

# JOSHUA BASIN WATER DISTRICT

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source...well into the future*



## 2023 Water Rate Study

January 2023



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS

# Joshua Basin Water District

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Prepared by:



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January 31, 2023

Joshua Basin Water District  
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Bartle Wells Associates is pleased to submit the attached *2023 Water Rate Study*. The study develops water rates designed to fund JBWD's projected costs of providing service over the next five years and fairly apportion costs to JBWD customers. The proposed rates were developed with substantial input from JBWD and the District's Citizens Advisory Council and are phased in over the next five years to help meet JBWD's financial needs while aiming to minimize the annual impact on ratepayers.

As noted in the report, JBWD is facing a number of financial challenges in upcoming years. The proposed rate increases are needed to provide adequate funding for future operations, rehabilitation and replacement of aging water system infrastructure, help fund the construction and operation of new Chromium 6 water treatment facilities to meet pending new state regulatory requirements, and keep up with cost inflation.

The proposed water rates are maximum rates that JBWD can adopt and levy. The District anticipates reevaluating rates and finances in future years with the goal of only implementing rate increases as needed. The report also develops proposed new Water Shortage Contingency Rate Surcharges designed to support financial stability and help ensure adequate funding for water utility operations during periods of water shortages, mandatory cutbacks, or significant reductions in water sales.

I enjoyed working with JBWD on this assignment and appreciate the ongoing input and assistance received from JBWD staff, Board Members, and the Citizens Advisory Council. Please contact me anytime if you have questions about this report or other issues related to rates and finances.

BARTLE WELLS ASSOCIATES

Alex Handlers, CIPMA  
Principal/Vice-President

<b>Proposed Maximum Water Rates</b>						
	<b>Current Water Rates</b>	<b>Projected Rates Effective</b>				
		<b>Mar-1 2023</b>	<b>Jan-1 2024</b>	<b>Jan-1 2025</b>	<b>Jan-1 2026</b>	<b>Jan-1 2027</b>
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b><u>For 3/4" and 1" Meters</u></b>						
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
<b><u>For 1-1/2", 2" and 3" Meters</u></b>						
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 (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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

<b>Proposed Maximum Water Shortage Contingency Rate Surcharges</b>					
<b>Water Shortage Contingency Stage</b>	<b>Stage 2 Moderate Shortage</b>	<b>Stage 3 Severe Shortage</b>	<b>Stage 4 Critical Shortage</b>	<b>Stage 5 Emergency Shortage</b>	<b>Stage 6 Catastrophic Failure</b>
<b>Water Shortage or Mandated Reduction</b>	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
<b>Maximum Rate Surcharge (\$/hcf)</b>					
<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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**Appendix A - Financial & Rate Scenarios**

**Appendix B - Proposition 218 Notice of Proposed Water Rate Increase**



# 1 BACKGROUND & OBJECTIVES

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## 1.1 Background

Joshua Basin Water District (JBWD or District) currently provides water service to roughly 5,600 homes, businesses, and properties within a 96-square-mile service area in the community of Joshua Tree, California. The District is located about 125 miles east of Los Angeles in San Bernardino County, to the north of Joshua Tree National Park. JBWD was formed in 1963 and is governed by a five-member Board of Directors elected from the community.

JBWD owns and operates roughly 310 miles of water system pipelines, 5 wells, 17 water storage tanks, 11 booster stations and a groundwater recharge facility. Roughly 164 miles of JBWD's water pipelines were installed 40 to 75 years ago and are approaching the end of their useful lives. Other facilities including booster pumps, wells and water tanks are aging and need to be refurbished in upcoming years.

An engineering analysis of the water system developed by Dudek Engineers and subsequently updated by District staff identifies the need for approximately \$2.5 million (current \$) of capital improvement funding each year for the next 30 years to gradually replace aging infrastructure, address current deficiencies, and improve system reliability. In recent years, the District established a Capital Improvement & Replacement Program (CIRP) with in-house staffing to help minimize costs and reduce the need for more expensive contracting.

JBWD is financially self-supporting and relies primarily on revenues from water service charges to fund the costs of operating, maintaining, and replacing aging water system infrastructure to support safe and reliable service. The District has historically provided strong financial management via gradual annual rate increases. JBWD last adopted a series of 5 years of rate increases in 2018 with the last increase effective January 1, 2022. These increases were designed to take substantial steps in the right direction with the understanding that significant additional rate increases would be needed to ultimately support the District's operating and capital improvement funding needs including providing adequate funding for replacement of aging infrastructure and anticipated Chromium 6 treatment.

JBWD relies on groundwater for 100% of the community's water supply. Local water demand exceeds the level of natural groundwater recharge. Historically, this resulted in ongoing decreases in local groundwater levels. Starting in 2015, JBWD began purchasing and importing water from Mojave Water Agency via the 71-mile Morongo Basin Pipeline to help recharge the local groundwater basin and reduce further groundwater depletion. While the District is not in any imminent danger of over-depleting its groundwater resources, JBWD anticipates continuing its practice of importing water to support the long-term sustainability of the District's groundwater supply.

The District also anticipates needing to fund treatment facilities for Chromium 6, a naturally occurring chemical in the District’s groundwater that is a suspected carcinogen. Concentration levels in the District’s groundwater are substantially below current federal and statewide standards. However, California’s State Water Resources Control Board is in the process of establishing new, substantially more-stringent regulations that would require the District to install and operate new Chromium 6 treatment facilities. Preliminary cost estimates for the new treatment facilities are in the \$18 million range with operating expenses estimated at \$750,000 per year. The District is searching for the most cost-effective treatment technology and is seeking grant funding to help offset the costs of new treatment facilities.

## 1.2 Rate Study Objectives

In 2022, JBWD retained Bartle Wells Associates (BWA) to help the District evaluate financial scenarios and develop a long-term financial plan and water rate study. BWA developed the District’s prior rate study in 2018. Key goals and objectives of this rate study include developing water rates that:

- Recover the costs of providing water service, including operating, maintenance, and capital improvement funding needs;
- Are fair and equitable to all customers;
- Are easy to understand and implement;
- Include less increases to the fixed Basic Monthly Fees with more increases to Monthly Water Flow Charges based on usage;
- Reflect the cost of providing service and comply with the substantive requirements of the California Constitution, Article 13D, Section 6 (established by Proposition 218) and the general mandate of Article 10, Section 2;
- Support JBWD’s long-term operational and financial stability.

Final recommendations were developed with substantial input from the District and the District’s *Citizens Advisory Council (CAC)*, a group of community members that has been advising the Board of Directors and providing community input on a wide range of policy issues since 2005.

This report summarizes findings and recommendations and develops water rate projections for the next five years. The report also develops new Water Shortage Contingency Rate Surcharges that can be implemented to support financial stability and ensure adequate funding for District operations during periods of water shortages, mandatory cutbacks, or reduced water sales.



### 1.3 Rate Study Process

The rates recommendations presented in this report were developed via a process that incorporated substantial input from District staff as well as a series of meetings held to gain input from the District's Finance Committee, Board of Directors and Citizens Advisory Council.

- Aug-31, 2022 **Board Meeting** - Water rate study introduction, received initial input on study objectives and key issues.
- Sep-13, 2022 **CAC Meeting** – Discussed preliminary findings and alternatives, received preliminary input.
- Oct-12, 2022 **Board Meeting with CAC participation** – Reviewed draft rate increase scenarios, discussed alternatives and received input.
- Nov-8, 2022 **CAC Meeting** – Reviewed draft rate increase scenarios, discussed alternatives and received additional input.
- Nov-9, 2022 **Board Meeting with CAC participation** – Reviewed draft rate increase scenarios, discussed alternatives and received additional input.
- Dec-14, 2022 **Board Meeting** – Presented recommendations and received Board direction to mail Proposition 218 Notices and set a Public Hearing to consider approval of proposed rates.
- Jan-10, 2023 **Community Workshop** at the Joshua Tree Community Center.
- Feb-15, 2023 **Public Hearing** and Board consideration of resolution adopting maximum proposed rates

The proposed rates are *maximum rates* that JBWD will consider authorizing. The District anticipates reevaluating rates and finances in future years with the goal of only implementing rate increases as needed. In accordance with Proposition 218, the District cannot implement rates that exceed the levels adopted pursuant to the Proposition 218 process but can implement rate increases that are below the maximum authorized levels.

## 2 WATER RATES, CUSTOMERS & FINANCES

### 2.1 Current Water Rates

The following table shows JBWD’s current water rates which went into effect on January 1, 2022. These rates were adopted in 2018 and are the final year of a 5-year rate increase.

Current Water Rates			
<b>BASIC MONTHLY FEE (FIXED CHARGE)</b>			<i>Equivalent</i>
<b>Meter Size</b>	<b>Capacity (gpm)</b>	<b>Monthly Rate</b>	<b>Rate Per Day</b>
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
<b>MONTHLY WATER FLOW CHARGES (PER HCF)</b>			<i>Equivalent Rate</i>
<b>For 3/4" &amp; 1" Meters</b>			<i>Per 100 gallons</i>
<b>Consumption</b>		<b>Rate per hcf</b>	
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
<b>For 1-1/2", 2" and 3" Meters</b>			
<b>Unit rate per all water use</b>		<b>Rate per hcf</b>	
		\$7.70	\$1.03

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

JBWD’s water service charges include two components:

- A fixed **Basic Monthly Fee** based on meter size purchased. This charge is levied independent of water use and recovers a portion of the District’s fixed costs for providing service. JBWD incurs a substantial amount of costs ensuring that water is available at all times to meet customer needs on demand. The Basic Monthly Fee varies by meter size and capacity, with larger meters paying higher charges in proportion to the increased capacity and demand placed on the water system associated with each meter size. Basic Monthly Fees currently recover roughly 40% of water rate revenues including charges from customers who previously connected to the District to secure future water service, but subsequently had their water meters locked or removed.
- Volumetric **Monthly Water Flow Charges** billed based on metered water use. Water Flow Charges for customers with 3/4-inch and 1-inch meters are billed according to a 4-tiered inclining rate structure with water purchased first in Tier 1 and then subsequently in higher tiers as water use

increases. Accounts with larger meters pay a uniform rate for each unit of metered water use. These volumetric charges currently recover approximately 60% of total water rate revenues.

The District's Water Flow Charges are billed in units of 100 cubic feet (hcf), which equates to approximately 748 gallons. Hence the District's current rates of \$6.20 to \$10.70 per hcf equate to \$0.83 to \$1.43 per 100 gallons, with the average rate of water equal to \$1.03 per 100 gallons, or about a penny per gallon.

### **Current monthly charges for a typical single family home:**

- A typical residential bill with monthly use of 6 hcf is currently \$80.05 including the Basic Monthly Fee of \$41.35 plus Monthly Flow Charges of \$6.20 for the first 5 units of metered water use and \$7.70 for the 6<sup>th</sup> unit.
- The District has a significant number of customers with lower levels of water use. Excluding bills with zero use, approximately one-third of residential bills have water use at or below 3 hcf per month which equates to a monthly bill at or below \$59.95.

## **2.2 Financial Overview**

JBWD is a financially self-supporting agency that relies primarily on monthly water service charges to fund the costs of operating, maintaining, and replacing aging water system infrastructure to support safe and reliable service. Water rate revenues currently account for an estimated 70% of JBWD's total annual revenues, with the remaining revenues coming from a combination of standby charges, property taxes, interest earnings, capacity and meter installation fees levied on new development, and other miscellaneous revenues. As such, the District's current and proposed water rates do not recover the full costs of service as rates are supplemented by other revenue sources.

The District has historically provided strong financial management via gradual annual rate increases. JBWD last adopted a series of 5 years of rate increases in 2018 with the last increase effective January 1, 2022. These increases were designed to take substantial steps in the right direction with the understanding that significant additional rate increases would be needed to ultimately support the District's operating and capital improvement funding needs including providing adequate funding for replacement of aging infrastructure and anticipated Chromium 6 treatment.

## 2.3 Financial Challenges / Key Drivers of Rate Increases

While the rate increases implemented over the past 5 years have put the District on a stronger financial footing, JBWD is facing a number of financial challenges and increased funding needs in upcoming years to support safe and reliable service and address new regulatory requirements. Key drivers of future rate increases are summarized as follows.

### 2.3.1 Replacement of Aging Infrastructure and Undersized Water Pipelines

JBWD owns and operates over 310 miles of pipelines, 5 wells, 17 water storage tanks, 11 pump stations, and a groundwater recharge facility. Roughly 164 miles of JBWD's water pipelines were installed 40 to 75 years ago and are approaching the end of their useful lives. Many old pipelines are substandard and/or inadequately sized to meet current fire flow capacity requirements. Some of the District's oldest existing developer-installed pipelines were second-hand when installed, further decreasing the remaining useful life. Other aging facilities – including old pump stations, wells and water tanks – will also need to be rebuilt or refurbished in upcoming years.

An engineering analysis of the water system developed by Dudek Engineers and subsequently updated by District staff identifies the need for \$2.5 million per year (current \$) of funding over the next 30 years to gradually replace aging infrastructure, address existing deficiencies, and improve reliability. The District's prior rate increases helped provide funding for these improvements, however additional rate increases are needed to support full funding of the District's capital needs.

### 2.3.2 New California Chromium 6 Regulations

The District also faces the anticipated need to fund treatment facilities for Chromium 6, a naturally occurring chemical in the District's groundwater that is a suspected carcinogen. Concentration levels in the District's groundwater are substantially below current federal and statewide standards. However, California's State Water Resources Control Board is in the process of establishing new, substantially more-stringent regulations that would require the District to install and operate new Chromium 6 treatment facilities.

Preliminary cost estimates for anticipated new Chromium 6 treatment facilities are in the \$18 million range with annual operating expenses estimated at \$750,000 per year. The District is searching for the most cost-effective treatment technology and is seeking grant funding and low-interest-rate loans from the California Safe Drinking Water State Revolving Fund (SRF) Financing Program to help minimize the costs of new treatment facilities.

The District's water rates adopted over the past 5 years were not designed to fund the costs of Chromium 6 treatment facilities or operations.

### **2.3.3 Support Balanced Budgets & Keep Up with Cost Inflation**

The District faces ongoing operating cost inflation due to increases in a range of expenses including staffing, utilities, insurance, supplies, etc. In addition to the need for rate increases to address other funding needs, annual rate adjustments are needed to support balanced budgets, and help keep revenues in line with the escalating costs of providing service.

## 3 WATER CUSTOMERS & USE

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### 3.1 Water Customers

JBWD provides water service to roughly 5,600 accounts including almost 4,900 active metered water accounts and about 760 accounts that previously connected to the District but subsequently had their water meters locked or removed. The table on the following page shows a breakdown of accounts by class and meter size. Almost 99% of the District's active water service accounts are served by 3/4-inch or 1-inch meters. Accounts with larger meter sizes of 1-1/2-inches to 3-inches only account for a little over 1% of total active accounts.

The table also shows the number of 3/4-inch meter equivalents that are served by the District. Meter equivalents are assigned based on the capacity of each meter size in relation to that of the base 3/4-inch meter. Due to newer plumbing codes and fire sprinkler requirements, new residential connections typically require installation of 1-inch meters due to fire flow requirement even though they have an underlying water demand consistent with existing homes served by 3/4-inch meters. For fairness, the District treats accounts with 3/4-inch and 1-inch meters the same for purposes of billing.

The District maintains service lines to 760 accounts that previously connected to the District to secure water service, but subsequently had their water meters locked or removed. These "locked meter" accounts benefit from an immediate availability of water service but have suspended service and pay the District's Basic Monthly Fees to help fund the District's fixed costs of operations and maintain their status as District customers. These customers have the ability to opt out from the District but would then need to pay new or additional capacity charges to re-establish service.

Water Accounts by Meter Size					
	Number of Accounts	% of Class	Capacity <sup>1,2</sup> (gpm)	Meter Ratio	Meter Equivalents
<b>Active Water Accounts</b>					
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
<b>Water Accounts with Locked Meters</b>					
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
<b>Fire Line Accounts</b>					
2"	2				
4"	7				
6"	6				
8"	9				
Total	24				

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

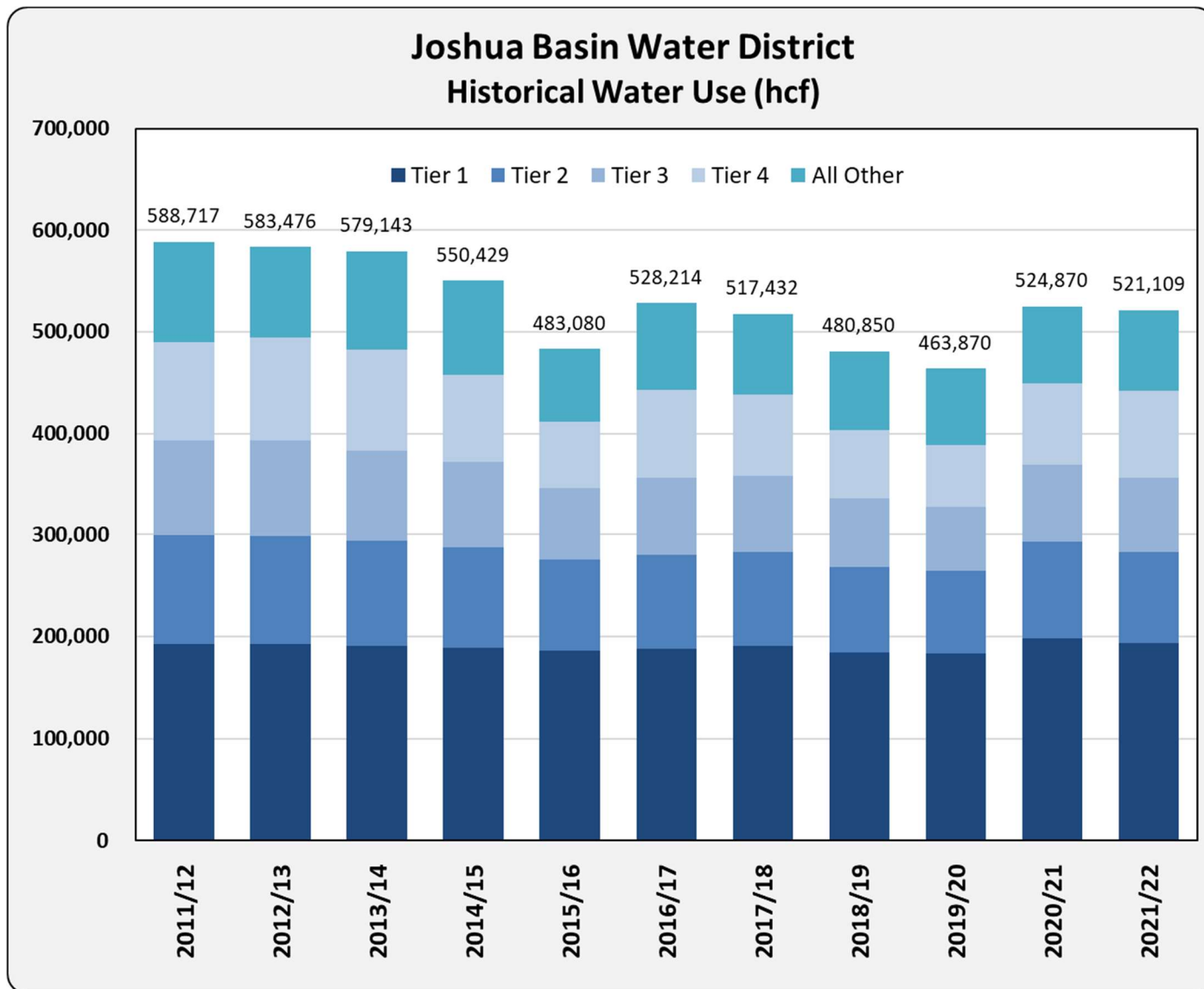
1 Based on American Water Works Association standard meter capacities.

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 & growth.*

### 3.2 Historical Water Use

The following chart shows a history of District water use by fiscal year since 2011/12. From 2011/12 to 2013/14, the District’s annual water sales averaged over 580,000 hcf per year. Water use subsequently declined through 2015/16 during California’s prior drought, before partially rebounding and then decreasing again through 2019/20. In March 2020 of that year, Covid-19 was declared a pandemic. Over the prior 2 fiscal years, water use averaged a little over 520,000 hcf, roughly 10% lower than the first few years shown on the chart.



The tables on the following pages show historical water use by tier and by month.



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
<b>Water Use by Tier for 3/4" &amp; 1" Meters (hcf)</b>											
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
<b>All Other Use</b>	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%

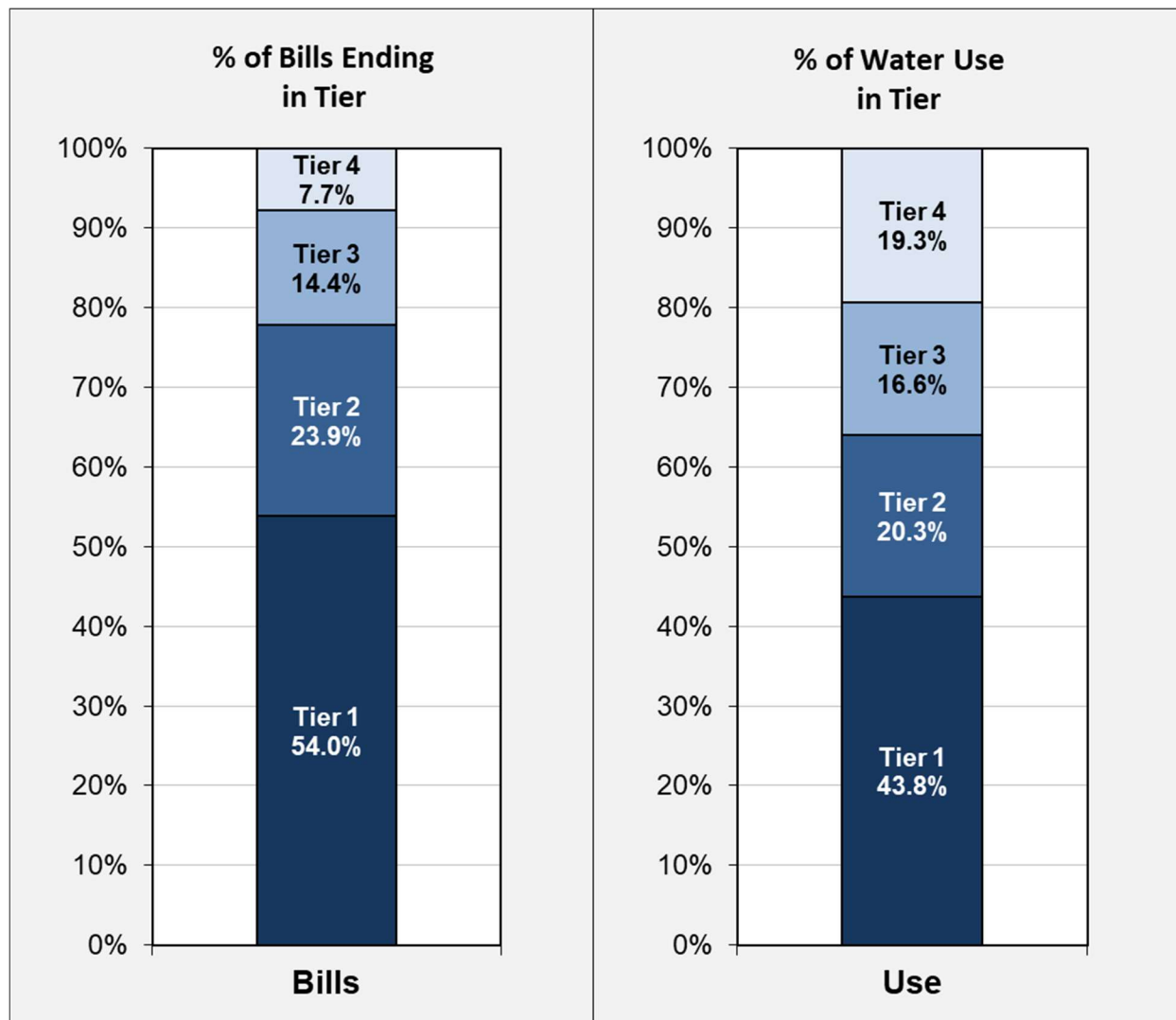
Historical Water Use by Month

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
<b>2017/18</b>													
Tier 1	17,503	16,093	16,976	15,454	16,121	16,265	15,019	14,832	14,324	15,143	15,905	17,027	190,662
Tier 2	11,241	8,639	10,299	7,188	7,652	7,652	5,856	5,631	5,010	5,896	7,388	9,684	92,136
Tier 3	11,764	7,921	10,105	5,671	6,147	5,553	3,710	3,587	3,069	3,785	5,642	8,803	75,757
Tier 4	14,457	8,959	12,610	5,353	5,851	5,239	3,060	2,678	2,351	3,728	5,960	9,076	79,322
All Other	9,602	7,799	8,897	6,487	6,773	6,646	4,844	5,291	4,493	5,004	5,920	7,799	79,555
<b>Total</b>	<b>64,567</b>	<b>49,411</b>	<b>58,887</b>	<b>40,153</b>	<b>42,544</b>	<b>41,355</b>	<b>32,489</b>	<b>32,019</b>	<b>29,247</b>	<b>33,556</b>	<b>40,815</b>	<b>52,389</b>	<b>517,432</b>
Fire/Temp/No Chg	937	362	495	756	148	241	52	95	71	166	210	338	3,871
<b>2018/19</b>													
Tier 1	16,868	16,787	16,417	15,857	16,291	14,333	15,398	13,073	13,056	14,394	16,223	15,710	184,407
Tier 2	9,796	9,984	9,194	7,979	7,980	5,138	6,225	3,895	3,721	4,934	8,010	7,226	84,032
Tier 3	9,368	9,546	8,554	6,727	6,259	3,329	4,261	2,256	2,107	3,019	6,230	5,807	67,463
Tier 4	10,647	11,156	9,619	6,042	5,817	2,698	4,295	2,477	1,607	2,032	6,081	5,216	67,687
All Other	8,860	9,049	7,749	7,948	7,543	5,374	5,517	4,401	3,803	4,569	5,623	6,825	77,261
<b>Total</b>	<b>55,539</b>	<b>56,522</b>	<b>51,533</b>	<b>44,553</b>	<b>43,840</b>	<b>30,872</b>	<b>35,696</b>	<b>26,102</b>	<b>24,294</b>	<b>28,948</b>	<b>42,167</b>	<b>40,784</b>	<b>480,850</b>
Fire/Temp/No Chg	183	231	208	219	357	218	281	220	25	148	264	573	2,927
<b>2019/20</b>													
Tier 1	16,169	16,753	17,201	14,211	15,134	14,666	14,319	14,291	14,397	14,600	15,413	16,271	183,425
Tier 2	8,474	9,734	10,685	5,856	6,214	5,226	4,898	4,972	4,901	5,097	7,118	8,063	81,238
Tier 3	7,406	9,366	10,448	4,251	4,361	3,292	2,974	2,927	2,990	3,003	4,809	6,283	62,110
Tier 4	6,641	10,196	13,909	4,660	3,956	3,224	3,444	2,284	2,017	1,999	3,756	5,033	61,419
All Other	7,404	9,490	10,033	6,003	7,073	5,526	5,113	4,690	4,899	4,557	5,275	5,615	75,678
<b>Total</b>	<b>46,094</b>	<b>55,539</b>	<b>62,276</b>	<b>34,981</b>	<b>36,738</b>	<b>32,234</b>	<b>30,748</b>	<b>29,164</b>	<b>29,204</b>	<b>29,256</b>	<b>36,371</b>	<b>41,265</b>	<b>463,870</b>
Fire/Temp/No Chg	206	235	326	1,238	146	159	76	165	87	44	55	187	2,924
<b>2020/21</b>													
Tier 1	17,515	18,004	17,098	17,456	16,736	15,712	15,992	14,855	14,433	16,406	16,797	17,068	198,072
Tier 2	10,236	11,367	9,473	9,936	8,241	6,189	6,558	5,076	4,569	7,061	7,951	8,456	95,113
Tier 3	9,213	11,206	8,387	8,995	6,544	4,084	4,159	3,101	2,795	4,877	6,068	7,017	76,446
Tier 4	9,856	12,921	9,748	9,990	6,233	4,772	4,004	3,189	2,201	4,375	5,974	6,833	80,096
All Other	7,319	8,134	7,004	7,714	6,363	5,304	5,235	4,808	4,213	5,691	6,469	6,889	75,143
<b>Total</b>	<b>54,139</b>	<b>61,632</b>	<b>51,710</b>	<b>54,091</b>	<b>44,117</b>	<b>36,061</b>	<b>35,948</b>	<b>31,029</b>	<b>28,211</b>	<b>38,410</b>	<b>43,259</b>	<b>46,263</b>	<b>524,870</b>
Fire/Temp/No Chg	286	114	133	112	311	110	465	271	108	355	627	714	3,606
<b>2021/22</b>													
Tier 1	17,490	17,414	16,744	16,999	15,112	15,939	15,239	14,462	14,671	16,756	16,111	16,498	193,435
Tier 2	10,028	10,059	9,062	9,044	6,025	6,612	5,786	4,949	5,050	7,756	7,139	8,070	89,580
Tier 3	9,352	9,490	8,337	8,333	4,445	4,810	3,880	3,269	3,214	5,964	5,508	6,928	73,530
Tier 4	11,479	12,552	10,864	10,192	4,647	4,922	4,384	3,599	3,133	6,514	5,339	7,525	85,150
All Other	8,746	9,510	8,241	8,317	5,608	5,291	5,472	4,686	4,558	6,404	6,032	6,549	79,414
<b>Total</b>	<b>57,095</b>	<b>59,025</b>	<b>53,248</b>	<b>52,885</b>	<b>35,837</b>	<b>37,574</b>	<b>34,751</b>	<b>30,955</b>	<b>30,626</b>	<b>43,394</b>	<b>40,129</b>	<b>45,570</b>	<b>521,109</b>
Fire/Temp/No Chg	645	1,130	389	1,252	499	302	99	81	81	65	60	232	4,835
<b>5-Year Average</b>													
Tier 1	17,109	17,010	16,887	15,995	15,879	15,383	15,193	14,303	14,176	15,460	16,090	16,515	190,000
Tier 2	9,955	9,957	9,743	8,001	7,212	6,163	5,865	4,905	4,650	6,149	7,521	8,300	88,420
Tier 3	9,421	9,506	9,166	6,795	5,551	4,214	3,797	3,028	2,835	4,130	5,651	6,968	71,061
Tier 4	10,616	11,157	11,350	7,247	5,301	4,231	3,837	2,845	2,262	3,730	5,422	6,737	77,475
All Other	8,386	8,796	8,385	7,294	6,672	5,628	5,236	4,775	4,393	5,245	5,864	6,735	74,410
<b>Total</b>	<b>55,531</b>	<b>56,426</b>	<b>55,531</b>	<b>45,333</b>	<b>40,615</b>	<b>35,619</b>	<b>33,928</b>	<b>29,856</b>	<b>28,316</b>	<b>34,713</b>	<b>40,548</b>	<b>45,254</b>	<b>501,626</b>
Fire/Temp/No Chg	645	1,130	389	1,252	499	302	99	81	81	65	60	232	4,835

### 3.3 Water Use per Tier for 3/4" & 1" Meters

The following table and charts show a breakdown of the number of bills ending in each tier in the prior fiscal year 2021/22 along with water use per tier for customer with 3/4-inch and 1-inch accounts who are billed tiered water rates.

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%



## 4 LEGAL REQUIREMENTS & RATE METHODOLOGY

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### 4.1 Constitutional Rate Requirements

The California Constitution includes two key articles that directly govern or impact JBWD's water rates: Article 10 and Article 13D. The water rates developed in this study were designed to comply with both of these constitutional mandates as well as various provisions of the California Water Code and Government Code that support and add further guidance for implementing these constitutional requirements. In accordance with the constitutional provisions, the proposed rates are designed to a) recover the District's cost of providing service, b) recover revenues in proportion to the cost for serving each customer, and c) promote conservation and discourage waste.

#### 4.1.1 Article 10, Section 2

Article 10, Section 2 of the California Constitution was established by voter-approval in 1976 and requires public agencies to maximize the beneficial use of water, prevent waste, and encourage conservation. Section 2 states that:

*It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.*

#### 4.1.2 Article 13D, Section 6

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water, sewer, and garbage rates. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water, sewer, and garbage service.

The substantive requirements of Article 13D, Section 6 require JBWD's water rates to meet the following conditions:

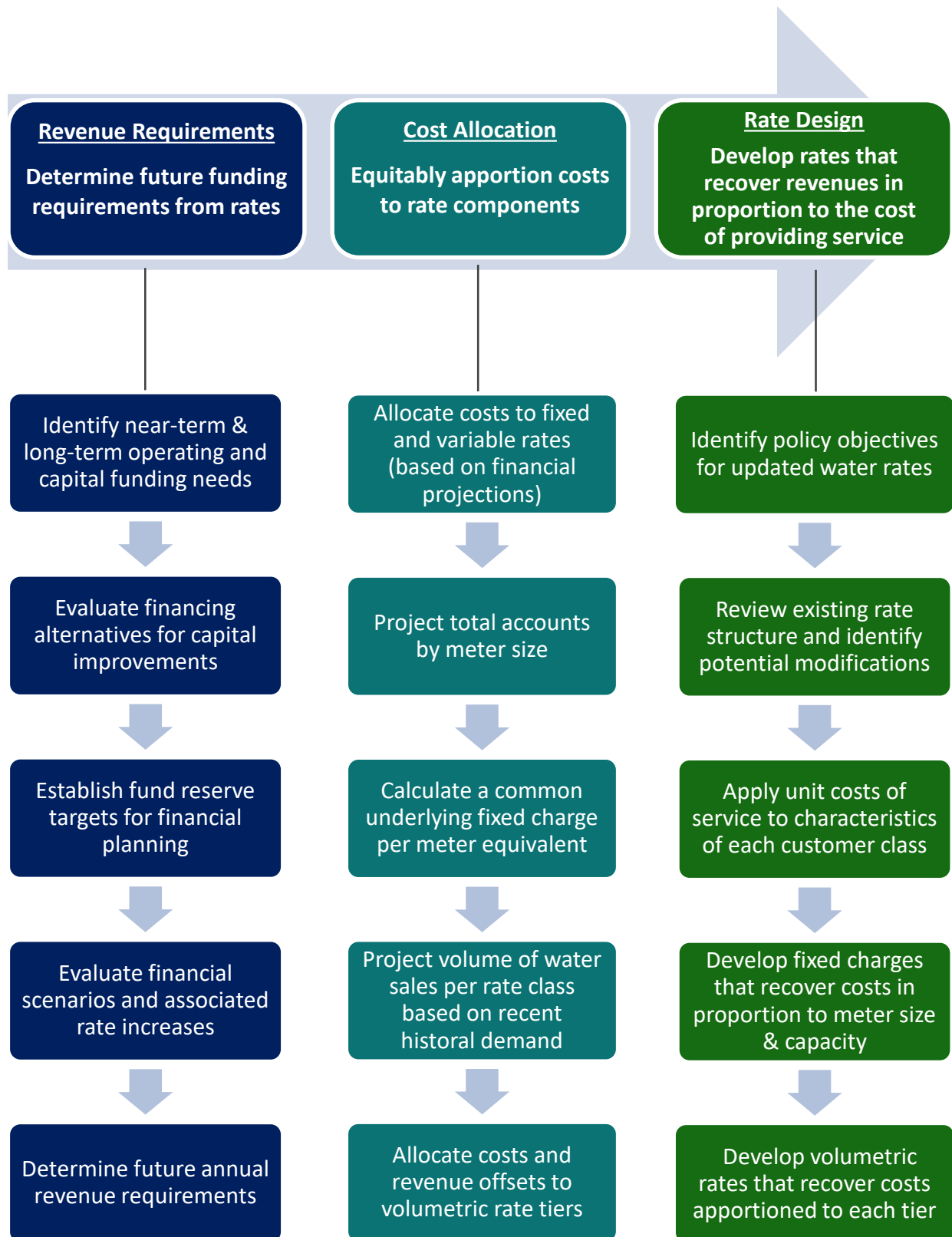
- 1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- 2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- 3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- 4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
- 5) No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

A number of court decisions have added some legal clarification regarding these substantive rate requirements. The water rates derived in this report are based on a cost-of-service methodology that is designed to fairly apportion costs to all customers and comply with all legal requirements.

## 4.2 Rate-Setting Methodology

The rates developed in this report use a cost-of-service methodology to establish an equitable system of fixed and variable service charges designed to equitably recover costs of providing service while aligning with District policy objectives to the extent possible. The general methodology used in this study is summarized on the diagram on the following page.

# Cost of Service Rate-Setting Methodology



## 5 FINANCIAL PROJECTIONS

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### 5.1 Financial Projections Overview

Bartle Wells Associates developed long-term cash flow projections to determine annual revenue requirements and evaluate water rate increases. During the rate study process, BWA worked with the District to evaluate a number of financial scenarios. Key scenarios evaluated include:

- **Best Management Practice Scenario** designed to fully fund JBWD’s projected operating and capital funding needs and ultimately support balanced budgets via rate increases phased in over the next 5 years;
- **Reduced Rate Scenario** that phases in slightly lower rate increases over the next 5 years to support projected funding needs while drawing down roughly \$2 million of fund reserves and deferring some rate increases to future years
- **Limit Rate Increases to 9% Per Year** and only partially increase capital funding levels while deferring more rate increases to future years.

Based on input received from the District and the Citizens Advisory Council, the rates developed in this report are based on the Best Management Practice Scenario, but are being proposed as *maximum rates*. The District anticipates reevaluating rates and finances in future years with the goal of only implementing rate increases as needed up to the maximum levels proposed.

### 5.2 Key Assumptions

The financial projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. Key assumptions are listed below:

- Operating expenses are based on the current fiscal year budget, which includes approximately \$7.1 million of operating and maintenance expenses
- Operating cost inflation is projected at 6% in the next fiscal year 2023/24 and subsequently at 4% per year thereafter
- Growth: The projections include 50 new single family homes or equivalents in the current fiscal year and 25 new equivalent connections per year thereafter
- Water Demand Elasticity: Water use projections assume each 10% increase in water usage charges results in a 1% decrease in water use
- Additional Staffing (deferred & reduced): The projections include an additional \$44,000 for additional staffing needs starting the current fiscal escalating to \$190,000 per year starting 2025/26. These levels of additional funding have been partially deferred and reduced from the District’s initial need-based estimates.

- Assumes \$18 million Chromium 6 Project funded by a \$10 million grant supplemented by an \$8 million low-rate State Revolving Fund Loan with a 30-year repayment term and a 2.75% annual interest rate resulting in \$400,000 in new annual debt service starting 2025/26.
- Chromium 6 operating expenses are estimated a \$750,000 per year starting in approximately 3 years in 2025/26 when the new treatment facilities are projected to begin operating.
- Imported water purchases for groundwater recharge from Mojave Water Agency are projected at 1,000 acre feet per year; roughly 85% of annual District water demand.
- Equipment/Technology replacement is projected to increase from prior budgeted levels of \$170,000 per year to \$375,000 per year based on District analysis of annual depreciation of vehicles and equipment accounting for new equipment needed for the CIRP program.
- Annual funding for Studies/Reports, many of which are state-mandated, is projected to increase from prior budgeted levels of \$50,000 per year to \$200,000 per year based on a conservative estimate of District needs.
- Meter Replacement Program funding, which was previously projected at \$500,000 per year, is reduced to \$185,000 per year for the next 7 years and then decreases to \$50,000 per year thereafter.
- Funding for a new administrative office building has been excluded from the financial projections.
- Capital improvement funding is projected at \$2.5 million per year with a conservative 3.5% annual cost escalation in future years.

### 5.3 Fund Reserves & Reserve Target

For financial planning purposes, the financial projections assume a Minimum Fund Reserve Target equal to 50% of annual operating and maintenance expenses plus \$2 million for emergency capital reserves. Maintaining a prudent minimal level of fund reserves is an important component of financial management. Fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. The fund reserve targets will escalate over time as JBWD's expenses gradually increase in future years. The projections indicate that the District will exceed the Minimum Fund Reserve Target in future years, which may provide the District with some flexibility for additional capital funding if needed, such as for higher-than-expected Chromium 6 project costs. The District may consider increasing its targeted levels of emergency capital reserves through a future Reserve Policy review.

### 5.4 Financial Projections

The following pages show 10-year financial projections under the proposed Best Management Practice Scenario.



**JBWD Cash Flow Projections - Best Management Practice Scenario**

**Years 1 - 5**

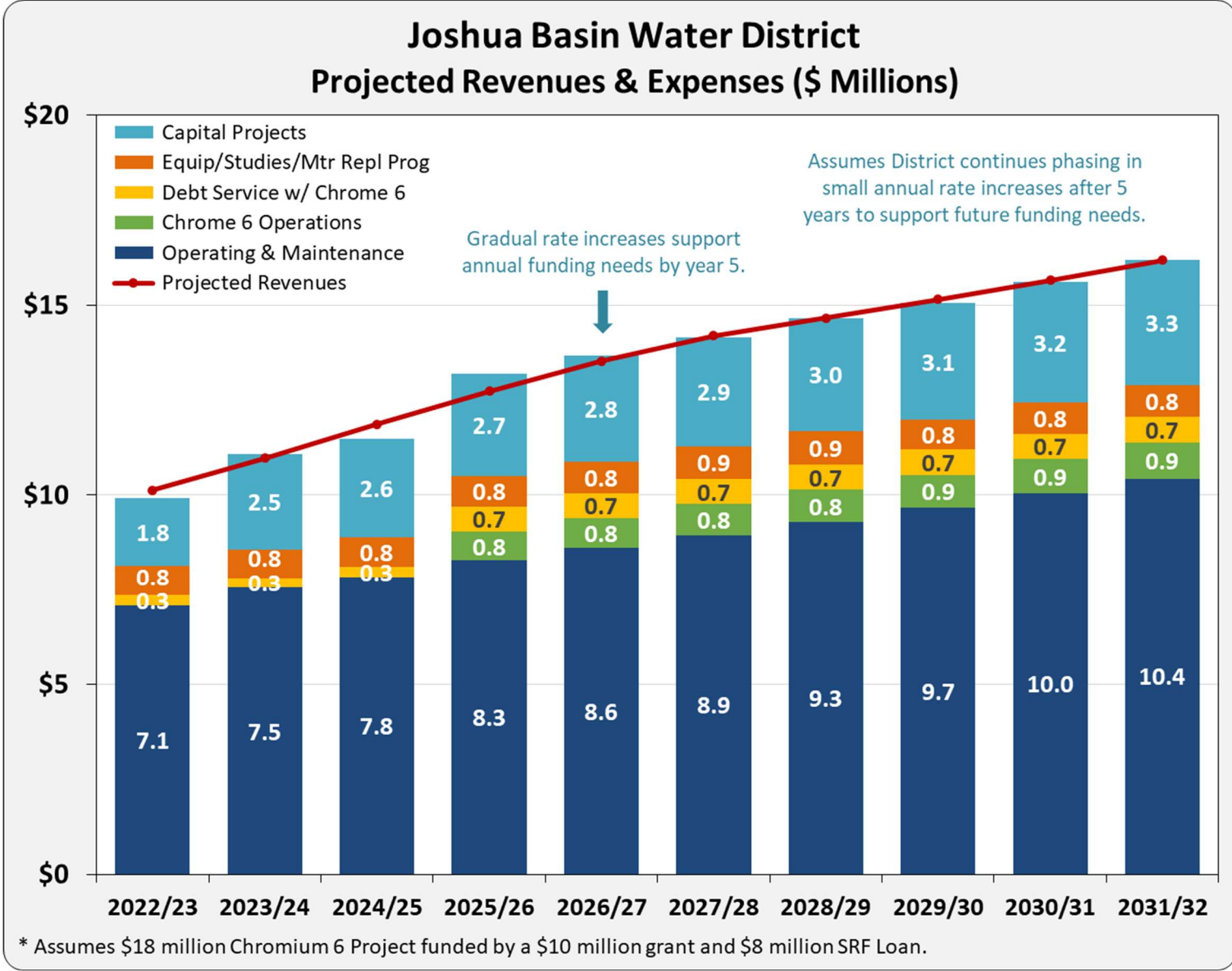
	1	2	3	4	5
	Projected 2022/23	Projected 2023/24	Projected 2024/25	Projected 2025/26	Projected 2026/27
1 Effective Date of Rate Adjustment	Mar-1	Jan-1	Jan-1	Jan-1	Jan-1
2 Overall Rate Increase Target	16%	14%	12%	10%	8%
3 Fixed Rate Increase %	5%	5%	5%	5%	5%
4 Usage Rate Increase %	23.2%	19.0%	15.4%	12.2%	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 (+3%/year)	\$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 <b>Beginning Fund Reserves</b>	\$12,846,000	\$13,068,000	\$12,971,000	\$13,365,000	\$12,913,000
14 <b>REVENUES</b>					
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 (+2%/year)	672,000	685,000	699,000	713,000	727,000
21 Private Fire Svc & Special Services (+2%/year)	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 <b>EXPENSES</b>					
31 <b>Operating &amp; Maintenance</b>					
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 <b>Debt Service</b>					
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 <b>Capital/Non-Operating</b>					
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 (excluded)	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 <b>Revenues Less Expenses</b>	222,000	(97,000)	394,000	(452,000)	(129,000)
62 <b>Ending Fund Reserves</b>	13,068,000	12,971,000	13,365,000	12,913,000	12,784,000
63 Min Fund Rsrv 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)

**JBWD Cash Flow Projections - Best Management Practice Scenario**

**Years 6 - 10**

	6	7	8	9	10
	Projected 2027/28	Projected 2028/29	Projected 2029/30	Projected 2030/31	Projected 2030/31
Effective Date of Rate Adjustment	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Overall Rate Increase Target	4%	4%	4%	4%	4%
Fixed Rate Increase %	4%	4%	4%	4%	4%
Usage Rate Increase %	4.0%	4.0%	4.0%	4.0%	4.0%
Growth: New 1" Meters or Equivalents	25	25	25	25	25
Growth %	0.5%	0.5%	0.5%	0.5%	0.5%
Wtr Demand Elasticity (Response to Rate Inc)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Change in Water Use After Rate Increase	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%
Water Purchases from MWA (AF)	1,000	1,000	1,000	1,000	1,000
MWA Rate per AF (+3%/year)	\$726	\$748	\$770	\$793	\$817
Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%
Annual Cost Escalator	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Beginning Fund Reserves</b>	\$12,784,000	\$12,806,000	\$12,786,000	\$12,856,000	\$12,878,000
<b>REVENUES</b>					
Basic Monthly Fees	3,369,000	3,521,000	3,680,000	3,846,000	4,019,000
Water Usage Charges	7,341,000	7,604,000	7,877,000	8,159,000	8,452,000
Basic Monthly Fees: Locked Meters	480,000	499,000	519,000	540,000	562,000
Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Property Taxes (+2%/year)	742,000	757,000	772,000	787,000	803,000
Private Fire Svc & Special Services (+2%/year)	220,000	224,000	228,000	233,000	238,000
Water Capacity & Meter Install Fees	258,000	258,000	258,000	258,000	258,000
Interest Earnings & Gain Loss/Chg Mkt Value	192,000	192,000	192,000	193,000	193,000
HDMC WWTP Reimbursements	349,000	362,000	377,000	392,000	407,000
Other Revenues	25,000	25,000	25,000	25,000	25,000
<b>Total Revenues</b>	<u>14,176,000</u>	<u>14,642,000</u>	<u>15,128,000</u>	<u>15,633,000</u>	<u>16,157,000</u>
SRF Grant for Chromium 6 Project					
SRF Loan for Chromium 6 Project					
<b>EXPENSES</b>					
<b>Operating &amp; Maintenance</b>					
Production	1,687,000	1,754,000	1,824,000	1,897,000	1,973,000
Recharge Water Purchases from MWA	726,000	748,000	770,000	793,000	817,000
Distribution	1,503,000	1,563,000	1,626,000	1,691,000	1,759,000
Customer Service	965,000	1,004,000	1,044,000	1,086,000	1,129,000
Administration	1,556,000	1,618,000	1,683,000	1,750,000	1,820,000
Finance	1,154,000	1,200,000	1,248,000	1,298,000	1,350,000
Human Resources	331,000	344,000	358,000	372,000	387,000
HDMC WWTP Operations (reimbursable)	286,000	297,000	309,000	321,000	334,000
Standby Admin/Developmt & Engineering	108,000	112,000	116,000	121,000	126,000
Add'l Staffing Needs (deferred & reduced)	206,000	214,000	223,000	232,000	241,000
CIRP Program (Operating Portion)	549,000	571,000	594,000	618,000	643,000
Capitalized Overhead Adjustment	(124,000)	(129,000)	(134,000)	(139,000)	(145,000)
Chrome 6 Operations (estimated)	811,000	843,000	877,000	912,000	948,000
<b>Subtotal</b>	<u>9,758,000</u>	<u>10,139,000</u>	<u>10,538,000</u>	<u>10,952,000</u>	<u>11,382,000</u>
<b>Debt Service</b>					
2018 Installment Sale Agmt (CIRP)	268,000	268,000	268,000	268,000	268,000
Chrome 6 SRF Loan (\$8M, 2.75%, 30-Yr)	400,000	400,000	400,000	400,000	400,000
<b>Subtotal</b>	<u>668,000</u>	<u>668,000</u>	<u>668,000</u>	<u>668,000</u>	<u>668,000</u>
<b>Capital/Non-Operating</b>					
Capital Improvement Program (CIP)	2,870,000	2,970,000	3,074,000	3,182,000	3,293,000
Equipment/Technology	439,000	457,000	475,000	494,000	514,000
Studies/Reports	234,000	243,000	253,000	263,000	274,000
Chromium 6 Project (grant & loan funded)	0	0	0	0	0
Meter Replacement Program	185,000	185,000	50,000	52,000	54,000
Admin Building & Financing (excluded)	0	0	0	0	0
<b>Subtotal</b>	<u>3,728,000</u>	<u>3,855,000</u>	<u>3,852,000</u>	<u>3,991,000</u>	<u>4,135,000</u>
<b>Total Expenses</b>	<u>14,154,000</u>	<u>14,662,000</u>	<u>15,058,000</u>	<u>15,611,000</u>	<u>16,185,000</u>
<b>Revenues Less Expenses</b>	22,000	(20,000)	70,000	22,000	(28,000)
<b>Ending Fund Reserves</b>	12,806,000	12,786,000	12,856,000	12,878,000	12,850,000
Min Fund Rsrv Target (50% O&M+\$2M)	6,879,000	7,069,500	7,269,000	7,476,000	7,691,000
Debt Service Coverage	6.61	6.74	6.87	7.01	7.15
Cumulative Change in Fund Reserves	(40,000)	(60,000)	10,000	32,000	4,000

The following chart shows a 10-year breakdown of projected expenses and future revenues with the projected rate increases. The projected rate increases are designed to fully fund JBWD’s projected operating and capital funding needs and ultimately support balanced budgets via rate increases phased in over the next 5 years



## 5.5 Projected Rate Increases

The following table shows projected overall water rate increases along with a breakdown of projected fixed and usage rate increases. The projected rates are designed to limit increases to the District’s fixed Basic Monthly Fees to 5% per year with the remaining required rate increases generated from increases to volumetric Water Flow Charges.

The proposed rate increases are phased in over 5 years in order to keep revenues in line with funding needs and help minimize the annual impact on ratepayers. Actual billing impacts will vary depending on each customer’s meter size and water consumption, as the proposed rates also include some adjustments to the District’s rate structure. While rate increases in early years are higher in percentage terms compared to the rate increases in later years, due to compounding, the actual dollar impacts on customer bills are more constant from year to year.

Projected Water Rate Increases					
	Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
Overall Rate Increases	16%	14%	12%	10%	8%
Fixed Rate Increases	5.0%	5.0%	5.0%	5.0%	5.0%
Usage Rate Increases	23.2%	19.0%	15.4%	12.2%	9.3%

Note: Due to rate structure adjustments, impacts will vary based on meter size & water use.

## 6 RATE DERIVATION

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### 6.1 Rate Structure Modifications

The District's current water rate structure reflects input received in prior years from the District's Citizens Advisory Council and Board of Directors.

- Over the years, there have been less increases to fixed Basic Monthly Fees coupled with higher increases to volumetric Water Flow Charges. These rate structure adjustments were designed to help reduce the billing impacts on low users and gradually increase conservation incentive.
- Over the years, the differences between the rates levied in each tier (for customers with smaller meter sizes) have gradually widened. Prior to 2007, the rates levied in each successive tier were only 10 cents higher than the prior tier, but now escalate by \$1.50 per tier.
- Based on input from a prior Citizens Advisory Council, the number of tiers was increased from 3 to 4 tiers for customers with 3/4-inch and 1-inch meters, and a uniform rate was established for customers with larger meters.

Based on evaluation of current water rates and additional input received during the rate study process, the proposed rates developed in this report incorporate some additional modest adjustments to JBWD's water rate structure. These modifications are designed to a) provide a reasonable and appropriate balance of fixed vs. usage-based revenue recovery, b) gradually increase conservation incentive while helping to minimize the financial impact on customers with low to moderate water use, c) fairly apportion costs of service to all JBWD customers in accordance with the substantive requirements of Article 13D, Section 6 of the California Constitution, and d) reflect the policy preferences of the District and the *Citizens Advisory Council*. Rate structure modifications are summarized as follows.

#### 6.1.1 Less Increase to Fixed Meter Charges

The proposed rates include lower 5% annual increases to fixed Basic Monthly Fees coupled with larger increases to volumetric Water Flow Charges. While this will result in some increases to fixed charges, it will also help keep fixed charges more affordable and reduce the overall billing impacts on customers with lower levels of water use.

#### 6.1.2 More Increases to Water Usage Charges

With fixed rate increases limited to 5% per year, more increases are required from water usage charges. Increases to water usage rates and tiers are phased in over 5 years.

### 6.1.3 Widening the Differences in Rates Between Tiers

The District's Water Flow Charges for accounts with 3/4-inch and 1-inch meters (mostly residential customers) are billed according a 4-tiered inclining rate structure with water first purchased in Tier 1 and subsequently in higher tiers as water use increases. Based on an updated cost of service analysis deriving the proposed rates, the rate differential between each tier gradually increases over 5 years from a current difference of \$1.50 per hcf between successive tiers to a difference of \$2.00 per hcf between successive tiers. This results in more increases to higher tiers and less increases to lower rate tiers. Note that all customers first use water in the lowest tier and hence also receive benefit due to lower rates for lower levels of water use. High use customers will face slightly higher rate increases for higher level of water use, but also benefit from paying the same fixed monthly charges as lower-use customers, even though they put more demand on the water system.

## 6.2 Fixed & Variable Cost Recovery

Rates developed in this report are based on an allocation of costs to fixed and variable rate recovery as shown on the following table. Costs are allocated based on projected expenses in 2026/27, the final year of the proposed rates. Revenues derived from sources other than water rates are applied toward reducing cost recovery from rates. Based on the cost allocations, water rates are designed to recover 36% of rate revenues from JBWD's fixed Basic Monthly Fees and 64% of rate revenues from volumetric Water Flow Charges, well in line with industry norms.

<b>Fixed vs. Variable Rate Recovery</b>					
	Year 5 2026/27	Cost Recovery %		Cost Recovery \$	
		Fixed	Variable	Fixed	Variable
<b>EXPENSES</b>					
<b>Operating &amp; Maintenance</b>					
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
<b>Debt Service</b>					
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
<b>Non-Operating/Discretionary</b>					
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
<b>Total Expenses</b>	<b>13,663,000</b>	<b>35.7%</b>	<b>64.3%</b>	<b>4,874,700</b>	<b>8,788,300</b>
<b>NET FUNDING REQUIRED FROM WATER RATES</b>					
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		<b>36.0%</b>	<b>64.0%</b>		

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

Depending on perspective, many costs can reasonably be allocated to either fixed rate revenue recovery, to usage-based rate recovery, or to some combination of the two. Many of the District's costs are fixed costs that do not vary with changes in water consumption, such as salaries, benefits, and costs for building and maintaining infrastructure. However, even though these are fixed expenses, revenue recovery for these costs can equitably be funded from variable, usage-based rates. For example, the fixed costs related to water production can reasonably be recovered from usage-based charges as these costs are incurred to provide water supply to meet customer demand, hence it is reasonable to recover these costs based on water use.

While there is no single correct approach to revenue recovery, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) policy preferences in cases where a range of reasonable approaches can be justified. As shown on the table:

- Costs related to water production, groundwater recharge, and distribution are allocated for recovery from volumetric rates. Under this approach, the costs related to water supply and distribution are recovered based on each customer's metered water consumption.
- Costs for administration and other support functions such as finance, engineering, legal, and to a larger degree customer service, are allocated primarily to cost recovery from fixed charges with a smaller share of revenue recovery from usage-based charges.
- Capital improvement related expenses are allocated for 25% cost recovery from fixed charges (which are based on the capacity needs for serving each meter size) and 75% cost recovery from volumetric rates. This reflects a balance in revenue recovery recognizing that a) infrastructure is needed to meet the demands of each meter size regardless of actual use, and also b) customers who use more water place a higher demand on the system and should pay based on their proportional share of water use.
- Projected operating and debt service expenses related to Chromium 6 treatment are allocated for 100% cost recovery from volumetric rates to be recovered based on metered water consumption.
- Costs for the District's meter replacement program are allocated for 100% cost recovery from fixed charges.
- Costs for Equipment/Technology and Studies/Reports are allocated to be recovered 50% from fixed charges and 50% from volumetric charges.
- Revenues received from sources other than rates (property taxes, standby charges, interest earnings, etc.) are used to offset the revenue requirements from fixed and volumetric rates based on the same overall share of expenses allocated for cost recovery from fixed and volumetric rates.



### 6.3 Fixed Rate Derivation

The proposed fixed meter charges are designed to recover costs from each meter in proportion to meter capacity and the associated demand placed on the water system by each meter size. The table below derives fixed meter charges effective January 1, 2027, the final year of rate increases projected for the next 5 years. Revenue requirements from fixed charges are calculated by multiplying a) the annualized revenue requirement from water rates effective Jan-1, 2027 by b) 36%, the percentage of costs allocated for fixed rate revenue recovery. This fixed rate funding target is then divided by the total number of projected meter equivalents that JBWD will serve in 2026/27 to determine a fixed charge per meter equivalent. A meter equivalent represents the capacity of a base 3/4-inch or 1-inch meter. Fixed rates for larger meters are then calculated in proportion to the capacity of each meter size in relation to that of the base meter size. For example, a 3-inch meter has 10 times the capacity of the base meter size and would pay a fixed charge that is also 10 times that of the base meter size.

Fixed Rate Derivation		
<b>Water Rate Revenue Recovery</b>		
Annualized Revenues w/ Rate Increases Effective Jan-1, 2027		\$10,549,000
<b>Fixed Rate Recovery</b>		
Cost Recovery Allocation %		36%
Cost Recovery Allocation \$		\$3,797,640
<b>Meter Equivalents</b>		
Active Water Accounts		5,088
Locked Meter Accounts		765
Projected Growth Through 2026/27		<u>150</u>
Total		6,003
<b>Rate per Meter Equivalent</b>		
Annual		\$632.62
Monthly		52.72
Rounded		52.70
<b>Projected Fixed Monthly Meter Charges Effective Jan-1, 2027</b>		
<u>Meter Size</u>	<u>Capacity (gpm)</u>	
3/4" & 1"	30	\$52.70
1-1/2"	100	175.67
2"	160	281.07
3"	300	527.00

## 6.4 Projected Water Use

The following table shows a 5-year projection of water use by rate class. Projected water use is based on the prior 5-year average with future use adjusted to account for a) overall elasticity of water purchases in response to rate increases, with each 10% increase to Water Flow Charges projected to result in a corresponding 1% reduction in water sales, and b) higher levels of water reduction in the higher rate tiers, and less reduction in lower rate tiers. If a customer cuts back water use by 10%, from 20 hcf to 18 hcf, they have reduced their Tier 3 consumption by 2 hcf, but are still using the full amount of water in the first two tiers. Hence, agencies experiencing a decline in water use typically face less reductions in the lowest rate tier coupled with higher percentage reductions in higher tiers. A small amount of Increased water use from growth is projected to be offset by additional conservation. Based on the projections, total water consumption is projected to decrease by 7% over the next 5 years in response to the projected increases to the District’s Water Flow Charges.

Projected Water Use						
	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
<b>Total Annual Use</b>						
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%

## 6.5 Water Flow Charge Derivation

The District's Water Flow Charges are designed to recover 64% of total rate revenues. For purposes of deriving rates for each of the District's rate tiers, costs allocated for recovery from volumetric rates are further broken down and allocated based on a Base vs. Extra Capacity approach.

- Base costs are defined as expenses associated with providing system capacity and water service under base, wet weather months with the lowest levels of water use. These costs benefit all water use on a pro-rata basis. For example, the costs of water production are recovered based on each customer's proportionate share of total water consumption. Hence, Base Costs are recovered equally from each unit of water sold.
- Extra Capacity costs are defined as expenses related to providing system capacity and water service to meet peak demands in excess of base use. Water system facilities must generally be oversized to meet peak-day and peak-hour demands, which require additional system capacity similar to the need for additional lanes on a highway to meet peak rush hour demands even though fewer lanes would otherwise be adequate for non-rush hour traffic. Additionally, there are some costs that should be recovered more from higher levels of use, such as costs related to the District's conservation program.

The table on the following page shows a breakdown of costs allocated for fixed and variable rate recovery. Costs slated for variable rate recovery are subsequently allocated to Base and Extra Capacity. Most of these costs are assigned as Base costs. Costs allocated to Extra Capacity include:

- Approximately 10% of customer service expenses are related to the District's conservation program and are assigned for variable rate recovery. 100% of these costs are subsequently allocated to Extra Capacity in recognition that conservation program costs are incurred largely due to the need to reduce water consumption of customers with higher levels of water use.
- Of the 75% of capital improvement costs allocated for variable rate recovery, 20% of these costs are allocated to Extra Capacity, resulting in 15% of total capital improvement costs allocated to Extra Capacity needed to meet peak demands. 15% is a conservative estimate of the share of water system costs associated with meeting peak demands in excess of base use.
- Similarly, of the 75% of net Capital Improvement Replacement Program (CIRP) Program expenses allocated for variable rate recovery, 20% of these costs are allocated to Extra Capacity, resulting in 15% of CIRP capital improvement costs allocated to Extra Capacity.
- A conservatively estimated 10% of the share of debt service allocated for variable rate recovery is further allocated to Extra Capacity, as debt service is essentially an amortized cost for infrastructure.

### Water Flow Charge Recovery with Base vs. Extra Capacity Cost Allocations

	Projected Expenses 2026/27	Fixed Rate Recovery	Usage Rate Allocation		Base %	Extra Capacity %	Base \$	Extra Capacity \$
			Usage Rate Recovery	Usage Rate Recovery				
<b>REVENUE REQUIREMENT FROM WATER USAGE CHARGES</b>								
<b>Expenses Fully Allocated for Base Usage Rate Revenue Recovery</b>								
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	
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)	188,000	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	
<b>Subtotal</b>	<b>8,885,000</b>	<b>3,177,000</b>	<b>5,708,000</b>	<b>100.0%</b>	<b>0.0%</b>	<b>5,708,000</b>	<b>0</b>	
<b>Expenses Partially Allocated for Extra Capacity Revenue Recovery</b>								
Customer Service (10% for Conservation Prog.)	928,000	835,200	92,800	0%	100%	0	92,800	
Debt Service	668,000	67,000	601,000	90%	10%	540,900	60,100	
CIRP Program Less Capitalized Portion	409,000	102,250	306,750	80%	20%	245,400	61,350	
Capital Improvements	2,773,000	693,250	2,079,750	80%	20%	1,663,800	415,950	
<b>Subtotal</b>	<b>4,778,000</b>	<b>1,697,700</b>	<b>3,080,300</b>	<b>79.5%</b>	<b>20.5%</b>	<b>2,450,100</b>	<b>630,200</b>	
<b>Total</b>	<b>13,663,000</b>	<b>4,874,700</b>	<b>8,788,300</b>	<b>92.8%</b>	<b>7.2%</b>	<b>8,158,100</b>	<b>630,200</b>	
<b>Offsetting Non-Rate Revenues</b>								
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	
<b>Subtotal</b>	<b>2,956,000</b>	<b>1,054,645</b>	<b>1,901,355</b>	<b>85.2%</b>	<b>14.8%</b>	<b>1,620,783</b>	<b>280,572</b>	

The following table derives water usage rates for each rate class and tier. The rates are calculated for January 1, 2027, the final year of the 5-year rate projections. Rates derived for each class and tier are based on a) net costs allocated to each tier divided by b) projected water use in each tier.

- Base costs are allocated on a pro-rata basis to all water use; each unit of water pays the same.
- Extra Capacity costs are allocated for recovery from higher tiers based on the share of water in each tier that exceeds base levels of use based on analysis of monthly water use data over the past 5 years.
- A portion of property tax revenues allocated toward offsetting volumetric rates is fully allocated to Tier 1, resulting in a partial reduction of the Tier 1 rate. All customers with 3/4-inch and 1-inch meters benefit from partially reduced Tier 1 rates as their water use is first billed in Tier 1 regardless of how much they use.
- A proportionate share of costs are applied to the uniform water quantity charges calculated for customers with larger meter sizes, resulting in charges for all other customers that equal the weighted average rate from the tiered rates for customers with 3/4-inch and 1-inch meters. This approach ensures equity between customer classes. These larger customers are not a homogenous group and can include anything from an office or apartment building to a school or hospital. As such, it is challenging and problematic to establish tiers that can reasonably apply to such a wide range of customer types and usage patterns. Hence the District, like most water agencies in California, charges a uniform rate to larger commercial and institutional customers. These customers do not get the benefit of the lower Tier 1 rates but also do not pay more per unit for higher levels of water use. Only about 1% of the District's customers are served by larger meters.

Water Flow Charge Derivation						
	3/4" and 1" Meters					All Other Use
	Tier 1 0 - 5	Tier 2 5.01 - 10	Tier 3 10.01 - 20	Tier 4 20.01+	Subtotal	
<b>Projected Water Use (hcf)</b>	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%
<b>Extra Capacity Cost Allocation</b>						
% 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%
<b>Base Water Flow Charge (\$/hcf)</b>	\$14.76	\$14.76	\$14.76	\$14.76	\$14.76	\$14.76
<b>Adjustments for Extra Capacity &amp; Prop Tax Allocations (\$/hcf)</b>						
Extra Capacity Expenses	\$0	\$58,123	\$170,192	\$300,950	\$100,935	\$100,935
Less Allocated Prop Tax Offset	(235,635)	0	0	0	(44,937)	(44,937)
Total	(235,635)	58,123	170,192	300,950	55,997	55,997
Divided by Water Use in Tier	187,100	79,000	62,100	63,500	74,700	74,700
Net Adjustments (\$/hcf)	(\$1.26)	\$0.74	\$2.74	\$4.74	\$0.74	\$0.74
<b>Water Flow Charges Effective Jan-1, 2027 (\$/hcf)</b>	\$13.50	\$15.50	\$17.50	\$19.50	\$15.50	\$15.50

## 6.6 Private Fire Protection Charges

JBWD provides water to 24 private fire service connections. While the District’s water system is generally sized to provide capacity for fire flow to benefit all properties served by the District, customers with separate private fire service connections receive additional benefit for having direct fire service connections and the District has to maintain its infrastructure leading up to the service lateral. Unlike regular ongoing water service, private fire service is essentially a stand-by service that is rarely used. In line with industry standards and historical District practice, Private Fire Protection Charges are conservatively calculated at 10% of the standard Basic Monthly Fee and proportionally applied to the capacity of each service size.

Projected Private Fire Service Charges								
		Current Rates	Projected Rates Effective					
			Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	
Projected Basic Monthly Fee	30 gpm	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	
10% Allocation		4.140	4.340	4.560	4.780	5.020	5.270	
<b>Private Fire Protection Charges</b>								
<i>Fixed monthly charge based on the size of each service connection</i>								
<u>Service Size</u>	<u>Accounts</u>	<u>Capacity</u>						
2 inches	2	160 gpm	\$22.05	\$23.15	\$24.29	\$25.49	\$26.77	\$28.11
3 inches	0	300 gpm	41.34	43.40	45.60	47.80	50.20	52.70
4 inches	7	500 gpm	68.91	72.34	75.91	79.66	83.66	87.84
6 inches	6	1,000 gpm	137.81	144.69	151.81	159.31	167.31	175.69
8 inches	9	1,600 gpm	220.50	231.50	242.90	254.90	267.70	281.10

## 7 PROPOSED RATES & IMPACTS

### 7.1 Proposed Maximum Rates

The following table shows a 5-year schedule of proposed water rates. Rate increases are gradually phased in over the next 5 years based on the annual rate increases identified in the financial projections. The proposed rates are maximum rates. The District anticipates reevaluating rates and finances in future years with the goal of only implementing rate increases as needed.

Proposed Maximum Water Rates						
	Current Water Rates	Projected Rates Effective				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b><u>For 3/4" and 1" Meters</u></b>						
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
<b><u>For 1-1/2", 2" and 3" Meters</u></b>						
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 (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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



## 7.2 Water Rate Impacts

The table on the following page shows the impacts of the proposed water rates on monthly bills for customers with 3/4-inch and 1-inch meters at a range of levels of water use. With full implementation of the proposed rate increases, the monthly bill for a typical single family home with 6 hcf of water use would gradually increase from the current level of \$80.05 to \$135.70 over the next 5 years. This equates to a total 5-year increase of 69.5% and an average annual compounded increase of 11.1% per year. More than half of the District’s bills are currently at or below this level of use.

Billing Impacts (3/4" & 1" Meters)												
Monthly Use			Current	Projected Monthly Bills					5-Year Impact			
Use (hcf)	% of Bills	% of Bills at or Below	Monthly Bill	Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	Ttl %	Avg%/Yr	
0	5.0%	<i>Excl Zeros</i>	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	5.0%	
1	9.9%	10.4%	47.55	51.20	55.05	58.80	62.50	66.20	18.65	39.2%	6.8%	
2	10.9%	21.9%	53.75	59.00	64.55	69.80	74.80	79.70	25.95	48.3%	8.2%	
3 Low	10.6%	33.0%	59.95	66.80	74.05	80.80	87.10	93.20	33.25	55.5%	9.2%	
4	9.5%	43.0%	66.15	74.60	83.55	91.80	99.40	106.70	40.55	61.3%	10.0%	
5 Median	8.1%	51.6%	72.35	82.40	93.05	102.80	111.70	120.20	47.85	66.1%	10.7%	
6 Typical	6.6%	58.4%	80.05	91.90	104.35	115.70	125.95	135.70	55.65	69.5%	11.1%	
7	5.5%	64.3%	87.75	101.40	115.65	128.60	140.20	151.20	63.45	72.3%	11.5%	
8 Average	4.8%	69.3%	95.45	110.90	126.95	141.50	154.45	166.70	71.25	74.6%	11.8%	
9	4.0%	73.5%	103.15	120.40	138.25	154.40	168.70	182.20	79.05	76.6%	12.1%	
10	3.1%	76.7%	110.85	129.90	149.55	167.30	182.95	197.70	86.85	78.3%	12.3%	
11	2.6%	79.5%	120.05	141.10	162.65	182.10	199.15	215.20	95.15	79.3%	12.4%	
12	2.2%	81.7%	129.25	152.30	175.75	196.90	215.35	232.70	103.45	80.0%	12.5%	
13	1.9%	83.7%	138.45	163.50	188.85	211.70	231.55	250.20	111.75	80.7%	12.6%	
14	1.7%	85.5%	147.65	174.70	201.95	226.50	247.75	267.70	120.05	81.3%	12.6%	
15	1.3%	86.9%	156.85	185.90	215.05	241.30	263.95	285.20	128.35	81.8%	12.7%	
16	1.2%	88.2%	166.05	197.10	228.15	256.10	280.15	302.70	136.65	82.3%	12.8%	
17	1.0%	89.2%	175.25	208.30	241.25	270.90	296.35	320.20	144.95	82.7%	12.8%	
18	1.0%	90.2%	184.45	219.50	254.35	285.70	312.55	337.70	153.25	83.1%	12.9%	
19	0.8%	91.1%	193.65	230.70	267.45	300.50	328.75	355.20	161.55	83.4%	12.9%	
20	0.8%	91.9%	202.85	241.90	280.55	315.30	344.95	372.70	169.85	83.7%	12.9%	
21	0.7%	92.6%	213.55	254.80	295.45	332.00	363.10	392.20	178.65	83.7%	12.9%	
22	0.6%	93.3%	224.25	267.70	310.35	348.70	381.25	411.70	187.45	83.6%	12.9%	
23	0.5%	93.9%	234.95	280.60	325.25	365.40	399.40	431.20	196.25	83.5%	12.9%	
24	0.4%	94.3%	245.65	293.50	340.15	382.10	417.55	450.70	205.05	83.5%	12.9%	
25	0.4%	94.7%	256.35	306.40	355.05	398.80	435.70	470.20	213.85	83.4%	12.9%	

The billing impacts shown on the table do not account for any potential reduction in future water use due to additional conservation. Customers can help mitigate the impact of the proposed rate increases by reducing water use and the cost of water purchases. Water consumption can vary from month to month due to seasonal variations in weather and/or other factors. Hence customers could face a range of impacts throughout the year depending on their level of water use in each billing period.

## 8 WATER SHORTAGE CONTINGENCY RATE SURCHARGES

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### 8.1 Water Shortage Contingency Rate Surcharges

JBWD is proposing to authorize a series of Water Shortage Contingency Rate Surcharges that could be implemented to support financial stability and help ensure adequate funding for water utility operations during periods of water shortages, mandatory cutbacks, or reduced water sales. These surcharges would be billed based on metered water use and levied in addition to JBWD's regular water rates. As proposed, these rates would be temporary surcharges that could be phased in and phased out at the discretion of JBWD's Board of Directors.

The proposed surcharges were developed to correspond with the Water Shortage Contingency Stages identified in JBWD's 2020 Water Shortage Contingency Plan. Each stage may be triggered by a declaration from federal or state authorities or JBWD's Board of Directors. No surcharges are proposed for Stage 1 water shortages.

A table deriving the proposed surcharges is shown on the following page and accounts for a number of financial impacts during water shortages and periods of reduced water sales including:

- A loss of volumetric water rate revenues due to a reduction in the volume of water sales.
- Reduced variable expenses due to reduced volumes of water production and supply. The analysis accounts for reduced costs for electricity and chemicals related to groundwater production based on analysis of the average costs per hcf incurred in 2021 adjusted for cost inflation, as well as a reduction in the volume of imported recharge water purchased from Mojave Water Agency.
- A conservative estimate of additional costs the District would need to incur to achieving water demand cutback targets, such as costs for an enhanced conservation program and water demand mitigation efforts, and costs related to compliance with drought-related regulations.

Derivation of Water Shortage Contingency Rate Surcharges					
	Water Shortage Contingency Stages				
	Stage 2 Moderate Shortage	Stage 3 Severe Shortage	Stage 4 Critical Shortage	Stage 5 Emergency Shortage	Stage 6 Catastrophic Failure
<b>Water Shortage or Mandated Reduction</b>	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
<b>Water Demand Reduction Target %</b>	15%	25%	35%	45%	50%
<b>Normal Year Water Use (hcf)</b>					
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
<b>Water Reduction Target (hcf)</b>					
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
<b>Net Use with Reduction (hcf)</b>					
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
<b>Avg Water Flow Rates by Year</b>					
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
<b>Revenue Loss by Year</b>					
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
<b>Est. Reduced Expenses due to Lower Use</b>					
Variable Cost per Unit (\$/hcf) <sup>1</sup>					
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
<b>Add'l Conservation &amp; Compliance Costs<sup>2</sup></b>	\$0	\$50,000	\$100,000	\$150,000	\$200,000
<b>Net Financial Impact</b>					
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
<b>Required Rate Surcharge (\$/hcf)</b>					
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.

2 Estimate of additional costs that would be incurred to meet water cutback targets for each stage.

Proposed water shortage contingency rate surcharges are listed in the table below and represent the maximum surcharges that JBWD would be authorized to levy during each water shortage contingency stage at the discretion of the Board of Directors. These surcharges can be phased in corresponding with escalating water shortages in order to support financial stability under associated escalating water reduction requirements. The surcharges can also be phased out as water use gradually rebounds after a water shortage has ended.

<b>Proposed Water Shortage Contingency Rate Surcharges</b>					
<b>Water Shortage Contingency Stage</b>	<b>Stage 2 Moderate Shortage</b>	<b>Stage 3 Severe Shortage</b>	<b>Stage 4 Critical Shortage</b>	<b>Stage 5 Emergency Shortage</b>	<b>Stage 6 Catastrophic Failure</b>
<b>Water Shortage or Mandated Reduction</b>	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
<b>Maximum Rate Surcharge (\$/hcf)</b>					
<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.

# **APPENDIX A**

## **Financial & Rate Scenarios**

Table A1		JBWD Cash Flow Projections - Best Management Practice Scenario A				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	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 (+3%/year)	\$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	<b>Beginning Fund Reserves</b>	\$12,846,000	\$13,068,000	\$12,971,000	\$13,365,000	\$12,913,000
14	<b>REVENUES</b>					
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 (+2%/year)	672,000	685,000	699,000	713,000	727,000
21	Private Fire Svc & Special Services (+2%/year)	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	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Debt Service</b>					
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	<b>Capital/Non-Operating</b>					
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 (excluded)	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	<b>Revenues Less Expenses</b>	222,000	(97,000)	394,000	(452,000)	(129,000)
62	<b>Ending Fund Reserves</b>	13,068,000	12,971,000	13,365,000	12,913,000	12,784,000
63	Min Fund Rsrv 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)

<b>Table A1 JBWD Cash Flow Projections - Best Management Practice Scenario A</b>		<b>Years 6 - 10</b>				
	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	
	<b>Projected 2027/28</b>	<b>Projected 2028/29</b>	<b>Projected 2029/30</b>	<b>Projected 2030/31</b>	<b>Projected 2030/31</b>	
1	Effective Date of Rate Adjustment	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
2	Overall Rate Increase Target	4%	4%	4%	4%	4%
3	Fixed Rate Increase %	4%	4%	4%	4%	4%
4	Usage Rate Increase %	4.0%	4.0%	4.0%	4.0%	4.0%
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	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%
9	Water Purchases from MWA (AF)	1,000	1,000	1,000	1,000	1,000
10	MWA Rate per AF (+3%/year)	\$726	\$748	\$770	\$793	\$817
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	<b>Beginning Fund Reserves</b>	\$12,784,000	\$12,806,000	\$12,786,000	\$12,856,000	\$12,878,000
14	<b>REVENUES</b>					
15	Basic Monthly Fees	3,369,000	3,521,000	3,680,000	3,846,000	4,019,000
16	Water Usage Charges	7,341,000	7,604,000	7,877,000	8,159,000	8,452,000
17	Basic Monthly Fees: Locked Meters	480,000	499,000	519,000	540,000	562,000
18	Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
20	Property Taxes (+2%/year)	742,000	757,000	772,000	787,000	803,000
21	Private Fire Svc & Special Services (+2%/year)	220,000	224,000	228,000	233,000	238,000
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	192,000	193,000	193,000
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	14,176,000	14,642,000	15,128,000	15,633,000	16,157,000
27	SRF Grant for Chromium 6 Project					
28	SRF Loan for Chromium 6 Project					
30	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Debt Service</b>					
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	<b>Capital/Non-Operating</b>					
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 (excluded)	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	<b>Revenues Less Expenses</b>	22,000	(20,000)	70,000	22,000	(28,000)
62	<b>Ending Fund Reserves</b>	12,806,000	12,786,000	12,856,000	12,878,000	12,850,000
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	6.61	6.74	6.87	7.01	7.15
65	Cumulative Change in Fund Reserves	(40,000)	(60,000)	10,000	32,000	4,000



Table A2  
 Joshua Basin Water District  
 Proposed Water Rates

**Scenario A**

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

<b>Proposed Maximum Water Rates</b>						
	Current Water Rates	Rates Effective On or After				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
<b>Overall Rate Increases</b>		<b>16%</b>	<b>14%</b>	<b>12%</b>	<b>10%</b>	<b>8%</b>
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b>For 3/4" and 1" Meters</b>						
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
<b>For 1-1/2", 2" and 3" Meters</b>						
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 (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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 A3  
 Joshua Basin Water District  
 Bill Impacts (3/4" or 1" Meter)

Scenario A

Billing Impacts (3/4" & 1" Meters)										
Monthly Use		Current Monthly Bill	Projected Monthly Bills					5-Year Impact		
(hcf)	% of Bills at or Below		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	Ttl %	Avg%/Yr
0	<i>Excl Zeros</i>	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	5.0%
1	10.4%	47.55	51.20	55.05	58.80	62.50	66.20	18.65	39.2%	6.8%
2	21.9%	53.75	59.00	64.55	69.80	74.80	79.70	25.95	48.3%	8.2%
3	Low 33.0%	59.95	66.80	74.05	80.80	87.10	93.20	33.25	55.5%	9.2%
4	43.0%	66.15	74.60	83.55	91.80	99.40	106.70	40.55	61.3%	10.0%
5	Me 51.6%	72.35	82.40	93.05	102.80	111.70	120.20	47.85	66.1%	10.7%
6	Typical 58.4%	80.05	91.90	104.35	115.70	125.95	135.70	55.65	69.5%	11.1%
7	64.3%	87.75	101.40	115.65	128.60	140.20	151.20	63.45	72.3%	11.5%
8	Average 69.3%	95.45	110.90	126.95	141.50	154.45	166.70	71.25	74.6%	11.8%
9	73.5%	103.15	120.40	138.25	154.40	168.70	182.20	79.05	76.6%	12.1%
10	76.7%	110.85	129.90	149.55	167.30	182.95	197.70	86.85	78.3%	12.3%
11	79.5%	120.05	141.10	162.65	182.10	199.15	215.20	95.15	79.3%	12.4%
12	81.7%	129.25	152.30	175.75	196.90	215.35	232.70	103.45	80.0%	12.5%
13	83.7%	138.45	163.50	188.85	211.70	231.55	250.20	111.75	80.7%	12.6%
14	85.5%	147.65	174.70	201.95	226.50	247.75	267.70	120.05	81.3%	12.6%
15	86.9%	156.85	185.90	215.05	241.30	263.95	285.20	128.35	81.8%	12.7%
16	88.2%	166.05	197.10	228.15	256.10	280.15	302.70	136.65	82.3%	12.8%
17	89.2%	175.25	208.30	241.25	270.90	296.35	320.20	144.95	82.7%	12.8%
18	90.2%	184.45	219.50	254.35	285.70	312.55	337.70	153.25	83.1%	12.9%
19	91.1%	193.65	230.70	267.45	300.50	328.75	355.20	161.55	83.4%	12.9%
20	91.9%	202.85	241.90	280.55	315.30	344.95	372.70	169.85	83.7%	12.9%
21	92.6%	213.55	254.80	295.45	332.00	363.10	392.20	178.65	83.7%	12.9%
22	93.3%	224.25	267.70	310.35	348.70	381.25	411.70	187.45	83.6%	12.9%
23	93.9%	234.95	280.60	325.25	365.40	399.40	431.20	196.25	83.5%	12.9%
24	94.3%	245.65	293.50	340.15	382.10	417.55	450.70	205.05	83.5%	12.9%
25	94.7%	256.35	306.40	355.05	398.80	435.70	470.20	213.85	83.4%	12.9%

Table B1		JBWD Cash Flow Projections - Reduced Rate Scenario B				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	Jan-1
2	Overall Rate Increase Target	14%	12%	10%	8%	8%
3	Fixed Rate Increase %	5%	5%	5%	5%	5%
4	Usage Rate Increase %	19.9%	16.0%	12.6%	9.4%	9.4%
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	-2.0%	-1.6%	-1.3%	-0.9%	-0.9%
9	Water Purchases from MWA (AF)	916	1,000	1,000	1,000	1,000
10	MWA Rate per AF (+3%/year)	\$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	<b>Beginning Fund Reserves</b>	\$12,846,000	\$13,023,000	\$12,759,000	\$12,856,000	\$11,957,000
14	<b>REVENUES</b>					
15	Basic Monthly Fees	2,560,000	2,731,000	2,882,000	3,041,000	3,209,000
16	Water Usage Charges	4,157,000	4,820,000	5,382,000	5,885,000	6,344,000
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 (+2%/year)	672,000	685,000	699,000	713,000	727,000
21	Private Fire Svc & Special Services (+2%/year)	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	195,000	191,000	193,000	179,000
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	10,089,000	10,807,000	11,574,000	12,289,000	12,956,000
27	SRF Grant for Chromium 6 Project		10,000,000	>>>>		
28	SRF Loan for Chromium 6 Project		8,000,000	>>>>		
30	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Debt Service</b>					
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	<b>Capital/Non-Operating</b>					
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 (excluded)	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	<b>Revenues Less Expenses</b>	177,000	(264,000)	97,000	(899,000)	(707,000)
62	<b>Ending Fund Reserves</b>	13,023,000	12,759,000	12,856,000	11,957,000	11,250,000
63	Min Fund Rsrv Target (50% O&M + \$2M)	5,538,500	5,771,500	5,919,000	6,517,000	6,695,000
64	Debt Service Coverage	11.24	12.18	13.94	4.87	5.34
65	Cumulative Change in Fund Reserves	177,000	(87,000)	10,000	(889,000)	(1,596,000)

Table B1		JBWD Cash Flow Projections - Reduced Rate Scenario B				Years 6 - 10
		6	7	8	9	10
		Projected 2027/28	Projected 2028/29	Projected 2029/30	Projected 2030/31	Projected 2030/31
1	Effective Date of Rate Adjustment	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
2	Overall Rate Increase Target	8%	6%	6%	4%	4%
3	Fixed Rate Increase %	5%	5%	5%	4%	4%
4	Usage Rate Increase %	9.3%	6.4%	6.4%	4.0%	4.0%
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%	-0.6%	-0.6%	-0.4%	-0.4%
9	Water Purchases from MWA (AF)	1,000	1,000	1,000	1,000	1,000
10	MWA Rate per AF (+3%/year)	\$726	\$748	\$770	\$793	\$817
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	<b>Beginning Fund Reserves</b>	\$11,250,000	\$10,768,000	\$10,497,000	\$10,487,000	\$10,544,000
14	<b>REVENUES</b>					
15	Basic Monthly Fees	3,386,000	3,573,000	3,769,000	3,958,000	4,136,000
16	Water Usage Charges	6,838,000	7,321,000	7,728,000	8,103,000	8,393,000
17	Basic Monthly Fees: Locked Meters	485,000	509,000	534,000	555,000	577,000
18	Standby Revenue	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
20	Property Taxes (+2%/year)	742,000	757,000	772,000	787,000	803,000
21	Private Fire Svc & Special Services (+2%/year)	220,000	224,000	228,000	233,000	238,000
22	Water Capacity & Meter Install Fees	258,000	258,000	258,000	258,000	258,000
23	Interest Earnings & Gain Loss/Chg Mkt Value	169,000	162,000	157,000	157,000	158,000
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	13,672,000	14,391,000	15,048,000	15,668,000	16,195,000
27	SRF Grant for Chromium 6 Project					
28	SRF Loan for Chromium 6 Project					
30	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Debt Service</b>					
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	<b>Capital/Non-Operating</b>					
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 (excluded)	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	<b>Revenues Less Expenses</b>	(482,000)	(271,000)	(10,000)	57,000	10,000
62	<b>Ending Fund Reserves</b>	10,768,000	10,497,000	10,487,000	10,544,000	10,554,000
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	5.86	6.37	6.75	7.06	7.21
65	Cumulative Change in Fund Reserves	(2,078,000)	(2,349,000)	(2,359,000)	(2,302,000)	(2,292,000)

Table B2

**Scenario B**

Joshua Basin Water District  
 Projected Water Rates

Same Level of CIP Funding with Reduced Rate Increases

Limit Fixed Rate Increases to 5% per Year

Requires \$1.6 Million Drawdown of Fund Reserves

<b>Water Rates Scenario B</b>						
	Current Water Rates	Rates Effective On or After				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
<b>Overall Rate Increases</b>		<b>14%</b>	<b>12%</b>	<b>10%</b>	<b>8%</b>	<b>8%</b>
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b>For 3/4" and 1" Meters</b>						
Tier 1 0 - 5 units	\$6.20	\$7.60	\$9.00	\$10.40	\$11.50	\$12.45
Tier 2 5.01 - 10 units	7.70	9.25	10.73	12.20	13.35	14.35
Tier 3 10.01 - 20 units	9.20	10.90	12.46	14.00	15.20	16.25
Tier 4 20.01 + units	10.70	12.55	14.19	15.80	17.05	18.15
<b>For 1-1/2", 2" and 3" Meters</b>						
Unit rate for all water use	\$7.70	\$9.25	\$10.73	\$12.20	\$13.35	\$14.35
<i>Note: 1 unit = one hundred cubic feet (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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 B3  
 Joshua Basin Water District  
 Bill Impacts (3/4" or 1" Meter)

Scenario B

Billing Impacts (3/4" & 1" Meters)										
Monthly Use		Current Monthly Bill	Projected Monthly Bills					5-Year Impact		
(hcf)	% of Bills at or Below		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	Ttl %	Avg%/Yr
0	<i>Excl Zeros</i>	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	5.0%
1	10.4%	47.55	51.00	54.55	58.20	61.70	65.15	17.60	37.0%	6.5%
2	21.9%	53.75	58.60	63.55	68.60	73.20	77.60	23.85	44.4%	7.6%
3	Low 33.0%	59.95	66.20	72.55	79.00	84.70	90.05	30.10	50.2%	8.5%
4	43.0%	66.15	73.80	81.55	89.40	96.20	102.50	36.35	55.0%	9.2%
5	Me 51.6%	72.35	81.40	90.55	99.80	107.70	114.95	42.60	58.9%	9.7%
6	Typical 58.4%	80.05	90.65	101.28	112.00	121.05	129.30	49.25	61.5%	10.1%
7	64.3%	87.75	99.90	112.01	124.20	134.40	143.65	55.90	63.7%	10.4%
8	Average 69.3%	95.45	109.15	122.74	136.40	147.75	158.00	62.55	65.5%	10.6%
9	73.5%	103.15	118.40	133.47	148.60	161.10	172.35	69.20	67.1%	10.8%
10	76.7%	110.85	127.65	144.20	160.80	174.45	186.70	75.85	68.4%	11.0%
11	79.5%	120.05	138.55	156.66	174.80	189.65	202.95	82.90	69.1%	11.1%
12	81.7%	129.25	149.45	169.12	188.80	204.85	219.20	89.95	69.6%	11.1%
13	83.7%	138.45	160.35	181.58	202.80	220.05	235.45	97.00	70.1%	11.2%
14	85.5%	147.65	171.25	194.04	216.80	235.25	251.70	104.05	70.5%	11.3%
15	86.9%	156.85	182.15	206.50	230.80	250.45	267.95	111.10	70.8%	11.3%
16	88.2%	166.05	193.05	218.96	244.80	265.65	284.20	118.15	71.2%	11.3%
17	89.2%	175.25	203.95	231.42	258.80	280.85	300.45	125.20	71.4%	11.4%
18	90.2%	184.45	214.85	243.88	272.80	296.05	316.70	132.25	71.7%	11.4%
19	91.1%	193.65	225.75	256.34	286.80	311.25	332.95	139.30	71.9%	11.4%
20	91.9%	202.85	236.65	268.80	300.80	326.45	349.20	146.35	72.1%	11.5%
21	92.6%	213.55	249.20	282.99	316.60	343.50	367.35	153.80	72.0%	11.5%
22	93.3%	224.25	261.75	297.18	332.40	360.55	385.50	161.25	71.9%	11.4%
23	93.9%	234.95	274.30	311.37	348.20	377.60	403.65	168.70	71.8%	11.4%
24	94.3%	245.65	286.85	325.56	364.00	394.65	421.80	176.15	71.7%	11.4%
25	94.7%	256.35	299.40	339.75	379.80	411.70	439.95	183.60	71.6%	11.4%

Table C1		JBWD Cash Flow Projections - Scenario C: Limit 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	Jan-1
2	Overall Rate Increase Target	9%	9%	9%	9%	9%
3	Fixed Rate Increase %	5%	5%	5%	5%	5%
4	Usage Rate Increase %	11.6%	11.5%	11.3%	11.2%	11.1%
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	-1.2%	-1.1%	-1.1%	-1.1%	-1.1%
9	Water Purchases from MWA (AF)	916	1,000	1,000	1,000	1,000
10	MWA Rate per AF (+3%/year)	\$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	<b>Beginning Fund Reserves</b>	\$12,846,000	\$12,907,000	\$12,777,000	\$12,943,000	\$12,141,000
14	<b>REVENUES</b>					
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 (+2%/year)	672,000	685,000	699,000	713,000	727,000
21	Private Fire Svc & Special Services (+2%/year)	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	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Debt Service</b>					
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	<b>Capital/Non-Operating</b>					
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 (excluded)	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	<b>Revenues Less Expenses</b>	61,000	(130,000)	166,000	(802,000)	(494,000)
62	<b>Ending Fund Reserves</b>	12,907,000	12,777,000	12,943,000	12,141,000	11,647,000
63	Min Fund Rsrv 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)



<b>Table C1 JBWD Cash Flow Projections - Scenario C: Limit Rate Increases to 9%</b>						<b>Years 6 - 10</b>
	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	
	<b>Projected 2027/28</b>	<b>Projected 2028/29</b>	<b>Projected 2029/30</b>	<b>Projected 2030/31</b>	<b>Projected 2030/31</b>	
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 (+3%/year)	\$726	\$748	\$770	\$793	\$817
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	<b>Beginning Fund Reserves</b>	\$11,647,000	\$11,482,000	\$11,416,000	\$11,414,000	\$11,349,000
14	<b>REVENUES</b>					
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 (+2%/year)	742,000	757,000	772,000	787,000	803,000
21	Private Fire Svc & Special Services (+2%/year)	220,000	224,000	228,000	233,000	238,000
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	<b>Total Revenues</b>	<b>13,119,000</b>	<b>13,826,000</b>	<b>14,582,000</b>	<b>15,364,000</b>	<b>16,109,000</b>
27	SRF Grant for Chromium 6 Project					
28	SRF Loan for Chromium 6 Project					
30	<b>EXPENSES</b>					
31	<b>Operating &amp; Maintenance</b>					
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	<b>Subtotal</b>	<b>9,758,000</b>	<b>10,139,000</b>	<b>10,538,000</b>	<b>10,952,000</b>	<b>11,382,000</b>
47	<b>Debt Service</b>					
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	<b>Subtotal</b>	<b>668,000</b>	<b>668,000</b>	<b>668,000</b>	<b>668,000</b>	<b>668,000</b>
51	<b>Capital/Non-Operating</b>					
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 (excluded)	0	0	0	0	0
59	<b>Subtotal</b>	<b>2,858,000</b>	<b>3,085,000</b>	<b>3,378,000</b>	<b>3,809,000</b>	<b>4,142,000</b>
60	<b>Total Expenses</b>	<b>13,284,000</b>	<b>13,892,000</b>	<b>14,584,000</b>	<b>15,429,000</b>	<b>16,192,000</b>
61	<b>Revenues Less Expenses</b>	<b>(165,000)</b>	<b>(66,000)</b>	<b>(2,000)</b>	<b>(65,000)</b>	<b>(83,000)</b>
62	<b>Ending Fund Reserves</b>	<b>11,482,000</b>	<b>11,416,000</b>	<b>11,414,000</b>	<b>11,349,000</b>	<b>11,266,000</b>
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	5.03	5.52	6.05	6.60	7.08
65	<b>Cumulative Change in Fund Reserves</b>	<b>(1,364,000)</b>	<b>(1,430,000)</b>	<b>(1,432,000)</b>	<b>(1,497,000)</b>	<b>(1,580,000)</b>



Table C2  
 Joshua Basin Water District  
 Projected Water Rates

**Scenario C**

Limit Overall Rate Increases to 9% per year  
 Limit Fixed Rate Increases to 5% per Year  
 Reduce Capital Funding to \$2 Million per Year  
 Requires \$1.2 Million Drawdown of Fund Reserves

<b>Water Rates Scenario C</b>						
	Current Water Rates	Rates Effective On or After				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
<b>Overall Rate Increases</b>		9%	9%	9%	9%	9%
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use, as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b>For 3/4" and 1" Meters</b>						
Tier 1 0 - 5 units	\$6.20	\$7.05	\$8.00	\$9.05	\$10.10	\$11.20
Tier 2 5.01 - 10 units	7.70	8.65	9.65	10.75	11.85	13.00
Tier 3 10.01 - 20 units	9.20	10.25	11.30	12.45	13.60	14.80
Tier 4 20.01 + units	10.70	11.85	12.95	14.15	15.35	16.60
<b>For 1-1/2", 2" and 3" Meters</b>						
Unit rate for all water use	\$7.70	\$8.65	\$9.65	\$10.75	\$11.85	\$13.00
<i>Note: 1 unit = one hundred cubic feet (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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 C3  
 Joshua Basin Water District  
 Bill Impacts (3/4" or 1" Meter)

Scenario C

Billing Impacts (3/4" & 1" Meters)										
Monthly Use		Current Monthly Bill	Projected Monthly Bills					5-Year Impact		
(hcf)	% of Bills at or Below		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027	\$/month	Ttl %	Avg%/Yr
0	<i>Excl Zeros</i>	\$41.35	\$43.40	\$45.55	\$47.80	\$50.20	\$52.70	\$11.35	27.4%	5.0%
1	10.4%	47.55	50.45	53.55	56.85	60.30	63.90	16.35	34.4%	6.1%
2	21.9%	53.75	57.50	61.55	65.90	70.40	75.10	21.35	39.7%	6.9%
3	Low 33.0%	59.95	64.55	69.55	74.95	80.50	86.30	26.35	44.0%	7.6%
4	43.0%	66.15	71.60	77.55	84.00	90.60	97.50	31.35	47.4%	8.1%
5	Me 51.6%	72.35	78.65	85.55	93.05	100.70	108.70	36.35	50.2%	8.5%
6	Typical 58.4%	80.05	87.30	95.20	103.80	112.55	121.70	41.65	52.0%	8.7%
7	64.3%	87.75	95.95	104.85	114.55	124.40	134.70	46.95	53.5%	8.9%
8	Average 69.3%	95.45	104.60	114.50	125.30	136.25	147.70	52.25	54.7%	9.1%
9	73.5%	103.15	113.25	124.15	136.05	148.10	160.70	57.55	55.8%	9.3%
10	76.7%	110.85	121.90	133.80	146.80	159.95	173.70	62.85	56.7%	9.4%
11	79.5%	120.05	132.15	145.10	159.25	173.55	188.50	68.45	57.0%	9.4%
12	81.7%	129.25	142.40	156.40	171.70	187.15	203.30	74.05	57.3%	9.5%
13	83.7%	138.45	152.65	167.70	184.15	200.75	218.10	79.65	57.5%	9.5%
14	85.5%	147.65	162.90	179.00	196.60	214.35	232.90	85.25	57.7%	9.5%
15	86.9%	156.85	173.15	190.30	209.05	227.95	247.70	90.85	57.9%	9.6%
16	88.2%	166.05	183.40	201.60	221.50	241.55	262.50	96.45	58.1%	9.6%
17	89.2%	175.25	193.65	212.90	233.95	255.15	277.30	102.05	58.2%	9.6%
18	90.2%	184.45	203.90	224.20	246.40	268.75	292.10	107.65	58.4%	9.6%
19	91.1%	193.65	214.15	235.50	258.85	282.35	306.90	113.25	58.5%	9.6%
20	91.9%	202.85	224.40	246.80	271.30	295.95	321.70	118.85	58.6%	9.7%
21	92.6%	213.55	236.25	259.75	285.45	311.30	338.30	124.75	58.4%	9.6%
22	93.3%	224.25	248.10	272.70	299.60	326.65	354.90	130.65	58.3%	9.6%
23	93.9%	234.95	259.95	285.65	313.75	342.00	371.50	136.55	58.1%	9.6%
24	94.3%	245.65	271.80	298.60	327.90	357.35	388.10	142.45	58.0%	9.6%
25	94.7%	256.35	283.65	311.55	342.05	372.70	404.70	148.35	57.9%	9.6%

# **APPENDIX B**

## **Proposition 218 Notice of Proposed Water Rate Increases**



## Notice of Public Hearing on Proposed Water Rate Increases

Dear Parcel Owner or Customer,

The Joshua Basin Water District (JBWD) is proposing to phase in a series of water rate increases over the next five years. The rate increases are needed to provide adequate funding for rehabilitation and replacement of aging water system infrastructure, help fund the construction and operation of new Chromium 6 water treatment facilities to meet new state regulatory requirements, and keep up with cost inflation.

The rates shown in this notice are proposed **maximum** rates. The District anticipates reevaluating rates in future years and only increasing rates as needed. The proposed rates were developed by an independent rate consultant and incorporate input from JBWD staff and the District's *Citizens Advisory Council*, a group of local community members that provide input to the Board of Directors. To date, six public meetings have been held to develop and deliberate the proposed rates. The proposed rate increases are phased in gradually over the next five years to minimize the annual impact on customers.

### Public Hearing on Proposed Water Rate Increases

JBWD will hold a public hearing on the proposed rate increases as follows:

**Date:** February 15, 2023  
**Time:** 5:30 PM  
**Place:** Joshua Basin Water District - Board Room  
61750 Chollita Road, Joshua Tree, CA 92252

Please check our website at [www.jbwd.com](http://www.jbwd.com) for the latest information about the meeting, including a Zoom link. If JBWD determines to hold the Public Hearing solely via the internet or teleconferencing due to a state of emergency or public health concern pursuant to California Government Code 54953 or other applicable law, information will be posted on our website at [www.jbwd.com](http://www.jbwd.com) as soon as possible and included in the meeting agenda.

### Community Workshop

Members of the public are also invited to attend a Community Workshop to learn more about the District and the proposed rate increases, ask questions, and provide input.

**Date:** January 10, 2023  
**Time:** 5:00 PM  
**Place:** Joshua Tree Community Center  
6171 Sunburst Ave, Joshua Tree, CA 92252

Please check our website at [www.jbwd.com](http://www.jbwd.com) in case there are any changes to the proposed meeting time or location.

We understand that rate increases place additional burden on our customers, particularly those on fixed or limited incomes, and plan to re-evaluate our finances and rates each year and only implement rate increases as needed to ensure rates continue to recover the costs of providing service without unnecessary increases. *Please see Page 4 of this notice for information about our low income discount program and other community resources.* As a public utility, JBWD does not profit from charges for water service. Pursuant to California law, 100% of water rate revenues are used to fund water system expenses.

## Why Are Rate Increases Needed?

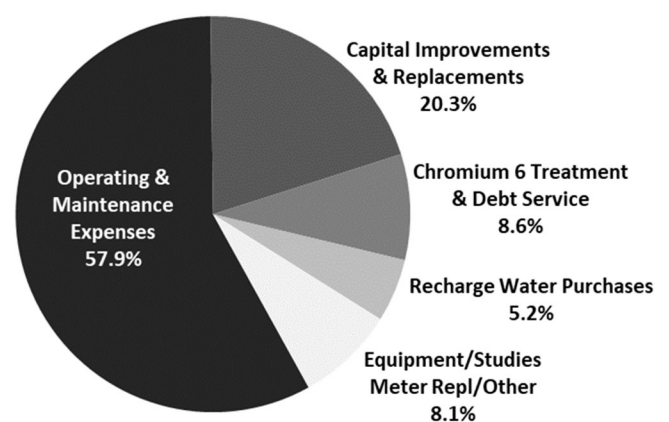
JBWD is a financially self-supporting government agency that relies primarily on revenues from water rates to fund the costs of operating and maintaining our local water system. Rate increases are needed to support safe, reliable, and sustainable water service. Some key factors driving the need for rate increases include:

- **Rehabilitation and Replacement of Aging Water System Infrastructure.** JBWD owns and operates over 310 miles of pipelines, 5 wells, 17 water storage tanks, 11 pump stations, and a groundwater recharge facility. Roughly 164 miles of JBWD’s water pipelines were installed 40 to 75 years ago and are approaching the end of their useful lives. Many old pipelines are inadequately sized and no longer meet fire flow requirements. Other aging facilities – including old pump stations, wells and water tanks – will need to be rebuilt or refurbished in upcoming years. An engineering analysis of the water system identifies the need for \$2.5 million of annual funding each year over the next roughly 30 years to gradually replace aging infrastructure. The District’s prior rate increases enabled the District to establish an in-house Capital Improvement Replacement Program (CIRP) and hire local staff to address funding needs on a more cost-effective basis. The District estimates that our in-house CIRP program produces savings of at least 30% over outsourcing such projects. However, additional funding is needed to keep the District from falling behind its replacement schedule, which would result in further inflationary costs.
- **New California Chromium 6 Regulations.** JBWD’s groundwater contains trace amounts of naturally occurring Chromium 6. While the levels of Chromium 6 are well below current federal and statewide standards, California’s State Water Resources Control Board is in process of establishing new more-stringent regulations that will require JBWD to fund the construction and operation of new Chromium 6 treatment facilities. JBWD is evaluating new treatment technologies and pursuing grants and low-interest-rate loans to help fund these new facilities.
- **Keep Up with Cost Inflation.** JBWD is also facing inflationary cost increases that will require ongoing rate adjustments to keep revenues in line with the costs of providing service.
- JBWD is a small agency, with approximately 5,600 service connections to share the cost of fixed operational expenses. This results in a cost-share per connection that is greater than larger neighboring agencies.

## What Do Your Rates Pay For?

The chart on the right shows a breakdown of projected expenses for the fiscal year starting July 1, 2026, the last year of the proposed 5-year rate adjustments. The breakdown reflects JBWD’s anticipated funding needs for annual operating and maintenance expenses, capital improvement and replacement projects, projected debt service and operating expenses for anticipated new Chromium 6 treatment facilities, annual funding for imported water purchases used to help prevent overdraft of the District’s groundwater basin, and other expenses for equipment, studies, meter replacements and other miscellaneous costs.

Breakdown of Projected Expenses



## What is the District Doing to Keep Costs Down?

JBWD has implemented a number of measures over the years to help keep costs down, including efforts to minimize staffing and insurance costs and has discontinued planning for a larger administrative building. In recent years, JBWD established an in-house program and construction crew to more cost-effectively replace aging pipelines and infrastructure. Additionally, JBWD was successful in obtaining over \$7 million of grant funding for the water recharge facilities that have enabled JBWD to start importing water to help reduce overdraft of the local groundwater basin. JBWD will continue to evaluate additional cost-cutting measures and is seeking funding from grants and low-interest-rate loans to help fund planned new Chromium 6 water treatment facilities.

## Proposed Maximum Water Rates

JBWD is proposing to phase in a series of water rate increases over the next five years as shown on the table below. The District anticipates reevaluating rates in future years and only implementing increases as needed. Water rates include two components as described below.

- **Basic Monthly Fee:** This is a fixed monthly charge based on the size of the water meter purchased by each customer and is billed independent of water consumption.
- **Monthly Water Flow Charges:** These charges are billed based on metered water use. Charges for customers with ¾-inch and 1-inch meters are billed according to a four-tiered rate structure with water purchased first in Tier 1 and then subsequently in higher Tiers as water use increases. Accounts with larger meters pay a uniform rate for each unit of metered water use. Monthly Water Flow Charges are billed in units of one hundred cubic feet (hcf), equal to approximately 748 gallons. Hence the proposed Tier 1 rate of \$7.80 per hundred cubic feet effective March 1, 2023, equates to charge of approximately \$1.04 per hundred gallons or slightly over 1 cent per gallon.

For example, effective March 1, 2023 the monthly water bill for a typical residential customer with a 3/4 or 1-inch meter and 6 hcf of monthly water use would include a) a fixed charge of \$43.40 plus b) water flow charges of \$7.80 per unit for the first 5 units and \$9.50 per unit for the sixth unit, resulting in c) a total charge of \$91.90. A limited number of customers also pay Private Fire Protection Charges, which are fixed monthly charges levied on approximately 25 accounts that have separate fire service connections.

Proposed Maximum Water Rates						
	Current Water Rates	Proposed Maximum Rates Effective On or After				
		Mar-1 2023	Jan-1 2024	Jan-1 2025	Jan-1 2026	Jan-1 2027
<b>BASIC MONTHLY FEE</b>						
<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
<b>MONTHLY WATER FLOW CHARGES</b>						
<i>Billed based on metered water use as measured in units of one hundred cubic feet (\$/hcf)</i>						
<b>For 3/4" and 1" Meters</b>						
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
<b>For 1-1/2", 2" and 3" Meters</b>						
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 (hcf), or approximately 748 gallons.</i>						
<b>PRIVATE FIRE PROTECTION CHARGES</b>						
<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

## Proposed Maximum Water Shortage Contingency Rate Surcharges

JBWD is also proposing to authorize a series of Water Shortage Contingency Rate Surcharges that could be implemented to support financial stability and help ensure adequate funding for water utility operations during periods of water shortages, mandatory cutbacks, or reduced water sales. As proposed, these rates would be temporary surcharges billed based on metered water use that would be levied in addition to JBWD’s regular water rates. The proposed surcharges correspond with the Water Shortage Contingency Stages identified in JBWD’s 2020 Water Shortage Contingency Plan. Each stage may be triggered by a declaration from federal or state authorities or JBWD’s Board of Directors. No surcharges are proposed for Stage 1 water shortages. Proposed water shortage contingency surcharges are listed in the table below and represent the maximum surcharges that JBWD would be authorized to levy.

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
<b>Water Shortage or Mandated Reduction</b>	11% - 20%	21% - 30%	31% - 40%	41% - 50%	> 50%
<b>Maximum Rate Surcharge (\$/hcf)</b>					
<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.

## Written Protest Procedures

Parcel owners (property owners) and customers of record affected by the proposed increases may submit written protests against the proposed water rates. Pursuant to California law, protests must be submitted in writing and must: a) identify the affected property or properties, such as by Assessor’s Parcel Number or service address; b) identify the name of the property owner or customer, and c) include the original signature of the parcel owner (property owner) or customer of record. The proposed rates cannot be adopted if written protests are received from a majority of affected parcels with one protest counted per parcel. Written protests should be mailed to: Joshua Basin Water District, P.O. Box 675, Joshua Tree, CA 92252 or can be hand-delivered to JBWD at 61750 Chollita Road, Joshua Tree, California 92252. All protests must be submitted prior to the close of the Public Hearing.

## Low Income Discount Program and Customer Assistance Resources

JBWD has partnered with United Way of the Desert to manage a customer assistance program to help eligible customers who are having trouble paying their water bill. Under the Help2Others Assistance Program, eligible residential customers can receive an annual \$100\* credit on their water bill each year. More information about the program and other community resources is available on our website or by contacting United Way of the Desert as follows:

- Visit JBWD’s website at: [www.jbwd.com/assistance](http://www.jbwd.com/assistance)
- Contact United Way of the Desert: (760) 323-2731 ext. 100

\*Beginning approximately March 1, 2023



## Additional Information

Pursuant to California Government Code 53759, there is a 120 day statute of limitations for challenging any new, increased, or extended fees. This statute of limitations applies to the water rates and water shortage contingency surcharges proposed in this notice and future changes to JBWD’s water rates and charges.

JBWD is committed to operating as cost-effectively as possible while providing safe and reliable service. For questions or more information about JBWD or the proposed rates, please contact us at (760) 366-8438 or email us at [customerservice@jbwd.com](mailto:customerservice@jbwd.com).