expenses					Years 1 - 5	
	1	2	3	4	5	
	Projected 2022/23	Projected 2023/24	Projected 2024/25	Projected 2025/26	Projected 2026/27	
1	Effective Date of Rate Adjustment	Mar-1	Jan-1	Jan-1	Jan-1	
2	Overall Rate Increase Target	16%	14%	12%	10%	8%
3	Fixed Rate Increase %	5%	5%	5%	5%	5%
4	Usage Rate Increase %	23.2%	19.0%	15.4%	12.2%	9.3%
5	Growth: New 1" Meters or Equivalents	50	25	25	25	25
6	Growth %	1.0%	0.5%	0.5%	0.5%	0.5%
7	Wtr Demand Elasticity (Response to Rate Incr)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
8	Change in Water Use After Rate Increase	-2.3%	-1.9%	-1.5%	-1.2%	-0.9%
9	Water Purchases from MWA (AF)	916	1,000	1,000	1,000	1,000
10	MWA Rate per AF	\$623	\$645	\$664	\$684	\$705
11	Interest Earnings Rate	1.0%	1.5%	1.5%	1.5%	1.5%
12	Annual Cost Escalator		6.0%	4.0%	4.0%	4.0%
13	Beginning Fund Reserves	\$12,846,000	\$13,068,000	\$12,971,000	\$13,365,000	\$12,913,000
14	REVENUES			Compounded 5-Year Rate Increase >>		76%
15	Basic Monthly Fees	2,560,000	2,731,000	2,882,000	3,041,000	3,209,000
16	Water Usage Charges	4,202,000	4,986,000	5,675,000	6,325,000	6,907,000
17	Basic Monthly Fees: Locked Meters	380,000	399,000	419,000	440,000	462,000
18	Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
20	Property Taxes	672,000	685,000	699,000	713,000	727,000
21	Private Fire Svc & Special Services	200,000	204,000	208,000	212,000	216,000
22	Water Capacity & Meter Install Fees	486,000	250,000	258,000	258,000	258,000
23	Interest Earnings & Gain Loss/Chg Mkt Value	128,000	196,000	195,000	200,000	194,000
24	HDMC WWTP Reimbursements	281,000	298,000	310,000	322,000	336,000
25	Other Revenues	25,000	25,000	25,000	25,000	25,000
26	Total Revenues	10,134,000	10,974,000	11,871,000	12,736,000	13,534,000
27	SRF Grant for Chromium 6 Project		10,000,000 >>>>			
28	SRF Loan for Chromium 6 Project		8,000,000 >>>>			
30	EXPENSES					
31	Operating & Maintenance					
32	Production	1,360,000	1,442,000	1,500,000	1,560,000	1,622,000
33	Recharge Water Purchases from MWA	571,000	645,000	664,000	684,000	705,000
34	Distribution	1,212,000	1,285,000	1,336,000	1,389,000	1,445,000
35	Customer Service	778,000	825,000	858,000	892,000	928,000
36	Administration	1,255,000	1,330,000	1,383,000	1,438,000	1,496,000
37	Finance	931,000	987,000	1,026,000	1,067,000	1,110,000
38	Human Resources	267,000	283,000	294,000	306,000	318,000
39	HDMC WWTP Operations (reimbursable)	230,000	244,000	254,000	264,000	275,000
40	Standby Admin/Developmt & Engineering	87,000	92,000	96,000	100,000	104,000
41	Add'l Staffing Needs (deferred & reduced)	44,000	47,000	49,000	190,000	198,000
42	CIRP Program (Operating Portion)	442,000	469,000	488,000	508,000	528,000
43	Capitalized Overhead Adjustment	(100,000)	(106,000)	(110,000)	(114,000)	(119,000)
44	Chrome 6 Operations (estimated)	0	0	0	750,000	780,000
46	Subtotal	7,077,000	7,543,000	7,838,000	9,034,000	9,390,000
47	Debt Service					
48	2018 Installment Sale Agmt (CIRP)	268,000	268,000	268,000	268,000	268,000
49	Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	-	-	-	400,000	400,000
50	Subtotal	268,000	268,000	268,000	668,000	668,000
51	Capital/Non-Operating					
52	Capital Improvement Program (CIP)	1,785,000	2,500,000	2,588,000	2,679,000	2,773,000
53	Equipment/Technology	300,000	375,000	390,000	406,000	422,000
54	Studies/Reports	300,000	200,000	208,000	216,000	225,000
55	Chromium 6 Project (grant & loan funded)	0	18,000,000 >>>>		0	0
56	Meter Replacement Program	182,000	185,000	185,000	185,000	185,000
57	Admin Building & Financing (deleted)	0	0	0	0	0
58	Morongo Basin Pipeline Debt Reimbs	0	0	0	0	0
59	Subtotal	2,567,000	21,260,000	3,371,000	3,486,000	3,605,000
60	Total Expenses	9,912,000	29,071,000	11,477,000	13,188,000	13,663,000
61	Revenues Less Expenses	222,000	(97,000)	394,000	(452,000)	(129,000)
62	Ending Fund Reserves	13,068,000	12,971,000	13,365,000	12,913,000	12,784,000
63	Min Fund Rsrsv Target (50% O&M + \$2M)	5,538,500	5,771,500	5,919,000	6,517,000	6,695,000
64	Debt Service Coverage	11.41	12.80	15.05	5.54	6.20
65	Cumulative Change in Fund Reserves	222,000	125,000	519,000	67,000	(62,000)

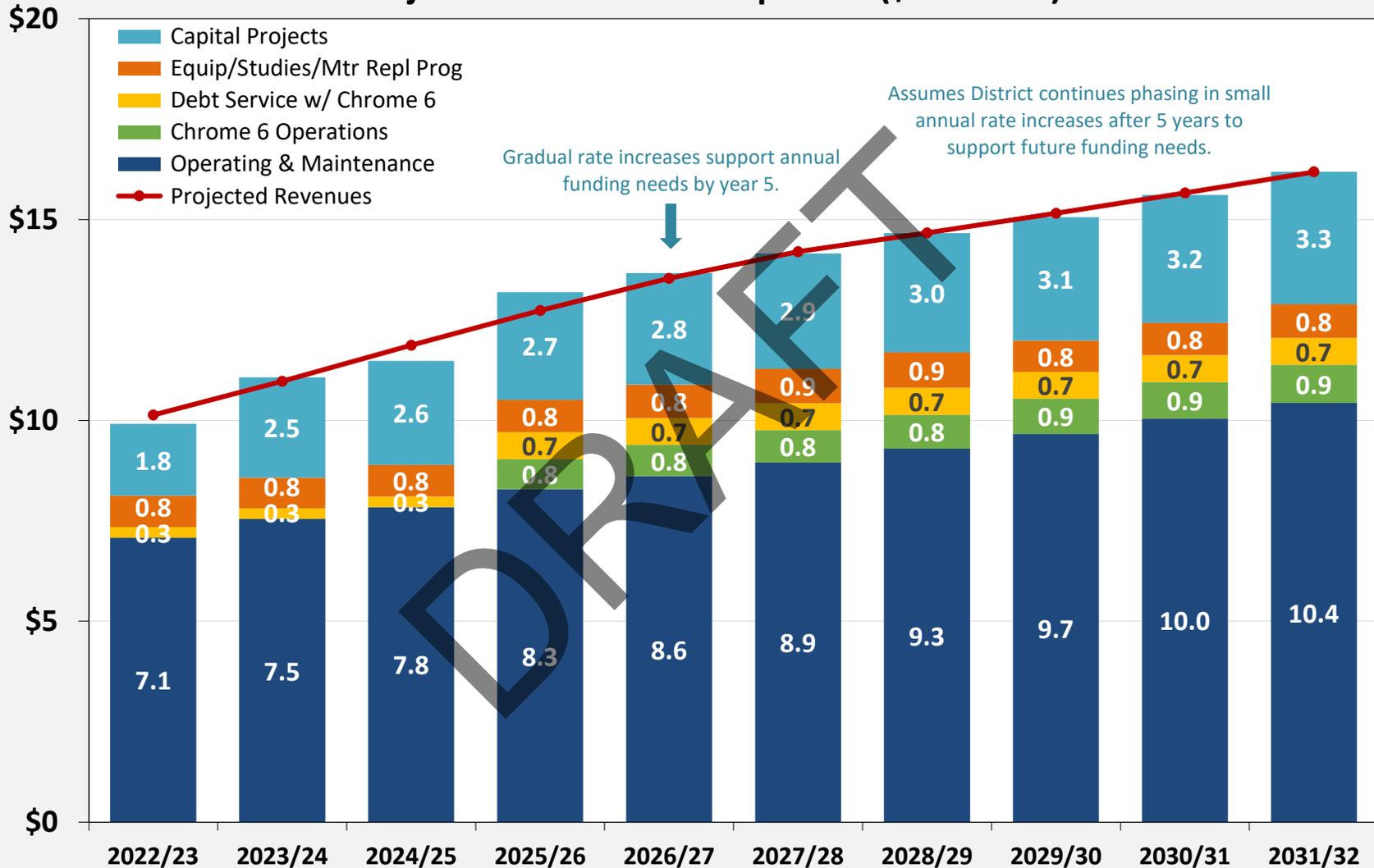
Table A1 JBWD Cash Flow Projections A - Best Mgmt Practice with Reduced Expenses **Year 6 - 10**

	6	7	8	9	10	Esc	
	Projected 2027/28	Projected 2028/29	Projected 2029/30	Projected 2030/31	Projected 2030/31	Factor	
1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1		
2	4%	4%	4%	4%	4%		
3	5%	4%	4%	4%	4%		
4	3.6%	4.0%	4.0%	4.0%	4.0%		
5	25	25	25	25	25		
6	0.5%	0.5%	0.5%	0.5%	0.5%		
7	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)		
8	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%		
9	1,000	1,000	1,000	1,000	1,000		
10	\$726	\$748	\$770	\$793	\$817	3.0%	
11	1.5%	1.5%	1.5%	1.5%	1.5%		
12	4.0%	4.0%	4.0%	4.0%	4.0%		
13	Beginning Fund Reserves	\$12,784,000	\$12,830,000	\$12,835,000	\$12,931,000	\$12,981,000	
14	REVENUES						
15	Basic Monthly Fees	3,386,000	3,555,000	3,715,000	3,883,000	4,058,000	
16	Water Usage Charges	7,343,000	7,590,000	7,862,000	8,144,000	8,436,000	
17	Basic Monthly Fees: Locked Meters	485,000	504,000	524,000	545,000	567,000	
18	Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	
20	Property Taxes	742,000	757,000	772,000	787,000	803,000	2.0%
21	Private Fire Svc & Special Services	220,000	224,000	228,000	233,000	238,000	2.0%
22	Water Capacity & Meter Install Fees	258,000	258,000	258,000	258,000	258,000	
23	Interest Earnings & Gain Loss/Chg Mkt Value	192,000	192,000	193,000	194,000	195,000	
24	HDMC WWTP Reimbursements	349,000	362,000	377,000	392,000	407,000	
25	Other Revenues	25,000	25,000	25,000	25,000	25,000	
26	Total Revenues	14,200,000	14,667,000	15,154,000	15,661,000	16,187,000	
27	SRF Grant for Chromium 6 Project						
28	SRF Loan for Chromium 6 Project						
30	EXPENSES						
31	Operating & Maintenance						
32	Production	1,687,000	1,754,000	1,824,000	1,897,000	1,973,000	
33	Recharge Water Purchases from MWA	726,000	748,000	770,000	793,000	817,000	
34	Distribution	1,503,000	1,563,000	1,626,000	1,691,000	1,759,000	
35	Customer Service	965,000	1,004,000	1,044,000	1,086,000	1,129,000	
36	Administration	1,556,000	1,618,000	1,683,000	1,750,000	1,820,000	
37	Finance	1,154,000	1,200,000	1,248,000	1,298,000	1,350,000	
38	Human Resources	331,000	344,000	358,000	372,000	387,000	
39	HDMC WWTP Operations (reimbursable)	286,000	297,000	309,000	321,000	334,000	
40	Standby Admin/Developmt & Engineering	108,000	112,000	116,000	121,000	126,000	
41	Add'l Staffing Needs (deferred & reduced)	206,000	214,000	223,000	232,000	241,000	
42	CIRP Program (Operating Portion)	549,000	571,000	594,000	618,000	643,000	
43	Capitalized Overhead Adjustment	(124,000)	(129,000)	(134,000)	(139,000)	(145,000)	
44	Chrome 6 Operations (estimated)	811,000	843,000	877,000	912,000	948,000	
46	Subtotal	9,758,000	10,139,000	10,538,000	10,952,000	11,382,000	
47	Debt Service						
48	2018 Installment Sale Agmt (CIRP)	268,000	268,000	268,000	268,000	268,000	
49	Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	400,000	400,000	400,000	400,000	400,000	
50	Subtotal	668,000	668,000	668,000	668,000	668,000	
51	Capital/Non-Operating						
52	Capital Improvement Program (CIP)	2,870,000	2,970,000	3,074,000	3,182,000	3,293,000	
53	Equipment/Technology	439,000	457,000	475,000	494,000	514,000	
54	Studies/Reports	234,000	243,000	253,000	263,000	274,000	
55	Chromium 6 Project (grant & loan funded)	0	0	0	0	0	
56	Meter Replacement Program	185,000	185,000	50,000	52,000	54,000	
57	Admin Building & Financing (deleted)	0	0	0	0	0	
58	Morongo Basin Pipeline Debt Reimbs	0	0	0	0	0	
59	Subtotal	3,728,000	3,855,000	3,852,000	3,991,000	4,135,000	
60	Total Expenses	14,154,000	14,662,000	15,058,000	15,611,000	16,185,000	
61	Revenues Less Expenses	46,000	5,000	96,000	50,000	2,000	
62	Ending Fund Reserves	12,830,000	12,835,000	12,931,000	12,981,000	12,983,000	
63	Min Fund Rsrv Target (50% O&M + \$2M)	6,879,000	7,069,500	7,269,000	7,476,000	7,691,000	
64	Debt Service Coverage	6.65	6.78	6.91	7.05	7.19	
65	Cumulative Fund Reserve Drawdown	(16,000)	(11,000)	85,000	135,000	137,000	

Joshua Basin Water District

Scenario A

Projected Revenues & Expenses (\$ Millions)



* Assumes \$18 million Chromium 6 Project funded by a \$10 million grant and \$8 million SRF Loan.

Table A2
 Joshua Basin Water District
 Accounts by Meter Size

	Number of Accounts	% of Class	Capacity ^{1,2} (gpm)	Meter Ratio	Meter Equivalents
Active Water Accounts					
3/4"	4,372	89.4%	30	1.00	4,372
1"	464	9.5%	30	1.00	464
1-1/2"	27	0.6%	100	3.33	90
2"	21	0.4%	160	5.33	112
3"	5	0.1%	300	10.00	50
Subtotal	4,889	100.0%			5,088
Water Accounts with Locked Meters					
3/4"	713	94.1%	30	1.00	713
3/4" Irrig	3	0.4%	30	1.00	3
1"	39	5.1%	30	1.00	39
1-1/2"	3	0.4%	100	3.33	10
Subtotal	758	100.0%			765
Fire Line Accounts					
2"	2				
4"	7				
6"	6				
8"	9				
Total	24				

Source: Based average number of accounts from May & June 2022 from utility billing data.

1 Based on American Water Works Association standard meter capacities.

2 Capacity of 1" meters assigned same capacity as 3/4" meters due to updated plumbing codes requiring installation of 1" meters in single family homes for fire flow, while the underlying demand remains the same as other single family homes served by a 3/4" meter.

Note: Number of accounts can vary by billing period due to changes in account status and growth.

Table A3
 Joshua Basin Water District
 Projected Water Use

Scenario A
 Best Management Practice with Cost Reductions
 Limit Fixed Rate Increases to 5% per Year

	5-Yr Avg FY18 - FY22	Projected Water Use				
		2022/23	2023/24	2024/25	2025/26	2026/27
Change in Use After Rate Increase		-2.3%	-1.9%	-1.5%	-1.2%	-0.9%
	<u>Jul-Dec</u>	<u>Jul-Feb</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	98,300	127,800	97,800	97,400	97,100	96,900
Tier 2	51,000	61,800	49,200	47,800	46,700	45,800
Tier 3	44,700	51,500	42,800	41,300	40,200	39,300
Tier 4	49,900	56,600	47,400	45,400	43,900	42,700
All Other Use (hcf)	45,200	55,200	44,700	44,300	44,000	43,700
	<u>Jan-Jun</u>	<u>Mar-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	91,700	62,000	90,900	90,600	90,400	90,200
Tier 2	37,400	25,700	35,100	34,300	33,700	33,200
Tier 3	26,400	18,800	24,400	23,700	23,200	22,800
Tier 4	24,800	17,200	22,600	21,800	21,200	20,800
All Other Use (hcf)	32,200	22,000	31,500	31,300	31,100	31,000
Total Annual Use						
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	190,000	189,800	188,700	188,000	187,500	187,100
Tier 2	88,400	87,500	84,300	82,100	80,400	79,000
Tier 3	71,100	70,300	67,200	65,000	63,400	62,100
Tier 4	74,700	73,800	70,000	67,200	65,100	63,500
All Other Use (hcf)	77,400	77,200	76,200	75,600	75,100	74,700
Annual Total	501,600	498,600	486,400	477,900	471,500	466,400
Annual Change		-0.6%	-2.4%	-1.7%	-1.3%	-1.1%
Cumulative Change		-0.6%	-3.0%	-4.7%	-6.0%	-7.0%

Table A4
Joshua Basin Water District
Cost Recovery Allocation

Fixed vs. Variable Rate Recovery					
	Year 5 2026/27	Cost Recovery %		Cost Recovery \$	
		Fixed	Variable	Fixed	Variable
EXPENSES					
Operating & Maintenance					
Production	1,622,000	0%	100%	0	1,622,000
Recharge Water Purchases from MWA	705,000	0%	100%	0	705,000
Distribution	1,445,000	0%	100%	0	1,445,000
Customer Service (10% for Conservation Prog)	928,000	90%	10%	835,200	92,800
Administration	1,496,000	75%	25%	1,122,000	374,000
Finance	1,110,000	75%	25%	832,500	277,500
Human Resources	318,000	75%	25%	238,500	79,500
HDMC WWTP Operations (reimbursable)	275,000	100%	0%	275,000	0
Standby Admin/Dvlmnt & Engin/Other	104,000	50%	50%	52,000	52,000
Add'l Staffing Needs (deferred & reduced)	198,000	75%	25%	148,500	49,500
CIRP Program (Operating Portion)	528,000	25%	75%	132,000	396,000
Capitalized Overhead Adjustment	(119,000)	25%	75%	(29,750)	(89,250)
Chrome 6 Operations (estimated)	780,000	0%	100%	0	780,000
Subtotal	9,390,000	38%	62%	3,605,950	5,784,050
Debt Service					
2018 Installment Sale Agmt (CIRP)	268,000	25%	75%	67,000	201,000
Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	400,000	0%	100%	0	400,000
Subtotal	668,000	50%	50%	67,000	601,000
Non-Operating/Discretionary					
Capital Improvement Program (CIP)	2,773,000	25%	75%	693,250	2,079,750
Equipment/Technology	422,000	50%	50%	211,000	211,000
Studies/Reports	225,000	50%	50%	112,500	112,500
Meter Replacement Program	185,000	100%	0%	185,000	0
Subtotal	3,605,000	33%	67%	1,201,750	2,403,250
Total Expenses	13,663,000	35.7%	64.3%	4,874,700	8,788,300
NET FUNDING REQUIRED FROM WATER RATES					
Total Expenses	13,663,000	35.7%	64.3%	4,874,700	8,788,300
Less Property Tax Revenues	(727,000)	35.7%	64.3%	(259,380)	(467,620)
Less Other Non-Rate Revenues	(2,229,000)	35.7%	64.3%	(795,265)	(1,433,735)
Net Funding Requirement from Water Rates	11,434,000	35.7%	64.3%	4,079,435	7,354,565
Rounded Target		36.0%	64.0%		

Excludes capital improvement projects funded by grants and debt, but includes associated debt service.

Table A5
 Joshua Basin Water District
 Fixed Meter Charge Derivation

	Jan-1 2017
Water Rate Revenue Recovery	
Annualized Revenues w/ Rate Increases	\$10,549,000
Fixed Rate Recovery	
Cost Recovery Allocation %	36%
Cost Recovery Allocation \$	\$3,797,640
Meter Equivalents	
Active Water Accounts	5,088
Locked Meter Accounts	765
Projected Growth	<u>150</u>
Total	6,003
Rate per Meter Equivalent	
Annual	\$632.62
Monthly	52.72
Rounded	52.70

Table A6
 Joshua Basin Water District
 Usage/Flow Rate Cost Recovery Allocation

Usage Rate Recovery: Base vs. Extra Capacity Cost Allocation							
	Projected Expenses 2026/27	Fixed Rate Recovery	Usage Rate Recovery	Usage Rate Allocation			
				Base %	Extra Capacity %	Base \$	Extra Capacity \$
REVENUE REQUIREMENT FROM WATER USAGE CHARGES							
Expenses Fully Allocated for Base Usage Rate Revenue Recovery							
Production	1,622,000	0	1,622,000	100%	0%	1,622,000	0
Recharge Water Purchases from MWA	705,000	0	705,000	100%	0%	705,000	0
Distribution	1,445,000	0	1,445,000	100%	0%	1,445,000	0
Customer Service (10% for Conservation Prog	928,000	835,200	92,800	0%	100%	0	92,800
Administration	1,496,000	1,122,000	374,000	100%	0%	374,000	0
Finance	1,110,000	832,500	277,500	100%	0%	277,500	0
Human Resources	318,000	238,500	79,500	100%	0%	79,500	0
HDMC WWTP Operations (reimbursable)	275,000	275,000	0	100%	0%	0	0
Standby Admin/Dvlmnt & Engin/Other	104,000	52,000	52,000	100%	0%	52,000	0
Add'l Staffing Needs (deferred & reduced)	198,000	148,500	49,500	100%	0%	49,500	0
Chrome 6 Operations (estimated)	780,000	0	780,000	100%	0%	780,000	0
Equipment/Technology	422,000	211,000	211,000	100%	0%	211,000	0
Studies/Reports	225,000	112,500	112,500	100%	0%	112,500	0
Meter Replacement Program	185,000	185,000	0	100%	0%	0	0
Subtotal	9,813,000	4,012,200	5,800,800	98.4%	1.6%	5,708,000	92,800
Expenses Partially Allocated for Extra Capacity Revenue Recovery							
Debt Service	668,000	67,000	601,000	90%	10%	540,900	60,100
Capital Improvements	2,773,000	693,250	2,079,750	80%	20%	1,663,800	415,950
CIRP Program Less Capitalized Portion	409,000	102,250	306,750	80%	20%	245,400	61,350
Subtotal	3,850,000	862,500	2,987,500	82.0%	18.0%	2,450,100	537,400
Total	13,663,000	4,874,700	8,788,300	92.8%	7.2%	8,158,100	630,200
Offsetting Non-Rate Revenues							
Property Taxes	727,000	259,380	467,620	40%	60%	187,048	280,572
All Other Non-Rate Revenues	2,229,000	795,265	1,433,735	100%	0%	1,433,735	0
Subtotal	2,956,000	1,054,645	1,901,355	85.2%	14.8%	1,620,783	280,572

Table A7

Joshua Basin Water District

Quantity Charge Cost Attribution & Rate Derivation

Water Flow Rate Calculation						
	3/4" and 1" Meters					All Other
	Tier 1 0 - 5	Tier 2 5.01 - 10	Tier 3 10.01 - 20	Tier 4 20.01+	Subtotal	All Use
Projected Water Use (hcf)	187,100	79,000	62,100	63,500	391,700	74,700
% of Total Use	40.1%	16.9%	13.3%	13.6%	84.0%	16.0%
Extra Capacity Cost Allocation						
% of Water in Class & Tier for Extra Capacity Cost Recovery	0.0%	12.0%	44.7%	77.3%	22.0%	22.0%
Volume of Water for Extra Capacity Cost Recovery	0	9,480	27,759	49,086	86,324	16,463
% of Total Water for Extra Capacity Cost Recovery	0.0%	9.2%	27.0%	47.8%	84.0%	16.0%
Base Water Flow Charge (\$/hcf)	\$14.76	\$14.76	\$14.76	\$14.76		\$14.76
Adjustments for Extra Capacity & Prop Tax Allocations (\$/hcf)						
Extra Capacity Expenses	\$630,200	\$0	\$58,123	\$170,192	\$300,950	\$100,935
Less Allocated Prop Tax Offset	(280,572)	(235,635)	0	0	0	(44,937)
Total	(235,635)	58,123	170,192	300,950		55,997
Divided by Water Use in Tier	187,100	79,000	62,100	63,500		74,700
Net Adjustments (\$/hcf)	(\$1.26)	\$0.74	\$2.74	\$4.74		\$0.74
Water Flow Charges (\$/hcf)	\$13.50	\$15.50	\$17.50	\$19.50		\$15.50

Table A8
 Joshua Basin Water District
 Projected Water Rates

Scenario A
 Best Management Practice with Cost Reductions
 Limit Fixed Rate Increases to 5% per Year

Projected Water Rates A							
	Current Water Rates	Projected Rates Effective					
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	
BASIC MONTHLY FEE							
<i>Fixed monthly charge based on meter size</i>							
<u>Meter Size</u>							
3/4 & 1 inch	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	
1-1/2 inches	137.83	144.67	151.83	159.33	167.33	175.67	
2 inches	220.53	231.47	242.93	254.93	267.73	281.07	
3 inches	413.50	434.00	455.50	478.00	502.00	527.00	
MONTHLY WATER FLOW CHARGES							
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>							
For 3/4" and 1" Meters							
Tier 1	0 - 5 units	\$6.20	\$7.80	\$9.50	\$11.00	\$12.30	\$13.50
Tier 2	5.01 - 10 units	7.70	9.50	11.30	12.90	14.25	15.50
Tier 3	10.01 - 20 units	9.20	11.20	13.10	14.80	16.20	17.50
Tier 4	20.01 + units	10.70	12.90	14.90	16.70	18.15	19.50
For 1-1/2", 2" and 3" Meters							
Unit rate for all water use		\$7.70	\$9.50	\$11.30	\$12.90	\$14.25	\$15.50
<i>Note: 1 unit = one hundred cubic feet, or approximately 748 gallons.</i>							
PRIVATE FIRE PROTECTION CHARGES							
<i>Fixed monthly charge based on size of service connection</i>							
<u>Service Size</u>							
2 inches		\$22.05	\$23.15	\$24.29	\$25.49	\$26.77	\$28.11
3 inches		41.34	43.40	45.55	47.80	50.20	52.70
4 inches		68.91	72.34	75.91	79.66	83.66	87.84
6 inches		137.81	144.69	151.81	159.31	167.31	175.69
8 inches		220.50	231.50	242.90	254.90	267.70	281.10

Table A9
 Joshua Basin Water District
 Bill Impacts (3/4" or 1" Meter)

Scenario A
 Best Management Practice with Cost Reductions

Monthly Use (hcf)	% of Bills	Current Monthly Bill	Projected Monthly Bills					5-Year Impact		
			Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	%	\$/day
0	7.3%	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	\$0.37
1	9.6%	47.55	51.20	55.05	58.80	62.50	66.20	18.65	39.2%	0.61
2	10.7%	53.75	59.00	64.55	69.80	74.80	79.70	25.95	48.3%	0.85
3 Low	10.4%	59.95	66.80	74.05	80.80	87.10	93.20	33.25	55.5%	1.09
4	9.2%	66.15	74.60	83.55	91.80	99.40	106.70	40.55	61.3%	1.33
5 Median	8.0%	72.35	82.40	93.05	102.80	111.70	120.20	47.85	66.1%	1.57
6 Typical	6.4%	80.05	91.90	104.35	115.70	125.95	135.70	55.65	69.5%	1.83
7	5.4%	87.75	101.40	115.65	128.60	140.20	151.20	63.45	72.3%	2.09
8 Average	4.6%	95.45	110.90	126.95	141.50	154.45	166.70	71.25	74.6%	2.34
9	3.9%	103.15	120.40	138.25	154.40	168.70	182.20	79.05	76.6%	2.60
10	3.0%	110.85	129.90	149.55	167.30	182.95	197.70	86.85	78.3%	2.86
11	2.6%	120.05	141.10	162.65	182.10	199.15	215.20	95.15	79.3%	3.13
12	2.1%	129.25	152.30	175.75	196.90	215.35	232.70	103.45	80.0%	3.40
13	1.8%	138.45	163.50	188.85	211.70	231.55	250.20	111.75	80.7%	3.67
14	1.7%	147.65	174.70	201.95	226.50	247.75	267.70	120.05	81.3%	3.95
15	1.3%	156.85	185.90	215.05	241.30	263.95	285.20	128.35	81.8%	4.22
16	1.1%	166.05	197.10	228.15	256.10	280.15	302.70	136.65	82.3%	4.49
17 Top 10%	1.0%	175.25	208.30	241.25	270.90	296.35	320.20	144.95	82.7%	4.77
18	1.0%	184.45	219.50	254.35	285.70	312.55	337.70	153.25	83.1%	5.04
19	0.8%	193.65	230.70	267.45	300.50	328.75	355.20	161.55	83.4%	5.31
20	0.7%	202.85	241.90	280.55	315.30	344.95	372.70	169.85	83.7%	5.58
21	0.7%	213.55	254.80	295.45	332.00	363.10	392.20	178.65	83.7%	5.87
22	0.6%	224.25	267.70	310.35	348.70	381.25	411.70	187.45	83.6%	6.16
23	0.5%	234.95	280.60	325.25	365.40	399.40	431.20	196.25	83.5%	6.45
24	0.4%	245.65	293.50	340.15	382.10	417.55	450.70	205.05	83.5%	6.74
25	0.4%	256.35	306.40	355.05	398.80	435.70	470.20	213.85	83.4%	7.03

Table A10
 Joshua Basin Water District
 Projected Water Rates

Scenario A
 Best Management Practice with Cost Reductions
 Limit Fixed Rate Increases to 5% per Year

Projected Fixed Rate Revenue Check A							
	Prior Jan-1	Current Jan-1	Projected Rates Effective				
			Mar-1	Jan-1	Jan-1	Jan-1	Jan-1
PROJECTED BASIC MONTHLY FEES							
<i>Fixed monthly charge based on meter size</i>							
<u>Meter Size</u>							
3/4 & 1 inch	\$38.03	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70
1-1/2 inches	126.77	137.83	144.67	151.83	159.33	167.33	175.67
2 inches	202.83	220.53	231.47	242.93	254.93	267.73	281.07
3 inches	380.30	413.50	434.00	455.50	478.00	502.00	527.00
Active Water Accounts							
<i>Projected Growth</i>							
			50	25	25	25	25
3/4 & 1 inch		4,836	4,886	4,911	4,936	4,961	4,986
1-1/2 inches		27	27	27	27	27	27
2 inches		21	21	21	21	21	21
3 inches		5	5	5	5	5	5
Locked Meters							
3/4 & 1 inch		755	755	755	755	755	755
1-1/2 inches		3	3	3	3	3	3
	2021/22	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
FIXED RATE REVENUES BY FISCAL YEAR							
Months at New Rate		6	4	6	6	6	6
Fixed Revenues: Active Water Accts							
3/4 & 1 inch		2,303,290	2,464,498	2,621,001	2,764,654	2,917,068	3,078,356
1-1/2 inches		42,865	45,396	48,033	50,408	52,919	55,566
2 inches		53,343	56,493	59,774	62,730	65,855	69,149
3 inches		23,814	25,220	26,685	28,005	29,400	30,870
Subtotal		2,423,313	2,591,607	2,755,493	2,905,797	3,065,242	3,233,941
Less Delinquency Factor	1.00%	(24,233)	(25,916)	(27,555)	(29,058)	(30,652)	(32,339)
Net Total		2,399,080	2,565,690	2,727,938	2,876,739	3,034,590	3,201,602
Fixed Revenues: Locked Meters							
3/4 & 1 inch		359,591	380,822	402,944	422,876	443,940	466,137
1-1/2 inches		4,763	5,044	5,337	5,601	5,880	6,174
Subtotal		364,354	385,866	408,281	428,476	449,820	472,311
Less Delinquency %	1.00%	(3,644)	(3,859)	(4,083)	(4,285)	(4,498)	(4,723)
Net Total		360,711	382,007	404,198	424,192	445,322	467,588

Table A11
 Joshua Basin Water District
 Projected Water Use & Consumption Charges

Scenario A
 Best Management Practice with Cost Reductions
 Limit Fixed Rate Increases to 5% per Year

Projected Usage Rate Revenue Check A						
	Current	Projected Rates Effective				
	Jan-1 2022	Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
PROJECTED WATER FLOW CHARGES						
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	\$6.20	\$7.80	\$9.50	\$11.00	\$12.30	\$13.50
Tier 2	7.70	9.50	11.30	12.90	14.25	15.50
Tier 3	9.20	11.20	13.10	14.80	16.20	17.50
Tier 4	10.70	12.90	14.90	16.70	18.15	19.50
All Other Use (hcf)	7.70	9.50	11.30	12.90	14.25	15.50
	5-Yr Avg FY18 - FY22	Projected				
		2022/23	2023/24	2024/25	2025/26	2026/27
PROJECTED WATER USE						
Change in Use After Rate Increase		-2.3%	-1.9%	-1.5%	-1.2%	-0.9%
	<u>Jul-Dec</u>	<u>Jul-Feb</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	98,300	127,800	97,800	97,400	97,100	96,900
Tier 2	51,000	61,800	49,200	47,800	46,700	45,800
Tier 3	44,700	51,500	42,800	41,300	40,200	39,300
Tier 4	49,900	56,600	47,400	45,400	43,900	42,700
All Other Use (hcf)	45,200	55,200	44,700	44,300	44,000	43,700
	<u>Jan-Jun</u>	<u>Mar-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	91,700	62,000	90,900	90,600	90,400	90,200
Tier 2	37,400	25,700	35,100	34,300	33,700	33,200
Tier 3	26,400	18,800	24,400	23,700	23,200	22,800
Tier 4	24,800	17,200	22,600	21,800	21,200	20,800
All Other Use (hcf)	32,200	22,000	31,500	31,300	31,100	31,000
Annual Total	501,600	498,600	486,400	477,900	471,500	466,400

Scenario C

Limit Overall Rate Increases to 9% Per Year & Reduce CIP

Assumes Continued 9% Rate Increases After 5 Years
To Eventually Support Full Capital Funding

DRAFT

Table C1 JBWD Cash Flow Projections C - Limit Overall Rate Increases to 9%					Years 1 - 5	
	1	2	3	4	5	
	Projected 2022/23	Projected 2023/24	Projected 2024/25	Projected 2025/26	Projected 2026/27	
1	Effective Date of Rate Adjustment	Mar-1	Jan-1	Jan-1	Jan-1	
2	Overall Rate Increase Target	9%	9%	9%	9%	
3	Fixed Rate Increase %	5%	5%	5%	5%	
4	Usage Rate Increase %	11.6%	11.5%	11.3%	11.1%	
5	Growth: New 1" Meters or Equivalents	50	25	25	25	
6	Growth %	1.0%	0.5%	0.5%	0.5%	
7	Wtr Demand Elasticity (Response to Rate Incr)	(0.10)	(0.10)	(0.10)	(0.10)	
8	Change in Water Use After Rate Increase	-1.2%	-1.1%	-1.1%	-1.1%	
9	Water Purchases from MWA (AF)	916	1,000	1,000	1,000	
10	MWA Rate per AF	\$623	\$645	\$664	\$684	
11	Interest Earnings Rate	1.0%	1.5%	1.5%	1.5%	
12	Annual Cost Escalator		6.0%	4.0%	4.0%	
13	Beginning Fund Reserves	\$12,846,000	\$12,907,000	\$12,777,000	\$12,943,000	\$12,141,000
14	REVENUES			Compounded 5-Year Rate Increase >>		54%
15	Basic Monthly Fees	2,560,000	2,731,000	2,882,000	3,041,000	3,209,000
16	Water Usage Charges	4,041,000	4,455,000	4,862,000	5,302,000	5,781,000
17	Basic Monthly Fees: Locked Meters	380,000	399,000	419,000	440,000	462,000
18	Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
20	Property Taxes	672,000	685,000	699,000	713,000	727,000
21	Private Fire Svc & Special Services	200,000	204,000	208,000	212,000	216,000
22	Water Capacity & Meter Install Fees	486,000	250,000	258,000	258,000	258,000
23	Interest Earnings & Gain Loss/Chg Mkt Value	128,000	194,000	192,000	194,000	182,000
24	HDMC WWTP Reimbursements	281,000	298,000	310,000	322,000	336,000
25	Other Revenues	25,000	25,000	25,000	25,000	25,000
26	Total Revenues	9,973,000	10,441,000	11,055,000	11,707,000	12,396,000
27	SRF Grant for Chromium 6 Project		10,000,000 >>>>			
28	SRF Loan for Chromium 6 Project		8,000,000 >>>>			
30	EXPENSES					
31	Operating & Maintenance					
32	Production	1,360,000	1,442,000	1,500,000	1,560,000	1,622,000
33	Recharge Water Purchases from MWA	571,000	645,000	664,000	684,000	705,000
34	Distribution	1,212,000	1,285,000	1,336,000	1,389,000	1,445,000
35	Customer Service	778,000	825,000	858,000	892,000	928,000
36	Administration	1,255,000	1,330,000	1,383,000	1,438,000	1,496,000
37	Finance	931,000	987,000	1,026,000	1,067,000	1,110,000
38	Human Resources	267,000	283,000	294,000	306,000	318,000
39	HDMC WWTP Operations (reimbursable)	230,000	244,000	254,000	264,000	275,000
40	Standby Admin/Developmt & Engineering	87,000	92,000	96,000	100,000	104,000
41	Add'l Staffing Needs (deferred & reduced)	44,000	47,000	49,000	190,000	198,000
42	CIRP Program (Operating Portion)	442,000	469,000	488,000	508,000	528,000
43	Capitalized Overhead Adjustment	(100,000)	(106,000)	(110,000)	(114,000)	(119,000)
44	Chrome 6 Operations (estimated)	0	0	0	750,000	780,000
46	Subtotal	7,077,000	7,543,000	7,838,000	9,034,000	9,390,000
47	Debt Service					
48	2018 Installment Sale Agmt (CIRP)	268,000	268,000	268,000	268,000	268,000
49	Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	-	-	-	400,000	400,000
50	Subtotal	268,000	268,000	268,000	668,000	668,000
51	Capital/Non-Operating					
52	Capital Improvement Program (CIP)	1,785,000	2,000,000	2,000,000	2,000,000	2,000,000
53	Equipment/Technology	300,000	375,000	390,000	406,000	422,000
54	Studies/Reports	300,000	200,000	208,000	216,000	225,000
55	Chromium 6 Project (grant & loan funded)	0	18,000,000 >>>>		0	0
56	Meter Replacement Program	182,000	185,000	185,000	185,000	185,000
57	Admin Building & Financing (deleted)	0	0	0	0	0
58	Morongo Basin Pipeline Debt Reimbs	0	0	0	0	0
59	Subtotal	2,567,000	20,760,000	2,783,000	2,807,000	2,832,000
60	Total Expenses	9,912,000	28,571,000	10,889,000	12,509,000	12,890,000
61	Revenues Less Expenses	61,000	(130,000)	166,000	(802,000)	(494,000)
62	Ending Fund Reserves	12,907,000	12,777,000	12,943,000	12,141,000	11,647,000
63	Min Fund Rsrsv Target (50% O&M + \$2M)	5,538,500	5,771,500	5,919,000	6,517,000	6,695,000
64	Debt Service Coverage	10.81	10.81	12.00	4.00	4.50
65	Cumulative Change in Fund Reserves	61,000	(69,000)	97,000	(705,000)	(1,199,000)

Table C1 JBWD Cash Flow Projections C - Limit Overall Rate Increases to 9%

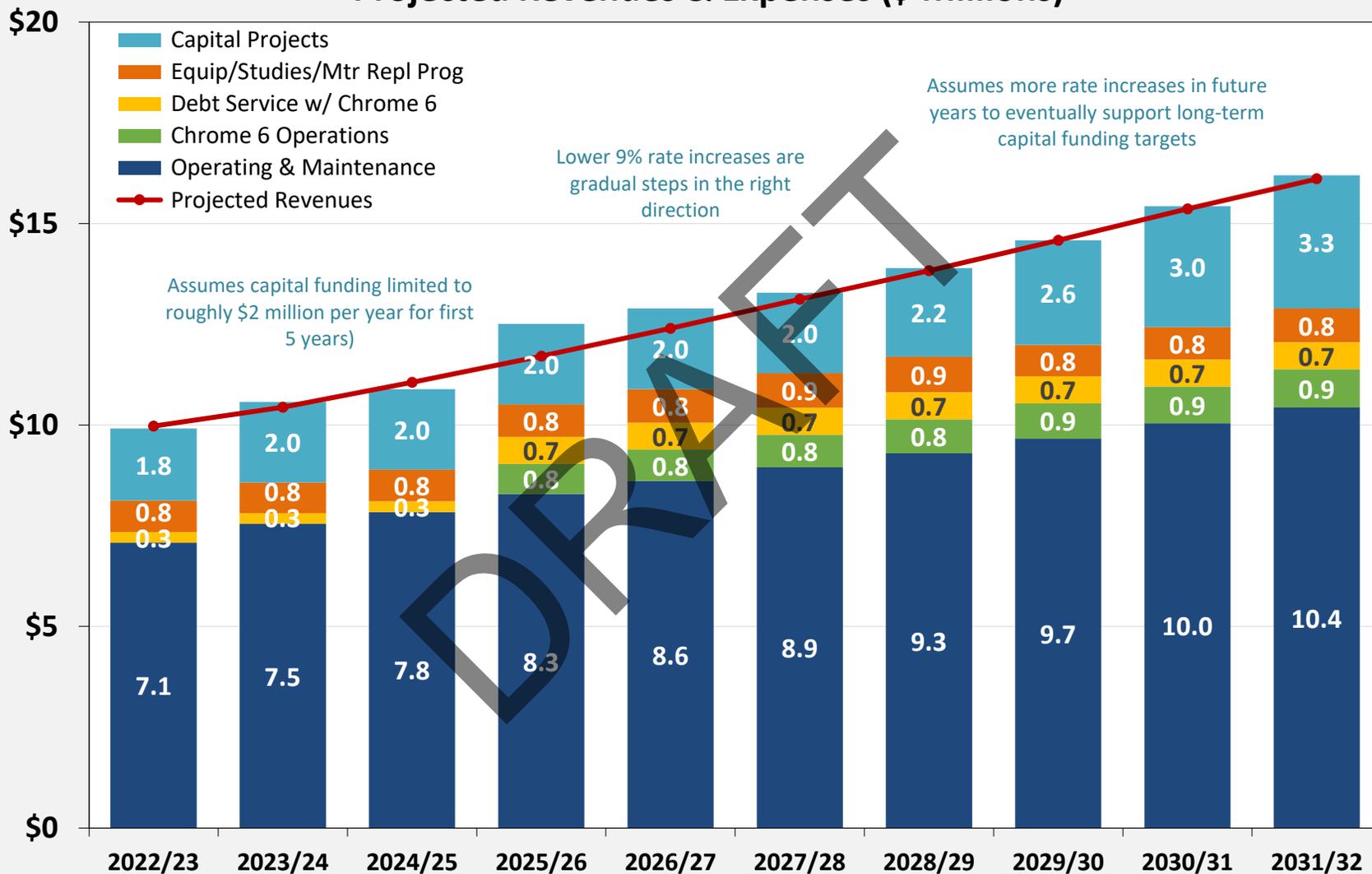
Year 6 - 10

	6	7	8	9	10	Esc
	Projected 2027/28	Projected 2028/29	Projected 2029/30	Projected 2030/31	Projected 2030/31	Factor
1 Effective Date of Rate Adjustment	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	
2 Overall Rate Increase Target	8%	8%	8%	7%	6%	
3 Fixed Rate Increase %	5%	4%	4%	4%	4%	
4 Usage Rate Increase %	9.5%	9.9%	9.8%	8.3%	6.8%	
5 Growth: New 1" Meters or Equivalents	25	25	25	25	25	
6 Growth %	0.5%	0.5%	0.5%	0.5%	0.5%	
7 Wtr Demand Elasticity (Response to Rate Incr)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	
8 Change in Water Use After Rate Increase	-0.9%	-1.0%	-1.0%	-0.8%	-0.7%	
9 Water Purchases from MWA (AF)	1,000	1,000	1,000	1,000	1,000	
10 MWA Rate per AF	\$726	\$748	\$770	\$793	\$817	3.0%
11 Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%	
12 Annual Cost Escalator	4.0%	4.0%	4.0%	4.0%	4.0%	
13 Beginning Fund Reserves	\$11,647,000	\$11,482,000	\$11,416,000	\$11,414,000	\$11,349,000	
14 REVENUES						
15 Basic Monthly Fees	3,386,000	3,555,000	3,715,000	3,883,000	4,058,000	
16 Water Usage Charges	6,279,000	6,769,000	7,312,000	7,870,000	8,383,000	
17 Basic Monthly Fees: Locked Meters	485,000	504,000	524,000	545,000	567,000	
18 Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	
20 Property Taxes	742,000	757,000	772,000	787,000	803,000	2.0%
21 Private Fire Svc & Special Services	220,000	224,000	228,000	233,000	238,000	2.0%
22 Water Capacity & Meter Install Fees	258,000	258,000	258,000	258,000	258,000	
23 Interest Earnings & Gain Loss/Chg Mkt Value	175,000	172,000	171,000	171,000	170,000	
24 HDMC WWTP Reimbursements	349,000	362,000	377,000	392,000	407,000	
25 Other Revenues	25,000	25,000	25,000	25,000	25,000	
26 Total Revenues	13,119,000	13,826,000	14,582,000	15,364,000	16,109,000	
27 SRF Grant for Chromium 6 Project						
28 SRF Loan for Chromium 6 Project						
30 EXPENSES						
31 Operating & Maintenance						
32 Production	1,687,000	1,754,000	1,824,000	1,897,000	1,973,000	
33 Recharge Water Purchases from MWA	726,000	748,000	770,000	793,000	817,000	
34 Distribution	1,503,000	1,563,000	1,626,000	1,691,000	1,759,000	
35 Customer Service	965,000	1,004,000	1,044,000	1,086,000	1,129,000	
36 Administration	1,556,000	1,618,000	1,683,000	1,750,000	1,820,000	
37 Finance	1,154,000	1,200,000	1,248,000	1,298,000	1,350,000	
38 Human Resources	331,000	344,000	358,000	372,000	387,000	
39 HDMC WWTP Operations (reimbursable)	286,000	297,000	309,000	321,000	334,000	
40 Standby Admin/Developmt & Engineering	108,000	112,000	116,000	121,000	126,000	
41 Add'l Staffing Needs (deferred & reduced)	206,000	214,000	223,000	232,000	241,000	
42 CIRP Program (Operating Portion)	549,000	571,000	594,000	618,000	643,000	
43 Capitalized Overhead Adjustment	(124,000)	(129,000)	(134,000)	(139,000)	(145,000)	
44 Chrome 6 Operations (estimated)	811,000	843,000	877,000	912,000	948,000	
46 Subtotal	9,758,000	10,139,000	10,538,000	10,952,000	11,382,000	
47 Debt Service						
48 2018 Installment Sale Agmt (CIRP)	268,000	268,000	268,000	268,000	268,000	
49 Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	400,000	400,000	400,000	400,000	400,000	
50 Subtotal	668,000	668,000	668,000	668,000	668,000	
51 Capital/Non-Operating						
52 Capital Improvement Program (CIP)	2,000,000	2,200,000	2,600,000	3,000,000	3,300,000	
53 Equipment/Technology	439,000	457,000	475,000	494,000	514,000	
54 Studies/Reports	234,000	243,000	253,000	263,000	274,000	
55 Chromium 6 Project (grant & loan funded)	0	0	0	0	0	
56 Meter Replacement Program	185,000	185,000	50,000	52,000	54,000	
57 Admin Building & Financing (deleted)	0	0	0	0	0	
58 Morongo Basin Pipeline Debt Reimbs	0	0	0	0	0	
59 Subtotal	2,858,000	3,085,000	3,378,000	3,809,000	4,142,000	
60 Total Expenses	13,284,000	13,892,000	14,584,000	15,429,000	16,192,000	
61 Revenues Less Expenses	(165,000)	(66,000)	(2,000)	(65,000)	(83,000)	
62 Ending Fund Reserves	11,482,000	11,416,000	11,414,000	11,349,000	11,266,000	
63 Min Fund Rsrsv Target (50% O&M + \$2M)	6,879,000	7,069,500	7,269,000	7,476,000	7,691,000	
64 Debt Service Coverage	5.03	5.52	6.05	6.60	7.08	
65 Cumulative Fund Reserve Drawdown	(1,364,000)	(1,430,000)	(1,432,000)	(1,497,000)	(1,580,000)	

Joshua Basin Water District

Scenario C

Projected Revenues & Expenses (\$ Millions)



* Assumes \$18 million Chromium 6 Project funded by a \$10 million grant and \$8 million SRF Loan.

Table C2
 Joshua Basin Water District
 Accounts by Meter Size

	Number of Accounts	% of Class	Capacity ^{1,2} (gpm)	Meter Ratio	Meter Equivalents
Active Water Accounts					
3/4"	4,372	89.4%	30	1.00	4,372
1"	464	9.5%	30	1.00	464
1-1/2"	27	0.6%	100	3.33	90
2"	21	0.4%	160	5.33	112
3"	5	0.1%	300	10.00	50
Subtotal	4,889	100.0%			5,088
Water Accounts with Locked Meters					
3/4"	713	94.1%	30	1.00	713
3/4" Irrig	3	0.4%	30	1.00	3
1"	39	5.1%	30	1.00	39
1-1/2"	3	0.4%	100	3.33	10
Subtotal	758	100.0%			765
Fire Line Accounts					
2"	2				
4"	7				
6"	6				
8"	9				
Total	24				

Source: Based average number of accounts from May & June 2022 from utility billing data.

1 Based on American Water Works Association standard meter capacities.

2 Capacity of 1" meters assigned same capacity as 3/4" meters due to updated plumbing codes requiring installation of 1" meters in single family homes for fire flow, while the underlying demand remains the same as other single family homes served by a 3/4" meter.

Note: Number of accounts can vary by billing period due to changes in account status and growth.

Table C3
 Joshua Basin Water District
 Projected Water Use

Scenario C
 Limit Overall Rate Increases to 9%
 Limit Fixed Rate Increases to 5% per Year

	5-Yr Avg FY18 - FY22	Projected Water Use				
		2022/23	2023/24	2024/25	2025/26	2026/27
Change in Use After Rate Increase		-1.2%	-1.1%	-1.1%	-1.1%	-1.1%
	<u>Jul-Dec</u>	<u>Jul-Feb</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	98,300	127,800	98,100	97,900	97,700	97,500
Tier 2	51,000	61,800	50,100	49,200	48,400	47,600
Tier 3	44,700	51,500	43,800	42,900	42,000	41,200
Tier 4	49,900	56,600	48,600	47,400	46,200	45,100
All Other Use (hcf)	45,200	55,200	44,900	44,600	44,300	44,100
	<u>Jan-Jun</u>	<u>Mar-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	91,700	62,100	91,300	91,100	90,900	90,700
Tier 2	37,400	26,200	36,100	35,500	34,900	34,300
Tier 3	26,400	19,200	25,300	24,800	24,300	23,800
Tier 4	24,800	17,700	23,600	23,000	22,400	21,900
All Other Use (hcf)	32,200	22,100	31,800	31,600	31,400	31,200
Total Annual Use						
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	190,000	189,900	189,400	189,000	188,600	188,200
Tier 2	88,400	88,000	86,200	84,700	83,300	81,900
Tier 3	71,100	70,700	69,100	67,700	66,300	65,000
Tier 4	74,700	74,300	72,200	70,400	68,600	67,000
All Other Use (hcf)	77,400	77,300	76,700	76,200	75,700	75,300
Annual Total	501,600	500,200	493,600	488,000	482,500	477,400
Annual Change		-0.3%	-1.3%	-1.1%	-1.1%	-1.1%
Cumulative Change		-0.3%	-1.6%	-2.7%	-3.8%	-4.8%

Table C4
Joshua Basin Water District
Cost Recovery Allocation

Fixed vs. Variable Rate Recovery					
	Year 5 2026/27	Cost Recovery %		Cost Recovery \$	
		Fixed	Variable	Fixed	Variable
EXPENSES					
Operating & Maintenance					
Production	1,622,000	0%	100%	0	1,622,000
Recharge Water Purchases from MWA	705,000	0%	100%	0	705,000
Distribution	1,445,000	0%	100%	0	1,445,000
Customer Service (10% for Conservation Prog)	928,000	90%	10%	835,200	92,800
Administration	1,496,000	80%	20%	1,196,800	299,200
Finance	1,110,000	80%	20%	888,000	222,000
Human Resources	318,000	80%	20%	254,400	63,600
HDMC WWTP Operations (reimbursable)	275,000	100%	0%	275,000	0
Standby Admin/Dvlmnt & Engin/Other	104,000	75%	25%	78,000	26,000
Add'l Staffing Needs (deferred & reduced)	198,000	80%	20%	158,400	39,600
CIRP Program (Operating Portion)	528,000	60%	40%	316,800	211,200
Capitalized Overhead Adjustment	(119,000)	60%	40%	(71,400)	(47,600)
Chrome 6 Operations (estimated)	780,000	0%	100%	0	780,000
Subtotal	9,390,000	42%	58%	3,931,200	5,458,800
Debt Service					
2018 Installment Sale Agmt (CIRP)	268,000	25%	75%	67,000	201,000
Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	400,000	0%	100%	0	400,000
Subtotal	668,000	50%	50%	67,000	601,000
Non-Operating/Discretionary					
Capital Improvement Program (CIP)	2,000,000	25%	75%	500,000	1,500,000
Equipment/Technology	422,000	80%	20%	337,600	84,400
Studies/Reports	225,000	80%	20%	180,000	45,000
Meter Replacement Program	185,000	100%	0%	185,000	0
Subtotal	2,832,000	42%	58%	1,202,600	1,629,400
Total Expenses	12,890,000	40.3%	59.7%	5,200,800	7,689,200
NET FUNDING REQUIRED FROM WATER RATES					
Total Expenses	12,890,000	40.3%	59.7%	5,200,800	7,689,200
Less Property Tax Revenues	(727,000)	40.3%	59.7%	(293,327)	(433,673)
Less Other Non-Rate Revenues	(2,217,000)	40.3%	59.7%	(894,505)	(1,322,495)
Net Funding Requirement from Water Rates	10,673,000	40.3%	59.7%	4,306,295	6,366,705
Rounded Target		40.3%	59.7%		

Excludes capital improvement projects funded by grants and debt, but includes associated debt service.

Table C5
 Joshua Basin Water District
 Fixed Meter Charge Derivation

	Jan-1 2017
Water Rate Revenue Recovery	
Annualized Revenues w/ Rate Increases	\$9,420,000
Fixed Rate Recovery	
Cost Recovery Allocation %	40.3%
Cost Recovery Allocation \$	\$3,796,260
Meter Equivalents	
Active Water Accounts	5,088
Locked Meter Accounts	765
Projected Growth	<u>150</u>
Total	6,003
Rate per Meter Equivalent	
Annual	\$632.39
Monthly	52.70
Rounded	52.70

Table C6
Joshua Basin Water District
Usage/Flow Rate Cost Recovery Allocation

Usage Rate Recovery: Base vs. Extra Capacity Cost Allocation							
	Projected Expenses 2026/27	Fixed Rate Recovery	Usage Rate Recovery	Usage Rate Allocation			
				Base %	Extra Capacity %	Base \$	Extra Capacity \$
REVENUE REQUIREMENT FROM WATER USAGE CHARGES							
Expenses Fully Allocated for Base Usage Rate Revenue Recovery							
Production	1,622,000	0	1,622,000	100%	0%	1,622,000	0
Recharge Water Purchases from MWA	705,000	0	705,000	100%	0%	705,000	0
Distribution	1,445,000	0	1,445,000	100%	0%	1,445,000	0
Customer Service (10% for Conservation Prog	928,000	835,200	92,800	0%	100%	0	92,800
Administration	1,496,000	1,196,800	299,200	100%	0%	299,200	0
Finance	1,110,000	888,000	222,000	100%	0%	222,000	0
Human Resources	318,000	254,400	63,600	100%	0%	63,600	0
HDMC WWTP Operations (reimbursable)	275,000	275,000	0	100%	0%	0	0
Standby Admin/Dvlmnt & Engin/Other	104,000	78,000	26,000	100%	0%	26,000	0
Add'l Staffing Needs (deferred & reduced)	198,000	158,400	39,600	100%	0%	39,600	0
Chrome 6 Operations (estimated)	780,000	0	780,000	100%	0%	780,000	0
Equipment/Technology	422,000	337,600	84,400	100%	0%	84,400	0
Studies/Reports	225,000	180,000	45,000	100%	0%	45,000	0
Meter Replacement Program	185,000	185,000	0	100%	0%	0	0
Subtotal	9,813,000	4,388,400	5,424,600	98.3%	1.7%	5,331,800	92,800
Expenses Partially Allocated for Extra Capacity Revenue Recovery							
Debt Service	668,000	67,000	601,000	90%	10%	540,900	60,100
Capital Improvements	2,000,000	500,000	1,500,000	75%	25%	1,125,000	375,000
CIRP Program Less Capitalized Portion	409,000	245,400	163,600	75%	25%	122,700	40,900
Subtotal	3,077,000	812,400	2,264,600	79.0%	21.0%	1,788,600	476,000
Total	12,890,000	5,200,800	7,689,200	92.6%	7.4%	7,120,400	568,800
Offsetting Non-Rate Revenues							
Property Taxes	727,000	293,327	433,673	50%	50%	216,837	216,837
All Other Non-Rate Revenues	2,217,000	894,505	1,322,495	100%	0%	1,322,495	0
Subtotal	2,944,000	1,187,832	1,756,168	87.7%	12.3%	1,539,331	216,837

Table C7

Joshua Basin Water District

Quantity Charge Cost Attribution & Rate Derivation

Water Flow Rate Calculation						
	3/4" and 1" Meters					All Other
	Tier 1 0 - 5	Tier 2 5.01 - 10	Tier 3 10.01 - 20	Tier 4 20.01+	Subtotal	All Use
Projected Water Use (hcf)	188,200	81,900	65,000	67,000	402,100	75,300
% of Total Use	39.4%	17.2%	13.6%	14.0%	84.2%	15.8%
Extra Capacity Cost Allocation						
% of Water in ClasS & Tier for Extra Capacity Cost Recovery	0.0%	13.0%	44.0%	75.0%	22.3%	22.3%
Volume of Water for Extra Capacity Cost Recovery	0	10,647	28,600	50,250	89,497	16,760
% of Total Water for Extra Capacity Cost Recovery	0.0%	10.0%	26.9%	47.3%	84.2%	15.8%
Base Water Flow Charge (\$/hcf)	\$12.04	\$12.04	\$12.04	\$12.04		\$12.04
Adjustments for Extra Capacity & Prop Tax Allocations (\$/hcf)						
Extra Capacity Expenses	\$568,800	\$0	\$56,994	\$153,098	\$268,992	\$89,716
Less Allocated Prop Tax Offset	(216,837)	(179,899)	0	0	0	(36,938)
Total	(179,899)	56,994	153,098	268,992		52,779
Divided by Water Use in Tier	188,200	81,900	65,000	67,000		75,300
Net Adjustments (\$/hcf)	(\$0.96)	\$0.70	\$2.36	\$4.01		\$0.70
Water Flow Charges (\$/hcf)	\$11.08	\$12.74	\$14.40	\$16.06		\$12.74

Table C8
 Joshua Basin Water District
 Projected Water Rates

Scenario C
 Limit Overall Rate Increases to 9%
 Limit Fixed Rate Increases to 5% per Year

Projected Water Rates C						
	Current Water Rates	Projected Rates Effective				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
BASIC MONTHLY FEE						
<i>Fixed monthly charge based on meter size</i>						
<u>Meter Size</u>						
3/4 & 1 inch	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70
1-1/2 inches	137.83	144.67	151.83	159.33	167.33	175.67
2 inches	220.53	231.47	242.93	254.93	267.73	281.07
3 inches	413.50	434.00	455.50	478.00	502.00	527.00
Usage Rate Increases		11.6%	11.5%	11.3%	11.2%	11.1%
MONTHLY WATER FLOW CHARGES						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
For 3/4" and 1" Meters						
Tier 1 0 - 5 units	\$6.20	\$7.10	\$8.05	\$9.10	\$10.15	\$11.08
Tier 2 5.01 - 10 units	7.70	8.64	9.62	10.70	11.78	12.74
Tier 3 10.01 - 20 units	9.20	10.18	11.19	12.30	13.41	14.40
Tier 4 20.01 + units	10.70	11.72	12.76	13.90	15.04	16.06
For 1-1/2", 2" and 3" Meters						
Unit rate for all water use	\$7.70	\$8.64	\$9.62	\$10.70	\$11.78	\$12.74
<i>Note: 1 unit = one hundred cubic feet, or approximately 748 gallons.</i>						
PRIVATE FIRE PROTECTION CHARGES						
<i>Fixed monthly charge based on size of service connection</i>						
<u>Service Size</u>						
2 inches	\$22.05	\$23.15	\$24.29	\$25.49	\$26.77	\$28.11
3 inches	41.34	43.40	45.55	47.80	50.20	52.70
4 inches	68.91	72.34	75.91	79.66	83.66	87.84
6 inches	137.81	144.69	151.81	159.31	167.31	175.69
8 inches	220.50	231.50	242.90	254.90	267.70	281.10

Table C9
 Joshua Basin Water District
 Bill Impacts (3/4" or 1" Meter)

Scenario C
 Limit Overall Rate Increases to 9%
 Limit Fixed Rate Increases to 5% per Year

Monthly Use (hcf)	% of Bills	Current Monthly Bill	Projected Monthly Bills					5-Year Impact			Avg Annual Increase
			Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	%	\$/day	
0	7.3%	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	\$0.37	5.0%
1	9.6%	47.55	50.50	53.60	56.90	60.35	63.78	16.23	34.1%	0.53	6.0%
2	10.7%	53.75	57.60	61.65	66.00	70.50	74.86	21.11	39.3%	0.69	6.8%
3 Low	10.4%	59.95	64.70	69.70	75.10	80.65	85.94	25.99	43.4%	0.85	7.5%
4	9.2%	66.15	71.80	77.75	84.20	90.80	97.02	30.87	46.7%	1.01	8.0%
5 Median	8.0%	72.35	78.90	85.80	93.30	100.95	108.10	35.75	49.4%	1.18	8.4%
6 Typical	6.4%	80.05	87.54	95.42	104.00	112.73	120.84	40.79	51.0%	1.34	8.6%
7	5.4%	87.75	96.18	105.04	114.70	124.51	133.58	45.83	52.2%	1.51	8.8%
8 Average	4.6%	95.45	104.82	114.66	125.40	136.29	146.32	50.87	53.3%	1.67	8.9%
9	3.9%	103.15	113.46	124.28	136.10	148.07	159.06	55.91	54.2%	1.84	9.0%
10	3.0%	110.85	122.10	133.90	146.80	159.85	171.80	60.95	55.0%	2.00	9.2%
11	2.6%	120.05	132.28	145.09	159.10	173.26	186.20	66.15	55.1%	2.17	9.2%
12	2.1%	129.25	142.46	156.28	171.40	186.67	200.60	71.35	55.2%	2.35	9.2%
13	1.8%	138.45	152.64	167.47	183.70	200.08	215.00	76.55	55.3%	2.52	9.2%
14	1.7%	147.65	162.82	178.66	196.00	213.49	229.40	81.75	55.4%	2.69	9.2%
15	1.3%	156.85	173.00	189.85	208.30	226.90	243.80	86.95	55.4%	2.86	9.2%
16	1.1%	166.05	183.18	201.04	220.60	240.31	258.20	92.15	55.5%	3.03	9.2%
17 Top 10%	1.0%	175.25	193.36	212.23	232.90	253.72	272.60	97.35	55.5%	3.20	9.2%
18	1.0%	184.45	203.54	223.42	245.20	267.13	287.00	102.55	55.6%	3.37	9.2%
19	0.8%	193.65	213.72	234.61	257.50	280.54	301.40	107.75	55.6%	3.54	9.3%
20	0.7%	202.85	223.90	245.80	269.80	293.95	315.80	112.95	55.7%	3.71	9.3%
21	0.7%	213.55	235.62	258.56	283.70	308.99	331.86	118.31	55.4%	3.89	9.2%
22	0.6%	224.25	247.34	271.32	297.60	324.03	347.92	123.67	55.1%	4.07	9.2%
23	0.5%	234.95	259.06	284.08	311.50	339.07	363.98	129.03	54.9%	4.24	9.1%
24	0.4%	245.65	270.78	296.84	325.40	354.11	380.04	134.39	54.7%	4.42	9.1%
25	0.4%	256.35	282.50	309.60	339.30	369.15	396.10	139.75	54.5%	4.59	9.1%

Table C10
 Joshua Basin Water District
 Projected Water Rates

Scenario C

Limit Overall Rate Increases to 9%
 Limit Fixed Rate Increases to 5% per Year

Projected Fixed Rate Revenue Check C

	Prior Jan-1	Current Jan-1	Projected Rates Effective				
			Mar-1	Jan-1	Jan-1	Jan-1	Jan-1
PROJECTED BASIC MONTHLY FEES							
<i>Fixed monthly charge based on meter size</i>							
<u>Meter Size</u>							
3/4 & 1 inch	\$38.03	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70
1-1/2 inches	126.77	137.83	144.67	151.83	159.33	167.33	175.67
2 inches	202.83	220.53	231.47	242.93	254.93	267.73	281.07
3 inches	380.30	413.50	434.00	455.50	478.00	502.00	527.00
Active Water Accounts							
<i>Projected Growth</i>							
			50	25	25	25	25
3/4 & 1 inch		4,836	4,886	4,911	4,936	4,961	4,986
1-1/2 inches		27	27	27	27	27	27
2 inches		21	21	21	21	21	21
3 inches		5	5	5	5	5	5
Locked Meters							
3/4 & 1 inch		755	755	755	755	755	755
1-1/2 inches		3	3	3	3	3	3
	2021/22	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
FIXED RATE REVENUES BY FISCAL YEAR							
Months at New Rate		6	4	6	6	6	6
Fixed Revenues: Active Water Accts							
3/4 & 1 inch		2,303,290	2,464,498	2,621,001	2,764,654	2,917,068	3,078,356
1-1/2 inches		42,865	45,396	48,033	50,408	52,919	55,566
2 inches		53,343	56,493	59,774	62,730	65,855	69,149
3 inches		23,814	25,220	26,685	28,005	29,400	30,870
Subtotal		2,423,313	2,591,607	2,755,493	2,905,797	3,065,242	3,233,941
Less Delinquency Factor	1.00%	(24,233)	(25,916)	(27,555)	(29,058)	(30,652)	(32,339)
Net Total		2,399,080	2,565,690	2,727,938	2,876,739	3,034,590	3,201,602
Fixed Revenues: Locked Meters							
3/4 & 1 inch		359,591	380,822	402,944	422,876	443,940	466,137
1-1/2 inches		4,763	5,044	5,337	5,601	5,880	6,174
Subtotal		364,354	385,866	408,281	428,476	449,820	472,311
Less Delinquency %	1.00%	(3,644)	(3,859)	(4,083)	(4,285)	(4,498)	(4,723)
Net Total		360,711	382,007	404,198	424,192	445,322	467,588

Table C11
 Joshua Basin Water District
 Projected Water Use & Consumption Charges

Scenario C
 Limit Overall Rate Increases to 9%
 Limit Fixed Rate Increases to 5% per Year

Projected Usage Rate Revenue Check C						
	Current	Projected Rates Effective				
	Jan-1 2022	Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
PROJECTED WATER FLOW CHARGES						
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	\$6.20	\$7.10	\$8.05	\$9.10	\$10.15	\$11.08
Tier 2	7.70	8.64	9.62	10.70	11.78	12.74
Tier 3	9.20	10.18	11.19	12.30	13.41	14.40
Tier 4	10.70	11.72	12.76	13.90	15.04	16.06
All Other Use (hcf)	7.70	8.64	9.62	10.70	11.78	12.74
	5-Yr Avg FY18 - FY22	Projected				
		2022/23	2023/24	2024/25	2025/26	2026/27
PROJECTED WATER USE						
Change in Use After Rate Increase		-1.2%	-1.1%	-1.1%	-1.1%	-1.1%
	<u>Jul-Dec</u>	<u>Jul-Feb</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>	<u>Jul-Dec</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	98,300	127,800	98,100	97,900	97,700	97,500
Tier 2	51,000	61,800	50,100	49,200	48,400	47,600
Tier 3	44,700	51,500	43,800	42,900	42,000	41,200
Tier 4	49,900	56,600	48,600	47,400	46,200	45,100
All Other Use (hcf)	45,200	55,200	44,900	44,600	44,300	44,100
	<u>Jan-Jun</u>	<u>Mar-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>	<u>Jan-Jun</u>
Billed Use by Tier for 3/4" & 1" Meters (hcf)						
Tier 1	91,700	62,100	91,300	91,100	90,900	90,700
Tier 2	37,400	26,200	36,100	35,500	34,900	34,300
Tier 3	26,400	19,200	25,300	24,800	24,300	23,800
Tier 4	24,800	17,700	23,600	23,000	22,400	21,900
All Other Use (hcf)	32,200	22,100	31,800	31,600	31,400	31,200
Annual Total	501,600	500,200	493,600	488,000	482,500	477,400

Water Shortage Contingency Rates

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Water Shortage Contingency Rate Surcharges

Scenario A

	Water Shortage Contingency Stages				
	Stage 2 Moderate Shortage	Stage 3 Severe Shortage	Stage 4 Critical Shortage	Stage 5 Emergency Shortage	Stage 6 Catastrophic Failure
Water Shortage or Mandated Reduction	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
Water Demand Reduction Target %	15%	25%	35%	45%	50%
Normal Year Water Use (hcf)					
2022/23	498,600	498,600	498,600	498,600	498,600
2023/24	486,400	486,400	486,400	486,400	486,400
2024/25	477,900	477,900	477,900	477,900	477,900
2025/26	471,500	471,500	471,500	471,500	471,500
2026/27	466,400	466,400	466,400	466,400	466,400
Water Reduction Target (hcf)					
2022/23	74,790	124,650	174,510	224,370	249,300
2023/24	72,960	121,600	170,240	218,880	243,200
2024/25	71,685	119,475	167,265	215,055	238,950
2025/26	70,725	117,875	165,025	212,175	235,750
2026/27	69,960	116,600	163,240	209,880	233,200
Net Use with Reduction (hcf)					
2022/23	423,810	373,950	324,090	274,230	249,300
2023/24	413,440	364,800	316,160	267,520	243,200
2024/25	406,215	358,425	310,635	262,845	238,950
2025/26	400,775	353,625	306,475	259,325	235,750
2026/27	396,440	349,800	303,160	256,520	233,200
Avg Water Flow Rates by Year					
2022/23	\$9.50	\$9.50	\$9.50	\$9.50	\$9.50
2023/24	11.30	11.30	11.30	11.30	11.30
2024/25	12.90	12.90	12.90	12.90	12.90
2025/26	14.25	14.25	14.25	14.25	14.25
2026/27	15.50	15.50	15.50	15.50	15.50
Revenue Loss by Year					
2022/23	\$710,505	\$1,184,175	\$1,657,845	\$2,131,515	\$2,368,350
2023/24	845,127	1,408,545	1,971,963	2,535,381	2,817,090
2024/25	964,791	1,607,985	2,251,179	2,894,373	3,215,970
2025/26	1,065,758	1,776,263	2,486,768	3,197,273	3,552,525
2026/27	1,159,245	1,932,075	2,704,905	3,477,735	3,864,150
Est. Reduced Expenses due to Lower Use					
Variable Cost per Unit (\$/hcf) ¹					
2022/23	\$2.04	\$2.04	\$2.04	\$2.04	\$2.04
2023/24	2.11	2.11	2.11	2.11	2.11
2024/25	2.18	2.18	2.18	2.18	2.18
2025/26	2.26	2.26	2.26	2.26	2.26
2026/27	2.34	2.34	2.34	2.34	2.34
Reduced Variable Costs					
2022/23	\$152,503	\$254,171	\$355,840	\$457,509	\$508,343
2023/24	153,978	256,631	359,283	461,935	513,261
2024/25	156,583	260,971	365,359	469,748	521,942
2025/26	159,893	266,488	373,083	479,678	532,976
2026/27	163,699	272,831	381,964	491,097	545,663
Add'l Conservation & Compliance Costs²	\$0	\$50,000	\$100,000	\$150,000	\$200,000
Net Financial Impact					
Revenue Loss - Reduced Exps + Add'l Costs					
2022/23	\$558,002	\$980,004	\$1,402,005	\$1,824,006	\$2,060,007
2023/24	691,149	1,201,914	1,712,680	2,223,446	2,503,829
2024/25	808,208	1,397,014	1,985,820	2,574,625	2,894,028
2025/26	905,865	1,559,775	2,213,685	2,867,595	3,219,549
2026/27	995,546	1,709,244	2,422,941	3,136,638	3,518,487
Required Rate Surcharge (\$/hcf)					
Net Financial Impact / Net Remaining Use					
2022/23	\$1.32	\$2.62	\$4.33	\$6.65	\$8.26
2023/24	1.67	3.29	5.42	8.31	10.30
2024/25	1.99	3.90	6.39	9.80	12.11
2025/26	2.26	4.41	7.22	11.06	13.66
2026/27	2.51	4.89	7.99	12.23	15.09

1 Includes estimated costs for electricity and pumping based on 2021 actual costs and MWA water purchases.

Water Shortage Contingency Rate Surcharges

Scenario A

Proposed Maximum Water Shortage Contingency Rate Surcharges					
Water Shortage Contingency Stage	Stage 2 Moderate Shortage	Stage 3 Severe Shortage	Stage 4 Critical Shortage	Stage 5 Emergency Shortage	Stage 6 Catastrophic Failure
Water Shortage or Mandated Reduction	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
Maximum Rate Surcharge (\$/hcf)					
<u>Effective On or After</u>					
Mar-1, 2023	\$1.32	\$2.62	\$4.33	\$6.65	\$8.26
Jan-1, 2024	1.67	3.29	5.42	8.31	10.30
Jan-1, 2025	1.99	3.90	6.39	9.80	12.11
Jan-1, 2026	2.26	4.41	7.22	11.06	13.66
Jan-1, 2027	2.51	4.89	7.99	12.23	15.09

Note: 1 unit = one hundred cubic feet (hcf), or approximately 748 gallons.

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Water Shortage Contingency Rate Surcharges

Scenario C

	Water Shortage Contingency Stages				
	Stage 2 Moderate Shortage	Stage 3 Severe Shortage	Stage 4 Critical Shortage	Stage 5 Emergency Shortage	Stage 6 Catastrophic Failure
Water Shortage or Mandated Reduction	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
Water Demand Reduction Target %	15%	25%	35%	45%	50%
Normal Year Water Use (hcf)					
2022/23	500,200	500,200	500,200	500,200	500,200
2023/24	493,600	493,600	493,600	493,600	493,600
2024/25	488,000	488,000	488,000	488,000	488,000
2025/26	482,500	482,500	482,500	482,500	482,500
2026/27	477,400	477,400	477,400	477,400	477,400
Water Reduction Target (hcf)					
2022/23	75,030	125,050	175,070	225,090	250,100
2023/24	74,040	123,400	172,760	222,120	246,800
2024/25	73,200	122,000	170,800	219,600	244,000
2025/26	72,375	120,625	168,875	217,125	241,250
2026/27	71,610	119,350	167,090	214,830	238,700
Net Use with Reduction (hcf)					
2022/23	425,170	375,150	325,130	275,110	250,100
2023/24	419,560	370,200	320,840	271,480	246,800
2024/25	414,800	366,000	317,200	268,400	244,000
2025/26	410,125	361,875	313,625	265,375	241,250
2026/27	405,790	358,050	310,310	262,570	238,700
Avg Water Flow Rates by Year					
2022/23	\$8.64	\$8.64	\$8.64	\$8.64	\$8.64
2023/24	11.19	11.19	11.19	11.19	11.19
2024/25	13.90	13.90	13.90	13.90	13.90
2025/26	11.84	11.84	11.84	11.84	11.84
2026/27	12.78	12.78	12.78	12.78	12.78
Revenue Loss by Year					
2022/23	\$648,259	\$1,080,432	\$1,512,605	\$1,944,778	\$2,160,864
2023/24	839,586	1,399,310	1,959,033	2,518,757	2,798,619
2024/25	1,042,917	1,738,195	2,433,473	3,128,751	3,476,390
2025/26	888,333	1,480,555	2,072,777	2,664,999	2,961,110
2026/27	959,227	1,598,712	2,238,197	2,877,682	3,197,425
Est. Reduced Expenses due to Lower Use					
Variable Cost per Unit (\$/hcf) ¹					
2022/23	\$2.04	\$2.04	\$2.04	\$2.04	\$2.04
2023/24	2.11	2.11	2.11	2.11	2.11
2024/25	2.18	2.18	2.18	2.18	2.18
2025/26	2.26	2.26	2.26	2.26	2.26
2026/27	2.34	2.34	2.34	2.34	2.34
Reduced Variable Costs					
2022/23	\$152,992	\$254,987	\$356,982	\$458,977	\$509,974
2023/24	156,258	260,429	364,601	468,773	520,859
2024/25	159,892	266,486	373,081	479,676	532,973
2025/26	163,623	272,705	381,787	490,869	545,410
2026/27	167,560	279,266	390,973	502,679	558,532
Add'l Conservation & Compliance Costs²	\$0	\$50,000	\$100,000	\$150,000	\$200,000
Net Financial Impact					
Revenue Loss - Reduced Exps + Add'l Costs					
2022/23	\$495,267	\$875,445	\$1,255,623	\$1,635,801	\$1,850,890
2023/24	683,328	1,188,880	1,694,432	2,199,984	2,477,760
2024/25	883,025	1,521,709	2,160,392	2,799,075	3,143,417
2025/26	724,710	1,257,850	1,790,990	2,324,130	2,615,700
2026/27	791,668	1,369,446	1,947,225	2,525,003	2,838,893
Required Rate Surcharge (\$/hcf)					
Net Financial Impact / Net Remaining Use					
2022/23	\$1.16	\$2.33	\$3.86	\$5.95	\$7.40
2023/24	1.63	3.21	5.28	8.10	10.04
2024/25	2.13	4.16	6.81	10.43	12.88
2025/26	1.77	3.48	5.71	8.76	10.84
2026/27	1.95	3.82	6.28	9.62	11.89

1 Includes estimated costs for electricity and pumping based on 2021 actual costs and MWA water purchases.

Water Shortage Contingency Rate Surcharges

Scenario C

Proposed Maximum Water Shortage Contingency Rate Surcharges					
Water Shortage Contingency Stage	Stage 2 Moderate Shortage	Stage 3 Severe Shortage	Stage 4 Critical Shortage	Stage 5 Emergency Shortage	Stage 6 Catastrophic Failure
Water Shortage or Mandated Reduction	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
Maximum Rate Surcharge (\$/hcf)					
<u>Effective On or After</u>					
Mar-1, 2023	\$1.16	\$2.33	\$3.86	\$5.95	\$7.40
Jan-1, 2024	1.63	3.21	5.28	8.10	10.04
Jan-1, 2025	2.13	4.16	6.81	10.43	12.88
Jan-1, 2026	1.77	3.48	5.71	8.76	10.84
Jan-1, 2027	1.95	3.82	6.28	9.62	11.89

Note: 1 unit = one hundred cubic feet (hcf), or approximately 748 gallons.

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