

# Joshua Basin Water District



## Water Rate Study

### Proposed Rate Recommendations

December 20, 2017



BARTLE WELLS ASSOCIATES  
INDEPENDENT PUBLIC FINANCE ADVISORS



## Presentation Overview

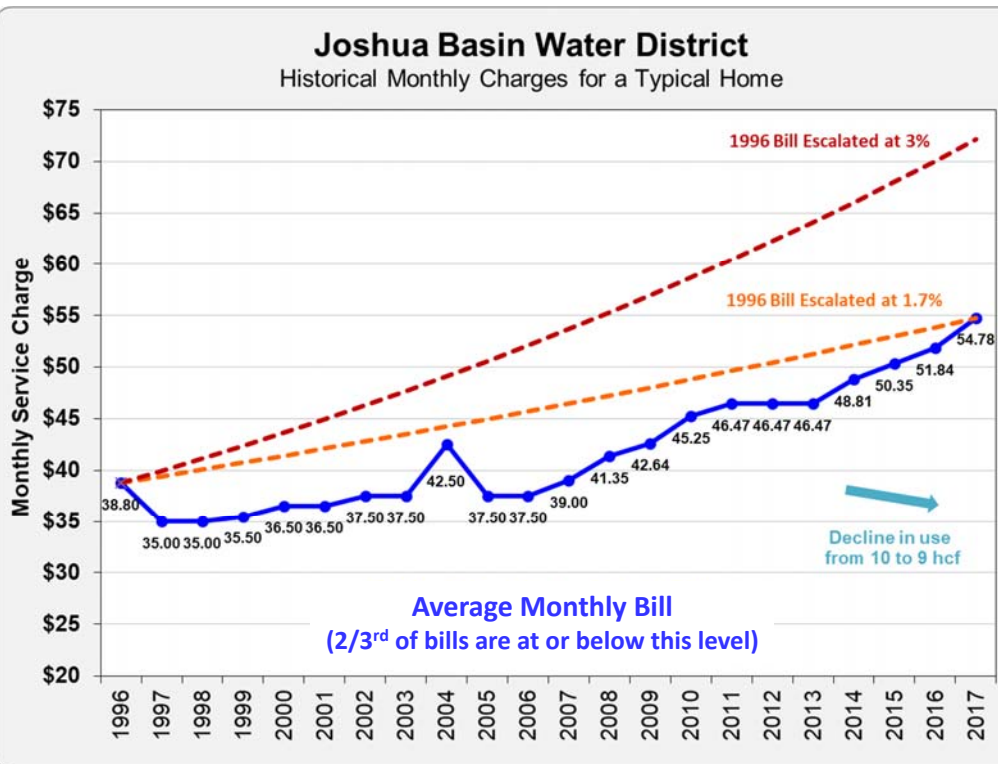


- **Brief Recap**
- **Financial Scenarios & Rates**
- **Water Rate Structure Modifications**
- **Next Steps**

# Brief Recap

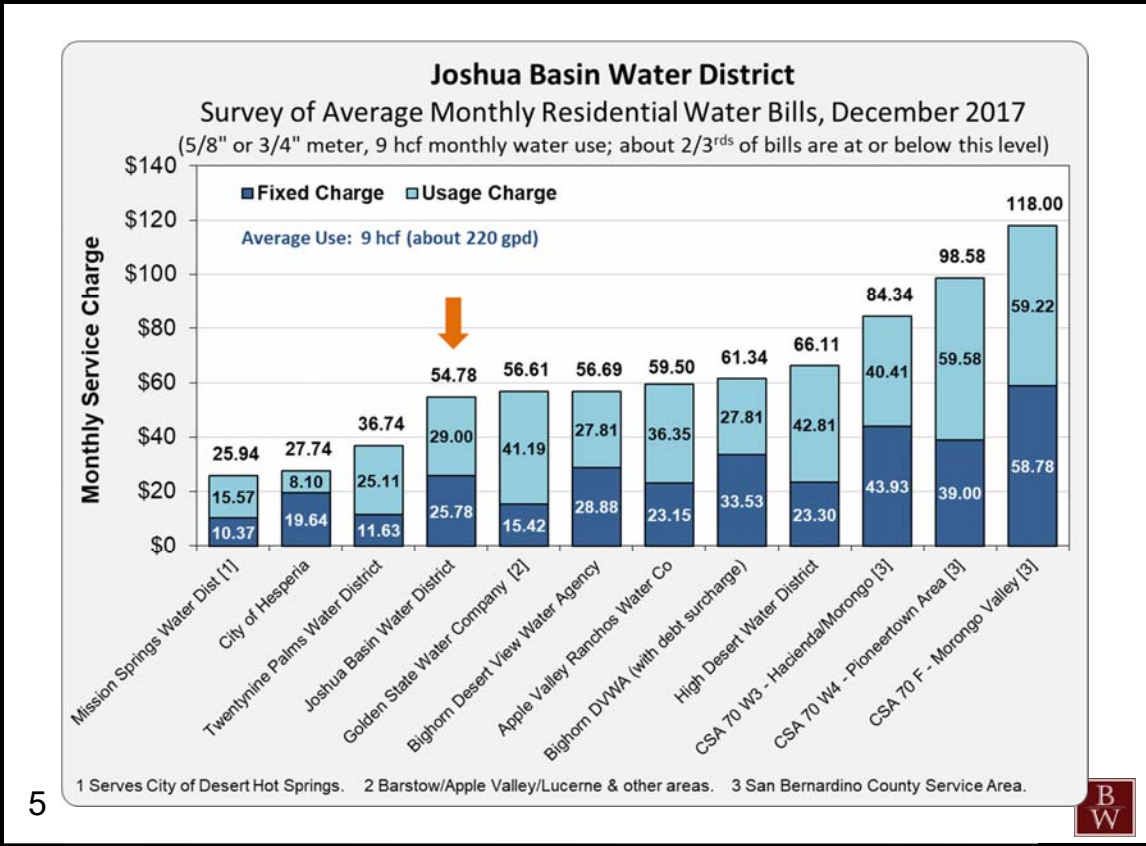


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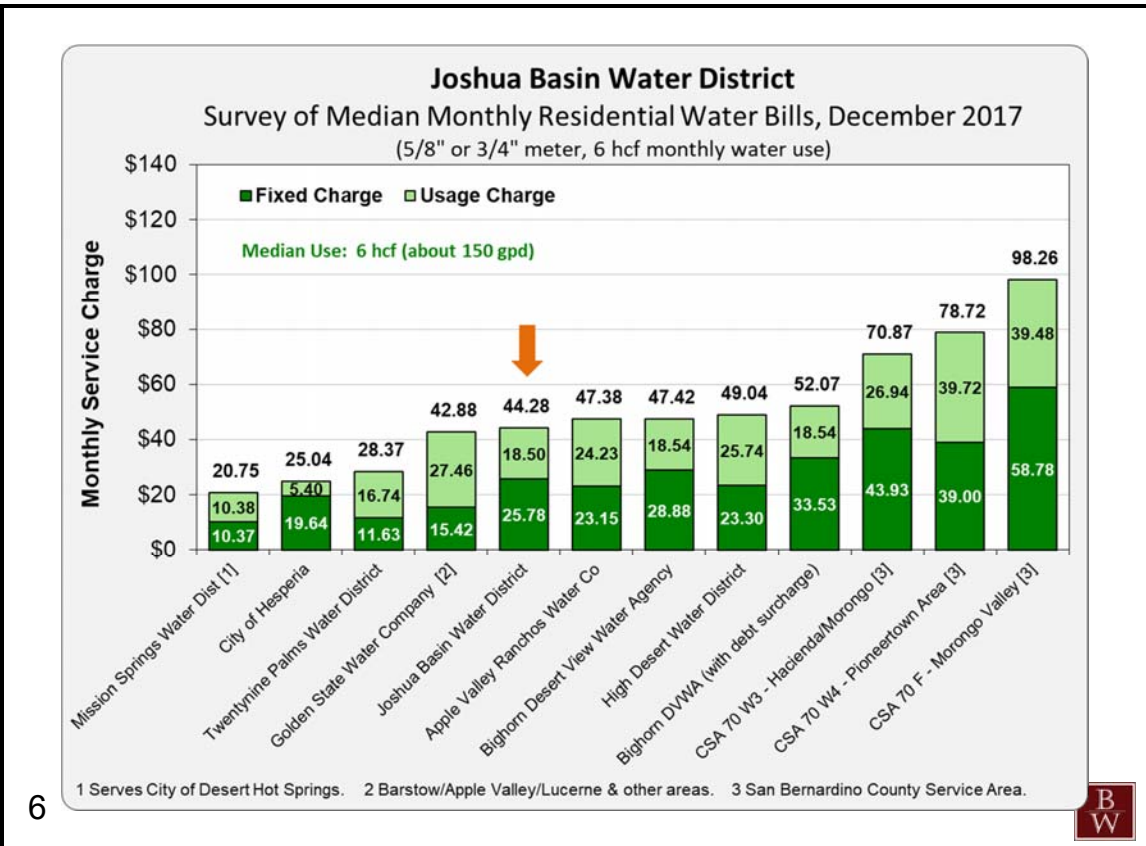


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# Financial Challenges

- **Aging Infrastructure & Capital Improvement Needs**
  - Dudek developed a 30-year Capital Improvement Program (CIP) that identifies \$2.5 million in annual funding needs for rehabilitation & replacement of aging infrastructure (boosters, wells, tanks, pipelines)
- **Long-Term Water Supply**
  - Additional funding needed to increase imported water to mitigate groundwater overdraft; goal of 1,000 Acre-Feet per year
- **Chromium 6 Treatment Requirements**
  - Likely will be needed to meet stricter state regulatory requirements
  - Cost est: \$2M planning, \$14M construction, \$632K annual O&M (current \$)
  - Projected compliance date deferred to January 1, 2023 (roughly 6 years)
- **Ongoing Cost Inflation**
  - Rate increases are needed to keep revenues in line with cost inflation and escalating costs of providing service

# Questions Discussion & Input



# Revised Scenarios



## Financial Scenarios

- **Revised financial scenarios:**
  - Scenario 1 – Best Management Practice with Deferred Chromium 6
  - Scenario 2 – Phased Approach with Deferred Chromium 6
  - Scenario 3 – \$5 Million of Debt Service to help front-load CIP
- **5-year rate scenarios exclude financial impacts of**
  - Chromium 6 treatment operations (potentially starts January 2023)
  - Organizational Assessment
  - 2019 Union Negotiations
- **All scenarios assume partial drawdown of fund reserves while rates are phasing in, but maintain a target level of:**
  - 50% of O&M + \$1 million for emergency capital needs
- **Lower rate increases in near term results in higher rate increases in longer term and vice versa**



# Scenario 1

## Scenario 1: Best Management Practice, Deferred Cr-6

	2017/18	2018/19	2019/20	2020/21	2021/22	
<b>Key Assumptions</b>						
Capital Improvement Projects	\$700,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	
Meter Replacement Program	\$0	\$500,000	\$500,000	\$500,000	\$500,000	
Annual Project Funding	\$237,000	\$250,000	\$250,000	\$250,000	\$250,000	
Recharge Water Purchases	\$287,000	\$597,000	\$627,000	\$658,000	\$691,000	
Recharge (Acre-Feet)	500	1,000	1,000	1,000	1,000	
<b>Rate Increases</b>						
Effective Date of Rate Increase	Mar-1	Jan-1	Jan-1	Jan-1	Jan-1	
Rate Revenue Increase %	40%	30%	20%	10%	5%	
Cumulative Increase %		82%	118%	140%	152%	
<b>Bill Impacts</b>						
Low Use (3 hcf)	\$34.78	\$44.69	\$57.39	\$68.38	\$74.97	\$78.53
Median Use (6 hcf)	44.28	59.19	76.91	92.37	101.70	106.75
Typical Residential Bill (9 hcf)	54.78	75.69	99.11	119.64	132.09	138.85
Higher Use (20 hcf)	98.28	146.19	194.01	236.23	262.02	276.05

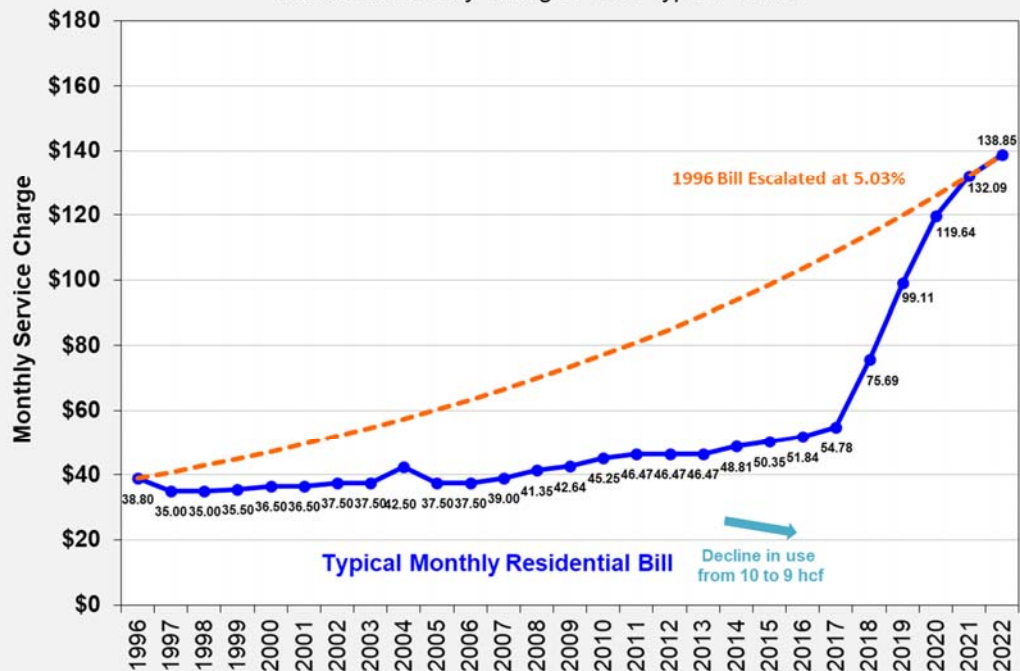
Note: Bill Impacts reflect rate increases & rate structure modifications



Scenario 1  
Best Mgmt Practice

### Joshua Basin Water District

Historical Monthly Charges for a Typical Home



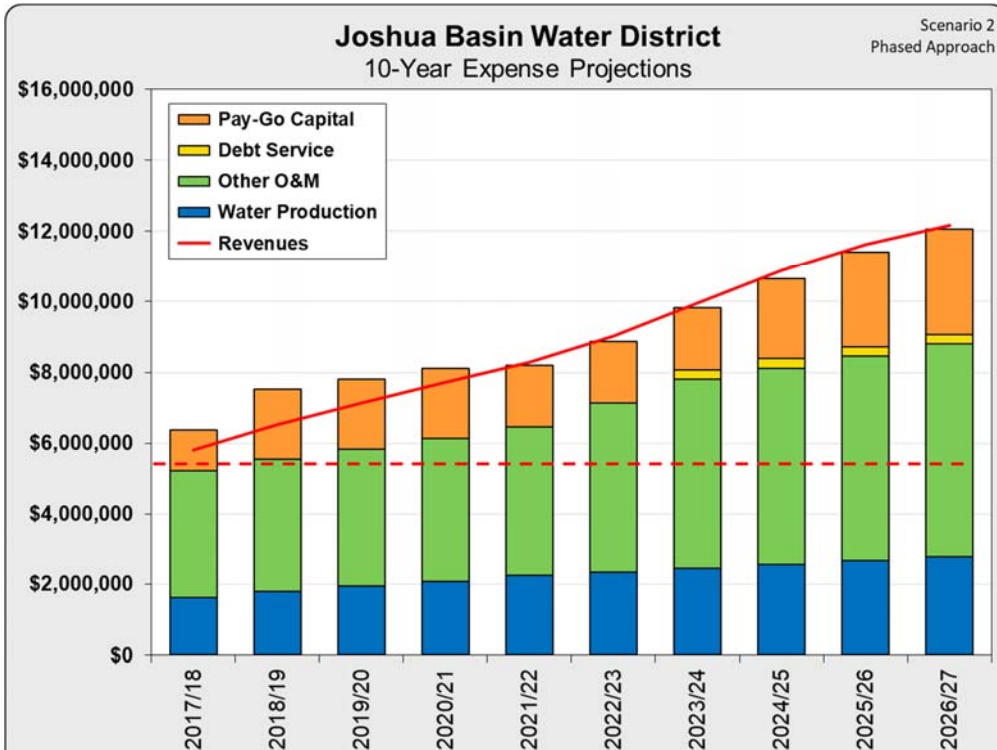


# Scenario 2

## Scenarios 2: Phased Approach, Deferred Cr-6

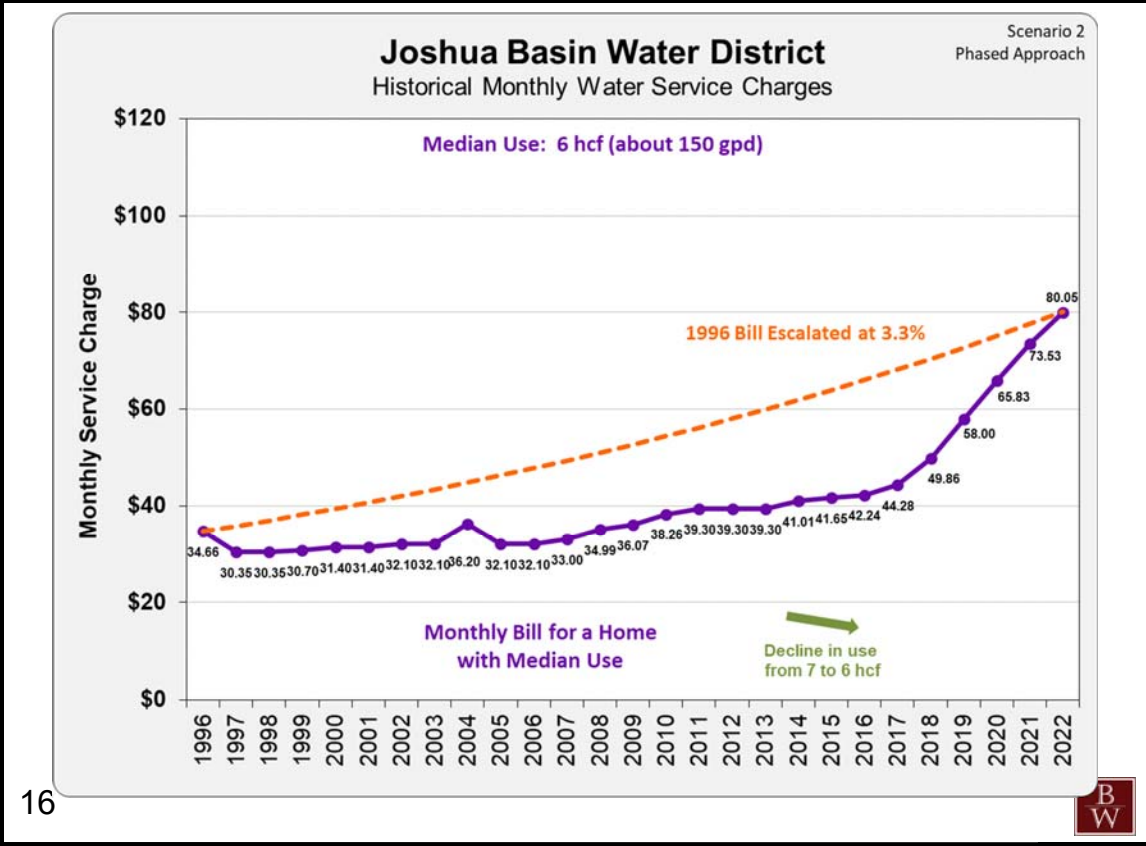
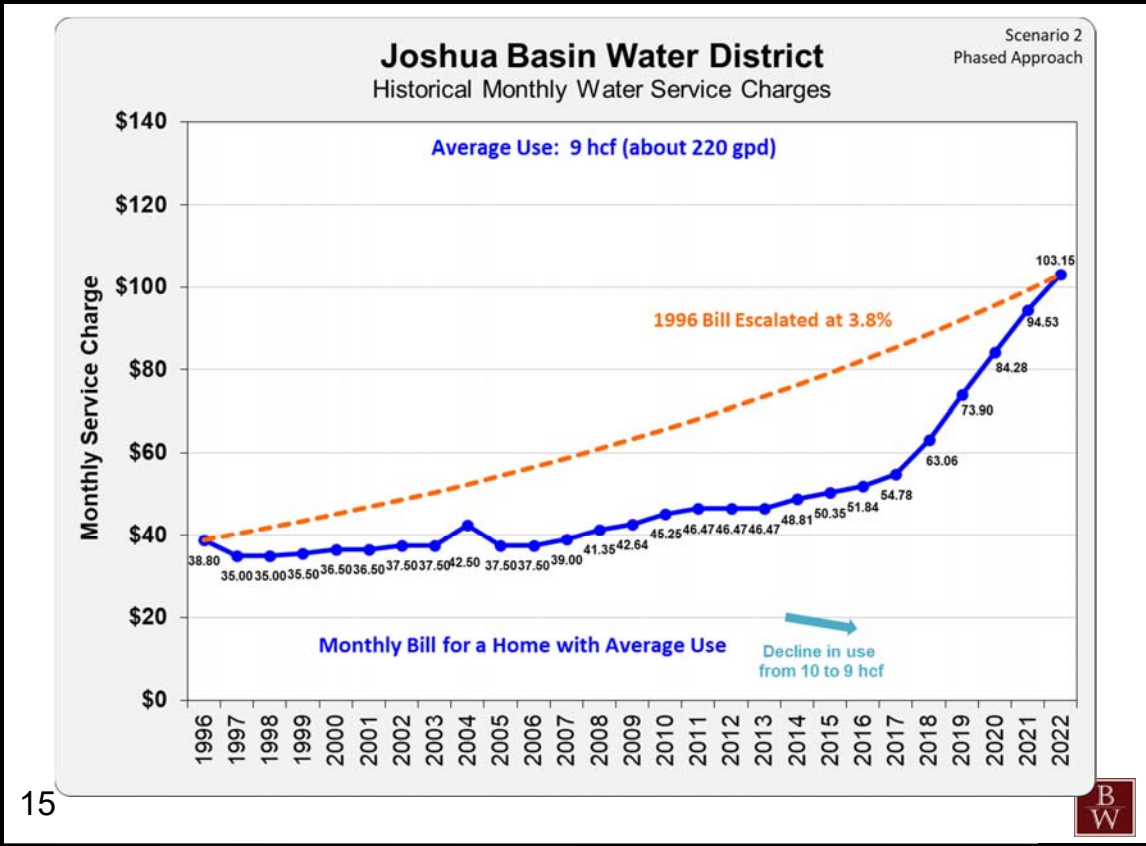
	2017/18	2018/19	2019/20	2020/21	2021/22	
<b>Key Assumptions</b>						
Capital Improvement Projects	\$700,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	
Meter Replacement Program	\$0	\$500,000	\$500,000	\$500,000	\$500,000	
Annual Project Funding	\$237,000	\$250,000	\$250,000	\$250,000	\$250,000	
Recharge Water Purchases	\$287,000	\$418,000	\$502,000	\$592,000	\$691,000	
Recharge (Acre-Feet)	500	700	800	900	1,000	
<b>Rate Increases</b>						
Effective Date of Rate Increase	Mar-1	Jan-1	Jan-1	Jan-1	Jan-1	
Rate Revenue Increase %	18%	16%	14%	12%	10%	
Cumulative Increase %		37%	56%	75%	92%	
<b>Bill Impacts</b>						
Low Use (3 hcf)	\$34.78	\$38.06	\$43.90	\$49.58	\$55.13	\$59.95
Median Use (6 hcf)	44.28	49.86	58.00	65.83	73.53	80.05
Typical Residential Bill (9 hcf)	54.78	63.06	73.90	84.28	94.53	103.15
Higher Use (20 hcf)	98.28	118.46	141.20	162.93	184.53	202.85

Note: Bill Impacts reflect rate increases & rate structure modifications

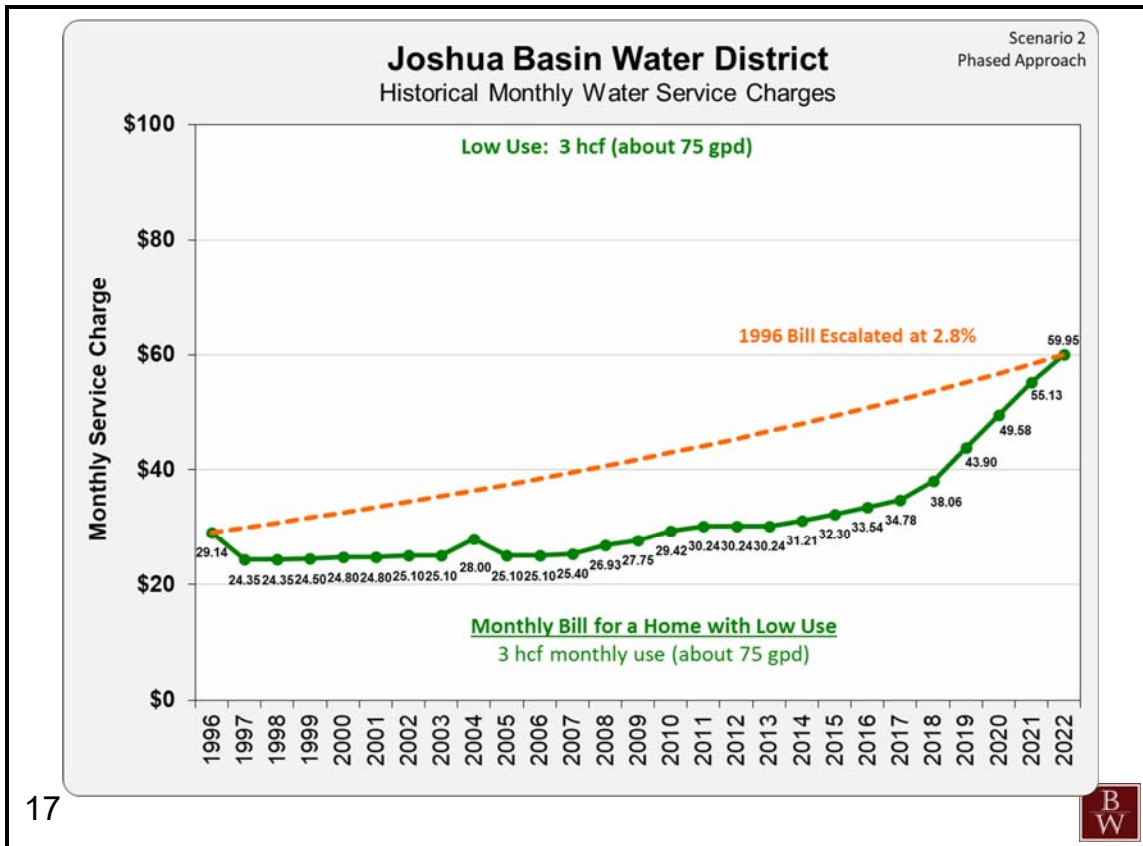


Excludes capital projects funded by debt.









## Scenario 3

### Scenario 3: \$5.0 Million Debt for High-Priority Capital Improvements

	2017/18	2018/19	2019/20	2020/21	2021/22	
<b>Key Assumptions</b>						
2018 Debt Funding for Capital Projects	\$700,000	\$5,000,000	\$0	\$1,000,000	\$1,000,000	
Meter Replacement Program	\$0	\$500,000	\$500,000	\$500,000	\$500,000	
Annual Project Funding	\$237,000	\$250,000	\$250,000	\$250,000	\$250,000	
Recharge Water Purchases	\$287,000	\$418,000	\$502,000	\$592,000	\$691,000	
Recharge (Acre-Feet)	500	700	800	900	1,000	
New Debt Service	\$0	\$325,000	\$325,000	\$325,000	\$325,000	
<b>Rate Increases</b>						
Effective Date of Rate Increase	Mar-1	Jan-1	Jan-1	Jan-1	Jan-1	
Rate Revenue Increase %	18%	16%	14%	12%	10%	
Cumulative Increase %		37%	56%	75%	92%	
<b>Bill Impacts</b>						
Low Use (3 hcf)	\$34.78	\$38.06	\$43.90	\$49.58	\$55.13	\$59.95
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Higher Use (20 hcf)	98.28	118.46	141.20	162.93	184.53	202.85

Note: Bill Impacts reflect rate increases & rate structure modifications

18



# Debt Financing

- **Same rate increases required for Scenarios 2 (phased) and 3 (\$5M debt)**
  - Scenario 3 shows phased approach with optional debt issue to help front-load more capital projects, if needed (no decision needs to be made at this time)
- **Debt issues and assumptions**
  - In general, debt can be issued for up to 3 years of anticipated expenditures
  - Potential savings of doing highest-priority projects over next 2-3 years due to economies of scale & construction cost inflation
  - Projections assume annual debt of \$65,000 per each million of project funding based on 30-year repayment term, 4.5% avg interest rate
  - Additional rate increases might be needed prior to obtaining financing for Chromium 6 project
- **Potential for low-rate SRF financing if debt financing is desired**
  - SRF would be particularly attractive if any grant funding was included

## Questions Discussion & Input



# WATER RATE STRUCTURE



## Current Water Rates 2017

### BASIC MONTHLY FEE (FIXED CHARGE)

<u>Meter Size</u>	<u>Capacity (gpm)</u>	<u>Monthly Rate</u>	<u>Per Day</u>
3/4" & 1"	30	\$25.78	\$0.85
1-1/2"	100	85.93	2.83
2"	160	137.49	4.52
3"	300	257.79	8.48

Fixed charges generate 46% of rate revenues (target was 40%)

### MONTHLY WATER USAGE CHARGES (PER HCF)

For 3/4" & 1" Meters

<u>Consumption</u>	<u>Rate per hcf</u>	<u>Per 100 gallons</u>
0 - 5 units	\$3.00	\$0.40
5.01 - 10 units	3.50	0.47
10.01 - 20 units	4.00	0.53
20.01 + units	4.50	0.60

For 1-1/2", 2" and 3" Meters

<u>Unit rate per all water use</u>	<u>Rate per hcf</u>	<u>Per 100 gallons</u>
	\$3.79	0.51



Average Rate = about 1/2 cent per gallon

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



# Rate Structure Modifications

- **Fixed charges set to recover 40% of rate revenues**
  - In line with prior rate study target
  - Results in a little less increase to fixed charges & more to usage charges
  
- **Increase in Tiered Rate Steepness** (for 3/4" & 1" meters)
  - Less increases to lowest tiers, larger increases to higher tiers
  - Less impact to low water users, more to high water users (minimal impact to average-use bill)
  - All tiered customers benefit from lowest tier rates first
  - No impact on customers with 2" are larger meters, who pay the same weighted average rate for all use
  
- **Rate structure needs to comply with substantive requirements of Proposition 218**



## Projected Rates with Phased Approach (Scenarios 2 or 3)

Effective	Current	Mar-1 2018	Jan-1 2019	Jan-1 2020	Jan-1 2021	Jan-1 2022		
<b>BASIC MONTHLY FEE</b>								
<b>Meter Size</b>	<b>Accounts</b>	<b>Capacity</b>	<b>Fixed Monthly Charge</b>					
3/4" & 1"	4,503	30 gpm	\$25.78	\$26.96	\$30.70	\$34.43	\$38.03	\$41.35
1-1/2"	28	100 gpm	85.93	89.87	102.33	114.77	126.77	137.83
2"	18	160 gpm	137.49	143.79	163.73	183.63	202.83	220.53
3"	7	300 gpm	257.79	269.60	307.00	344.30	380.30	413.50
<b>MONTHLY WATER FLOW CHARGES</b>								
<b>For 3/4" and 1" Meters</b>			<b>Rate Per Unit (\$/hcf)</b>					
Tier 1	0 - 5 units		\$3.00	\$3.70	\$4.40	\$5.05	\$5.70	\$6.20
Tier 2	5.01 - 10 units		3.50	4.40	5.30	6.15	7.00	7.70
Tier 3	10.01 - 20 units		4.00	5.10	6.20	7.25	8.30	9.20
Tier 4	20.01 + units		4.50	5.80	7.10	8.35	9.60	10.70
<b>For 1-1/2", 2" and 3" Meters</b>			<b>Rate Per Unit (\$/hcf)</b>					
Rate for all water use			\$3.79	\$4.60	\$5.40	\$6.20	\$7.00	\$7.70

Note: 1 unit = one hundred cubic feet (hcf) = 748 gallons

Average water flow rate per unit increases from about ½ cent to 1 cent per gallon



# Questions Discussion & Input



25



26





## Draft Schedule

- Oct-18 Present preliminary findings and draft scenarios to CAC & Board
- Nov-1 Present revised findings to CAC & Board for input
- Nov-14/15 Present draft recommendations to CAC & Board for input
- Dec-6 CAC approves proposed rates with the Phased Approach and makes recommendation to Board
- Dec-20 Present proposed rates to Board and obtain approval for rates to include in Prop 218 Notice
- Dec/Jan Mail Prop 218 notices by Jan-5 (notices must be mailed at least 45 days prior to public hearing)
- Feb-21 Hold a public hearing & consider adoption of proposed rates
- Mar-1 Goal: New rates effective starting March 1, 2018

*JBWD can always implement rates that are lower than adopted, but cannot exceed rates adopted without going through the Prop 218 process again*

## Questions & Discussion

