



Agenda Item No. Revised 11  
Meeting Date: July 11, 2018  
Resolution: No

**AGENDA DOCKET FORM**

**SUBJECT: RATE STRUCTURE ANALYSIS UPDATE**

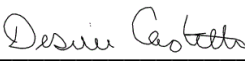


**SUMMARY:** Contra Costa Water District (District) is conducting a comprehensive analysis on both treated and untreated water service to evaluate the appropriate rate structure and ensure costs are allocated appropriately. The study is guided by the Board’s policy objectives: ensuring financial sufficiency and stability, providing affordable water for essential uses, allocating costs equitably, encouraging efficient water use, and enhancing customer understanding of the rate structure. Implementation of an alternative rate structure is being considered in conjunction with the 2019 rate setting process. Updates have been provided at ten Board meetings, held between February 2017 and June 2018. All materials and presentations provided to the Board have been made available on the District’s website. Board input has been incorporated into the technical analysis and summarized in Attachment 1. Summary impacts are included in the slide presentation provided in Attachment 2.

The District’s rate consultant, Raftelis, has recently updated the rate structure analysis incorporating expense and revenue projections from the Board-adopted FY19 and FY20 budgets and the 2019-2028 Capital Improvement Program and Ten-Year Financial Plan (2019 CIP). This has been done for the purpose of providing a preliminary review of how a 2019 revenue increase would affect the various customer classes in combination with the rate structure charges being contemplated. The Board is aware that the FY19 budget was prepared in conformance with and reflects the CIP projection of a 6.0% revenue increase for untreated water and treated water. It should be noted that this analysis does not in any way establish a commitment to any particular revenue increase nor does it establish any particular commitment to what will be communicated to customers as part of the Prop 218 process. These decisions will occur later this year as part of the regular annual revenue review process.

*(Continued on page 2)*

**FISCAL IMPACT:** The primary intent of the rate structure analysis is not to increase revenues but to ensure the appropriate allocation of costs among customer classes and to accomplish the Board’s rate study policy objectives. Implementation of the alternative rate structure is being considered in conjunction with the 2019 rate review. A revenue increase of 6.0% for untreated water is anticipated to generate \$1.1 million for FY19 and \$2.5 million for FY20 in additional untreated water revenue. A revenue increase of 6.0% for treated water is anticipated to generate \$1.1 million in FY19 and \$4.7 million in FY20 in additional treated water revenue, consistent with the FY19-FY20 Budget.

**RECOMMENDED ACTION:** Receive update on the rate structure analysis and provide direction.

 <hr/> Desiree Castello Director of Finance	 <hr/> Ronald D. Jacobsma Assistant General Manager	 <hr/> Jerry Brown General Manager
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JB/DC:dmg

Attachments: 1) Matrix of Board of Directors’ Input on Rate Study, 2) **Presentation Slides**

## **AGENDA DOCKET FORM**

### **SUMMARY (Continued from Page 1):**

#### Untreated Water

The alternative untreated water rates calculated for 2019 reflect the updated revenue and expense projections. The updated results also reflect the application of the methodology previously presented to the Board. Demand charges are standardized and allocated to customer classes based on a three-year average of maximum monthly demands per fiscal year. Implementing a standard demand charge for all untreated water customers will provide equitable allocation of cost and simplification of rate structure. The agricultural irrigation customer class has historically been exempt from the demand charges as their water service is seasonal and interruptible based on District water supply reliability; it is proposed that this exemption continue. The quantity charge is being recommended as a standard rate for all customer classes to provide an equitable cost allocation and simplify the rate structure.

The largest financial impact from a uniform quantity charge would be to the agricultural irrigation customer class. Based on initial customer feedback, staff has evaluated a phase-in option for the agricultural irrigation customer class to lessen the business impacts. A portion of non-rate revenues, such as property taxes, can be used to offset lower revenues. As the rate structure changes are proposed to be implemented with the 2019 rate review and adopted in January 2019, the alternative rates reflect the projected 6.0% revenue increase. Actual customer impacts would vary depending on water use. Water sales projections are consistent with the FY19-FY20 budget.

#### Treated Water

The Board concurred with retaining a uniform, rather than tiered, rate structure. Updated treated water rates have been calculated for the quantity, energy, service and demand, public and private fire protection, and backflow prevention charges to align with cost of service. The public fire protection component is proposed to be combined with the service and demand charge, which simplifies the rates and helps achieve the objective of enhancing customer understanding of the rate structure. The customer impacts would vary depending on water usage demands and types of services. For example customers with large private fire connections and backflow prevention devices would likely see a larger increase than the typical treated water customer.

#### Next Steps

The Board will receive a draft administrative record that will document the methodology and calculations of the alternative rate structure on October 3, 2018. Implementation of the alternative rate structure is targeted in conjunction with the 2019 rate setting process. This will begin with the Board's review of fiscal year end results in September and the potential to allocate financial plan benefits to offset revenue requirements. The alternative rate structure would be used to establish the rates to be reflected on the Proposition 218 notices anticipated to be distributed in November. Customer outreach will focus on developing tools that customers can use to better understand the proposed changes, including educational videos and the use of sample bills and/or a bill calculator. The public hearing for the 2019 proposed water rates and the Board's consideration of adoption are planned for January 2, 2019.

**Rate Study – Board of Directors Input  
Input Received through June 20, 2018 Board Meeting**

Rate Study Steps	Analysis Update	Status
<b>Board Updates and Input</b>		
Board interaction and guidance	<p>The Board established the policy objectives in February, and received updates in April, August, September, October, and November 2017. Options for establishing the framework and potential customer impacts were reviewed at Board workshops (special public meetings) held in January and February 2018. The Board received an update from the consultant leading the study on March 21, 2018.</p> <p>Board comments and input have been and will continue to be incorporated into the rate review process, with all information made available on the District’s website.</p>	<p>The alternative rate model under review is consistent with Board direction obtained during the January and February special meetings and reviewed at the Board’s March 21, 2018 meeting.</p> <p>The rate model has been updated by the consultant to reflect projected 2019 rates based on the Board-adopted FY19 budget. This aligns the cost of service with updated expense projections.</p> <p>The Board will review the updated calculations at its July 11, 2018 meeting.</p> <p>The Board will continue to receive regular updates up to and through the 2019 rate setting process.</p>

<b>Input from the March 21, 2018 and June 20, 2018 Board Meetings</b>		
Customer Outreach	Ensure outreach efforts clearly communicate the purpose of the rate structure revision to all District stakeholders.	<p>The Board requested that messaging cite the purpose of the proposed rate structure update is to ensure compliance with current regulations and case law and that cost of service is realigned to current customer demands.</p> <p>Outreach will be made to reach all customer classifications (e.g., agricultural customers outside of our service area, but within County boundaries, and private schools).</p>
Customer Workshops	Staff to schedule multiple workshops, with talking points	Surveys, focus groups, and in person meetings/workshops will

## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
	<p>and other key information made available on the website.</p>	<p>be scheduled with customers throughout the service area. The Board will be kept informed of the schedule via the weekly Board letter. Presentation materials, outreach documents, and talking points will also be added to the District’s website.</p> <p>On June 20, 2018, the Board received an overview of the customer feedback received to date. The initial outreach included five workshops, phone/online surveys, and a customer focus group.</p>
<p>Customer Billing Statement</p>	<p>Add clarity to the billing statement regarding the conversion of units to gallons, acre feet, etc.</p>	<p>The District’s Code of Regulations references rates based on the unit cost of water, with a unit of water equivalent to 748 gallons. The use of units for billing is prevalent throughout the industry as it aligns with the unit of measurement obtained from water meter gauges.</p> <p>The Board requested that the bill statement be revised to provide clarity in the converting of units to gallons, and that samples of bills reflecting this and any other proposed changes be provided for review. Proposed updates will be provided to the Board later this year, anticipating that any changes would be implemented in 2019.</p>

**Rate Study – Board of Directors Input**

Rate Study Steps	Analysis Update	Status
<b>Comments Received from Previous Board Meetings</b>		
<b>Input from the February 28, 2018 Special Board Meeting</b>		
Evaluation of tiered rates	As part of the rate study, a tiered rate structure was evaluated for residential customers as an alternative to the District’s current uniform rate structure as it best aligned with the pricing objectives of ensuring the cost was affordable to essential use, promoting efficiencies, and minimizing customer impacts.	Upon further analysis, it was determined that the proposed addition of a second tier (based on average summer use) would be unlikely to further encourage conservation as the cost differential would be minimal (approximately \$0.30 per 748 gallons). Furthermore, a tiered structure would add complexity to the ability to understand, administer, and update the rate structure.
Elimination of excess use charges	A second tier was evaluated as a replacement for the existing excess use charge incurred by treated water residential customers with consumption above 1,000 gallons per day (or base historical usage)	The Board concurred with eliminating the excess use charge upon implementation of the alternative rate structure. A future drought rate component of the alternative rate structure will be evaluated subsequently, either in conjunction with the update of water shortage contingency planning within the Urban Water Management Plan in FY20 and/or as needed to address future drought-related conservation requirements.
Allocation of pumping costs to customers by energy zone	Cost impacts for customers in differing energy zones have been reviewed.	<p>Energy costs have risen significantly over the past 10 years, and the increases have not been fully incorporated into the District’s existing energy surcharge rates.</p> <p>The evaluation and review of the allocation of costs and the impacts by energy zones were further reviewed by the Board on February 28, 2018. Direction was provided to exclude costs related to District operations (such as those related to flushing and</p>

**Rate Study – Board of Directors Input**

Rate Study Steps	Analysis Update	Status
		testing for water quality) from those allocated to customers by energy zone. Instead, these costs will continue to be allocated District-wide through the quantity charge for a more equitable cost allocation amongst beneficiaries/ water users. The goal for revising the rate structure is not to modify total revenue requirements, but instead to reset charges to align with the cost of service. The increase in energy charges will be largely offset by a decrease in the quantity charge for water consumption.
Consideration of revising calculations for fixed costs	The calculations for fixed charges (including private fire services and backflow prevention) have been reviewed to ensure that the costs are being allocated equitably to those customers benefitting from the specific services and facilities.	The alternative rate structure will have related costs increase with the size of the customer’s meter and backflow device. The proposed change will align charges with the cost of service as it is more expensive to maintain larger devices. The allocations will be calculated in accordance with AWWA standards.
Wet/Dry Scenario	The Board was provided with a graph showing the impact on demands during an extremely wet or dry water year on treated water revenues.	It was shown that the impact on revenues was more reflective of changes in hydrology than the type of rate structure utilized.

**Input from the January 31, 2018 Special Board Meeting**

Implementation of standardized demand charge of untreated water customers	The Board considered the option of standardizing the demand charge (the cost of providing peak demands) against the option of incorporating these costs within the untreated water quantity charge.	The Board reviewed sample impacts for each untreated water customer class under each option. Staff recommended the standardized demand charge based on a three-year rolling average of maximum monthly demands. This option best aligns with the Board’s policy principles of ensuring financial stability and equitable cost allocations.
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## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
<p>Establishing demands on three-year average of maximum month consumption</p>	<p>The Board commented on whether an alternative period be considered (i.e., five years rather than three).</p>	<p>A three-year average for calculating demands will react more quickly to a customers' changed consumption than a longer time period, and provides more revenue stability than a shorter period. In addition, a five-year average is not recommended at this time as basing demands on a period that includes a five-year drought would not appropriately align charges with current costs. A three-year rolling average will be more representative of customer's current water demands.</p> <p>Customers will be able to control bill impacts sooner if demand changes. An alternative to three years will be evaluated with future rate structure updates (anticipated to occur at least every five years). In the interim, evaluation of the results of three-year smoothing will be completed annually.</p>
<p>Exemption of agricultural for demand charges</p>	<p>The District currently exempts agricultural accounts from demand charges based on the service's interruptible nature.</p>	<p>Agricultural customers are recommended to remain exempt from demand charges due to the interruptible nature of the service.</p>
<p>Comparison of proposed agricultural water rates to other agencies</p>	<p>The Board asked that the District's rates for agricultural water use be compared to rates in areas such as San Joaquin and Napa.</p>	<p>Rates for agricultural irrigation vary largely by agency. Locally, East Contra Costa Irrigation District charges \$44 per acre foot (AF) for irrigation of five or more acres, and \$66/AF for less than five. Byron-Bethany Irrigation District charges \$82/AF. North San Joaquin Water Conservation District charges \$101.40/AF. Costs are significantly higher in Sonoma County at \$861/AF. Variances in charges reflect the cost of service, including source water costs and pumping requirements, for each agency.</p>

## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
Wet/Dry Scenario	The Board was provided with a graph showing the impact on demands during an extremely wet or dry water year on untreated water revenues.	At the request of the Board, a similar graph was provided for treated water consumption at the special meeting in February.
<b>Cost of Service Analysis/Rate Setting</b>		
Alternative break points for tiered residential rates	Additional break points will be evaluated prior to Board consideration of adopting tiered residential rates as part of an alternative rate structure. The evaluation will provide a statistical analysis of the effects of the break points on specific customer circumstances (e.g. historic and seasonal use, lot size, and elevation).	Break points presented for consideration, including: peak summer use, average summer use, average annual use and average winter use.  Based on further analysis, it was determined that a transition to a two-tiered system for residential treated water customers would not provide the conservation benefits previously envisioned and would likely complicate customer understanding of the rate structure. The District will continue to utilize a uniform rate structure.
Costs associated with peak use	The distribution of additional costs associated with peak use to the upper tiers is being considered to align costs with higher water use. Demand charges recover costs associated with having facilities available to meet peak demands. The cost allocation will be updated with customers' current peaking patterns, which may have shifted since the last rate study.	The evaluation has been completed and staff is recommending that demand charges for untreated water customers be based on a three-year rolling average of peak monthly demands.
Allocating fixed and variable charges between customer categories	The distribution of costs to variable and fixed charges will be carefully evaluated. In allocating fixed charges, consideration needs to be given to customers with already low water use.	Costs have been evaluated, consistent with AWWA rate setting methodology.



## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
Provide context to reliance on AWWA standards for rate setting	The methods and analyses established by the American Water Works Association (AWWA) are considered the standard within the industry for establishing cost-based rates, fees, and charges. AWWA’s most recent update of its rate setting manual was published in 2017.	<p>The generally accepted rate setting methodology includes three categories of technical analysis. The first is the revenue requirement analysis, which examines the utility’s operating and capital costs to determine the total revenue requirement and the adequacy of the utility’s existing rates.</p> <p>Next, a cost-of-service analysis is used to allocate and equitably distribute the revenue requirements to the various customer classes (e.g., residential, commercial) served by the utility.</p> <p>The final technical analysis is the rate-design analysis, which uses the results of the first two steps to establish cost-based water rates that meet the overall rate-design goals and objectives.</p>
Consideration of revising calculations for fixed costs	The calculations for fixed charges (related to service and demand) are being reviewed to ensure that the costs are being allocated equitably to those customers benefitting from the specific services and facilities.	Calculations for fixed costs have been reviewed and will align with cost of service and be allocated in accordance with AWWA standards.
Sensitivity analysis for tiered options	Provide a sensitivity analysis to demonstrate whether a two- or three-tiered option would have a greater impact on revenues and customer conservation efforts during a future drought.	Although the District will not pursue a tiered structure at this time, it was determined that revenue and conservation impacts would not vary substantially between the two scenarios during a drought as the highest tier in both structures would take effect at the same use threshold of average use.

### Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
Application of conservation costs	The alternative rate structure previously presented to the Board exempted residential customers in the lowest tier from being allocated a portion of conservation program costs (e.g., surveys, outreach, rebates, etc.).	The analysis has been updated to apply a portion of the program costs to all treated water customers.
Impact on unmetered untreated water bills	A comparison has been completed of sample customers using treated water for residential purposes and unmetered untreated water for irrigation purposes.	Sample bill impacts and comparative data were reviewed by the Board on October 18, 2017, January 31, 2018 and February 28, 2018.
Impact on individual municipal customers	Demand charges proposed through the alternative rate structure would be based on maximum monthly demands. As such, the impact on each municipal customer will vary depending on typical use as compared to peak usage.	Sample bill impacts and comparative data were reviewed by the Board on October 18, 2017, January 31, 2018 and February 28, 2018.
Potential standby charge	Consider a possible “stand by” or reliability charge for customers who primarily rely on recycled water service.	The District has historically handled these issues as part of project-specific agreements with the wastewater agencies conducting the recycled water project.
Impact on individual agricultural customers	The consistent application of fixed charges across all untreated water categories has the potential to result in large increases for individual agricultural customers. This customer category has historically been exempt from demand charges as agricultural service is seasonal and interruptible.	Sample bill impacts and comparative data were reviewed by the Board on October 18, 2017 and January 31, 2018. Based on the seasonal and interruptible nature of this water service, this customer class will continue to be exempt from incurring demand charges.

## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
Provide copies of presentation slides in advance of the meeting date	The Board requested that future presentations on the rate structure analysis be provided for review in advance of the meeting date.	Presentation slides will be distributed at the same time as the meeting agenda package.
Consideration of standardizing demand charges	Peaking is an integral part of all rate structures. High peak demands are a factor as water must be available to meet a customer’s need whether or not they chose to take it. A demand charge based on peaking addresses reliability.	Demand charges will be based on a three-year rolling average of maximum monthly consumption. This is anticipated to address peaking and allows customers to manage usage and control the impact of future demand charges.
<b>Proposition 218 Notification</b>		
Annual vs. multi-year notification process	The Board directed that the rate setting approval process continue to occur on a yearly basis as this is a critical touchpoint with customers. The Board was open to the possibility of a separate process for future drought rate notices.	Per Board direction, District will continue annual Proposition 218 notification and rate-setting process to support customer interaction and transparency.
<b>Lifeline Program</b>		
Evaluation of District's Lifeline Program	Review of the District's lifeline program, which provides reduced fixed charges to qualified low-income customers, is currently on hold.	Consideration of modifying the program will be postponed until the State Water Board releases the framework for its initiative, anticipated in 2018.
<b>Drought Rate Evaluation</b>		
Consideration of establishing a drought rate structure	Drought rates encourage conservation and recover costs when water usage is reduced, resulting in a net neutral financial position. Although establishing drought rates before a drought would allow the District to expedite actions when a drought occurs, the Board voiced concern about a lack of transparency and customer input.	The cost of service analysis for drought rates will be completed to establish a nexus between cost of service under varying drought scenarios, but finalization of a drought rate structure and any future implementation will be considered separately by the Board, and include a separate Proposition 218 notification process.

## Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
Drought rates vs. drought reserve vs. hybrid	The use of drought rates during a drought emergency assists with recovering costs during the year the restrictions are in effect. The use of a drought reserve mitigates the impacts and can be used to offset lower revenues during the subsequent rebound period.	Based on Board input, a hybrid approach will be pursued. The District's drought contingency reserve was drawn down in FY17 to help offset the financial impacts of the five-year drought. The 2019-2018 Capital Improvement Program and Ten-Year Financial Plan approved in February 2018 anticipates \$8.0 million in funding of the reserve by designating a portion of the projected rate revenues over the plan period.
Setting drought rates at trigger points	The Board directed that any drought rates would be developed based on the District's declaration of a specific water shortage stage and be subject to Board approval.	A future drought rate structure would be aligned with the water shortage stages (1-5) identified within the District's 2015 Urban Water Management Plan and implementation would be subject to Board approval.
<b>Public Outreach</b>		
Provide public outreach throughout the process	In order to enhance customer understanding of rate structure and related rate-setting information, the Board requested that the process be transparent, include opportunities for public input, and that feedback be provided within Board presentations.	<p>Initial focus group sessions and public surveys have been conducted, and details provided to the Board. Public rate workshops will be scheduled, with separate workshops held for the impacted customer groups. Potential changes to the rate structure will be communicated to customers to ensure that the methodology is presented in a reasonable, logical, and comprehensible manner. Feedback will be integrated into the rate structure, as appropriate, and presented to the Board.</p> <p>A second focus group will be assembled to test and determine final communication messages and tools that clearly articulate changes to customers.</p>

### Rate Study – Board of Directors Input

Rate Study Steps	Analysis Update	Status
		<p>Information on the rate review process, including reports and presentations to the Board, have been made available on the website.</p> <p>The public outreach plan was reviewed by the Board on March 21, 2018 with a summary of the input received provided on June 20, 2018.</p>
Accessible public workshops	Workshops will be provided at public venues throughout the service area.	Public workshops will be held at multiple locations within the District’s service area to facilitate accessibility to customers.
Clear and concise references	Terms used to describe the costs should be clear and comprehensible.	<p>To enhance transparency, references to “base” charges in staff reports and presentations will be replaced with “delivery.”</p> <p>References to a tiered structure with not include descriptions such as “inclining.” Public outreach shall include examples that can put the costs into perspective, such as the cost of water per gallon.</p>

# CONTRA COSTA

## WATER DISTRICT

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Board Meeting – Rate Study Update

July 11, 2018



CONTRA COSTA  
WATER DISTRICT

# Agenda

- Purpose and Board Objectives
- Key Decisions and Changes
- Treated Water Rates
- Untreated Water Rates
- Next Steps and Schedule



# Objectives and Key Changes





# Purpose and Board Objectives

## Purpose of the Study

- Align water rates with cost of providing service
- Establish rate structure that best meets the Board's policy objectives

## Board Objectives

- Ensuring financial sufficiency and stability
- Providing affordable water for essential uses
- Allocating costs equitably
- Encouraging efficient water use
- Enhancing customer understanding of the rate structure



# Key Decisions: Treated Water

- Uniform Single Family variable charge (no tiers)
- Elimination of excess use charge
- Energy surcharge cost allocation
- Consolidate public fire with service charge



# Key Decisions: Untreated Water

- Demand charge standardized
- Service charge standardized
- Quantity charge standardized



# Key Updates to Rate Analysis

- Updated cost of service based on FY 2019 budget
- Revenue adjustment in FY 2019:
  - › Untreated – 6.0%
  - › Treated – 6.0%
- Allocated property tax to align with historical revenue received
- Option for Agricultural customer rates to be phased in



# Treated Water



# Revenue Comparison

(With 6.0% Revenue Adjustment)

Rate Component	Current Revenue	Alternative Revenue	Difference (\$)	Difference (%)
Quantity Charge	\$53,435,009	\$56,963,480	\$3,528,471	6.6%
Service and Public Fire Protection Charge	\$19,770,277	\$20,216,665	\$446,388	2.3%
Energy Surcharge	\$1,933,363	\$2,404,680	\$471,318	24.4%
Private Fire Protection Charge	\$63,543	\$414,736	\$351,193	552.7%
Backflow Prevention Charge	\$1,144,593	\$940,739	(\$203,854)	-17.8%
<b>Total</b>	<b>\$76,346,785</b>	<b>\$80,940,301</b>	<b>\$4,593,515</b>	<b>6.0%</b>
Fixed Revenue	27%	27%		



# Alternative Rates: Energy Surcharge

(With 6.0% Revenue Adjustment)

Energy Surcharge	Current Charge (\$/hcf)	Alternative Charge (\$/hcf)	Difference (\$)	Difference (%)
Zone 1	\$0.0767	<b>\$0.0780</b>	\$0.0013	1.7%
Zone 2	\$0.1514	<b>\$0.1920</b>	\$0.0406	26.8%
Zone 3	\$0.2120	<b>\$0.2890</b>	\$0.0770	36.3%
Zone 4	\$0.2763	<b>\$0.3740</b>	\$0.0977	35.4%
Zone 5	\$0.3889	<b>\$0.4990</b>	\$0.1101	28.3%
Zone 6	\$0.4497	<b>\$0.6660</b>	\$0.2163	48.1%
Zone 7	\$0.5614	<b>\$0.8530</b>	\$0.2916	51.9%
Zone 8	\$0.7545	<b>\$1.1830</b>	\$0.4285	56.8%



# Alternative Rates: Private Fire Protection Charge

(With 6.0% Revenue Adjustment)

Private Fire Protection Charge	Current Charge (\$/day)	Alternative Charge (\$/day)	Difference (\$)	Difference (%)
2 inch	\$0.0242	<b>\$0.0515</b>	\$0.0273	112.8%
3 inch	\$0.0477	<b>\$0.1496</b>	\$0.1019	213.6%
4 inch	\$0.0747	<b>\$0.3188</b>	\$0.2441	326.8%
6 inch	\$0.1492	<b>\$0.9259</b>	\$0.7767	520.6%
8 inch	\$0.2685	<b>\$1.9731</b>	\$1.7046	634.9%
10 inch	\$0.4331	<b>\$3.5484</b>	\$3.1153	719.3%
12 inch	\$0.6280	<b>\$5.7315</b>	\$5.1035	812.7%





# Single Family Impacts at Usage Levels

(With 6.0% Revenue Adjustment)

Usage (gpd)	Current Bi - Monthly Bill	Alternative Bi - Monthly Bill	Difference (\$)	Difference (%)
75	\$64.08	<b>\$67.63</b>	\$3.55	5.5%
125	\$81.27	<b>\$86.16</b>	\$4.89	6.0%
212	\$111.37	<b>\$118.59</b>	\$7.23	6.5%
224	\$115.67	<b>\$123.23</b>	\$7.56	6.5%
524	\$218.85	<b>\$234.43</b>	\$15.58	7.1%

Single Family Residential customer with 5/8" meter in Zone 1



# Customer Impacts by Energy Zone

(No Revenue Adjustment)

Usage (gpd)	Energy Zone	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	Difference (\$)	Difference (%)
260	Zone 1	\$128.56	\$129.26	\$0.70	0.5%
260	Zone 2	\$130.13	\$131.53	\$1.40	1.1%
260	Zone 3	\$131.40	\$133.44	\$2.04	1.6%
260	Zone 4	\$132.75	\$135.12	\$2.37	1.8%
260	Zone 5	\$135.12	\$137.60	\$2.48	1.8%
260	Zone 6	\$136.40	\$140.90	\$4.50	3.3%
260	Zone 7	\$138.74	\$144.59	\$5.85	4.2%
260	Zone 8	\$142.80	\$151.13	\$8.33	5.8%



# Customer Impacts by Energy Zone

(With 6% Revenue Adjustment)

Usage (gpd)	Energy Zone	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	Difference (\$)	Difference (%)
260	Zone 1	\$128.56	\$137.13	\$8.56	6.7%
260	Zone 2	\$130.13	\$139.52	\$9.39	7.2%
260	Zone 3	\$131.40	\$141.56	\$10.15	7.7%
260	Zone 4	\$132.75	\$143.34	\$10.59	8.0%
260	Zone 5	\$135.12	\$145.97	\$10.85	8.0%
260	Zone 6	\$136.40	\$149.48	\$13.08	9.6%
260	Zone 7	\$138.74	\$153.40	\$14.66	10.6%
260	Zone 8	\$142.80	\$160.33	\$17.54	12.3%



# Other Customer Impacts by Class

(No Revenue Adjustment)

Customer Class	Usage (gpd)	Meter Size	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	Difference (\$)	Difference (%)
Commercial	1,000	5/8 inch	\$384.80	\$390.86	\$6.06	1.6%
Irrigation	2,000	1 inch	\$788.55	\$798.38	\$9.83	1.2%
Public Authority	7,900	2-3 inch	\$4,085.49	\$4,157.44	\$71.95	1.8%
Multi-Family	14,700	Dual 2 inch	\$8,070.71	\$7,371.90	(\$698.81)	-8.7%



# Other Customer Impacts by Class

(With 6% Revenue Adjustment)

Customer Class	Usage (gpd)	Meter Size	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	Difference (\$)	Difference (%)
Commercial	1,000	5/8 inch	\$384.80	\$414.69	\$29.90	7.8%
Irrigation	2,000	1 inch	\$788.55	\$847.11	\$58.56	7.4%
Public Authority	7,900	2-3 inch	\$4,085.49	\$4,402.59	\$317.10	7.8%
Multi-Family	14,700	Dual 2 inch	\$8,070.71	\$7,781.76	(\$288.96)	-3.6%



# Untreated Water



# Revenue Comparison

(With 6.0% Revenue Adjustment)

Rate Component	Current Revenue	Alternative Revenue	Difference (\$)	Difference (%)
Service Charge	\$99,929	\$26,624	(\$73,305)	-73.4%
Quantity Charge	\$40,291,556	\$37,787,659	(\$2,503,897)	-6.2%
Demand Charge	\$1,629,791	\$6,728,269	\$5,098,479	312.8%
<b>Total</b>	<b>\$42,021,275</b>	<b>\$44,542,552</b>	<b>\$2,521,277</b>	<b>6.0%</b>



# Rate Impacts by Customer Class

(With 6.0% Revenue Adjustment)

Customer Class	Current Revenue	Alternative Revenue	Difference (\$)	Difference (%)
Wholesale Municipal	\$22,316,232	\$23,995,103	\$1,678,871	7.5%
Industrial	\$19,906,577	\$20,728,777	\$822,200	4.1%
Landscape Irrigation-Metered	\$917,677	\$993,073	\$75,396	8.2%
Landscape Irrigation-Unmetered	\$107,166	\$188,870	\$81,704	76.2%
Agricultural Irrigation*	\$12,243	\$15,587	\$3,344	27.3%
Temporary Service	\$693	\$0	(\$693)	-100.0%
<b>Total**</b>	<b>\$43,260,588</b>	<b>\$45,921,410</b>	<b>\$2,660,822</b>	<b>6.0%</b>

\*Agricultural impacts include phasein option for FY 2019

\*\*Total alternative revenue slightly higher than 6.0% due to rounding of rates





# Sample Customer Bill Impacts



# Municipal Customer Impacts

(No Revenue Adjustment)

Customer Class	Est. Usage (thousand gallons)	Current Monthly Bill	Alternative Monthly Bill	Difference (\$)	Difference (%)
Antioch	211,100	\$522,556	\$556,885	\$34,329	6.6%
Pittsburg	212,600	\$499,043	\$483,664	(\$15,379)	-3.1%
Diablo Water District	146,600	\$337,461	\$333,148	(\$4,313)	-1.3%
Martinez	126,000	\$293,189	\$286,363	(\$6,826)	-2.3%
GSWC	46,100	\$149,807	\$146,905	(\$2,902)	-1.9%
Brentwood	50,000	\$116,629	\$112,026	(\$4,603)	-3.9%



# Municipal Customer Impacts

(With 6.0% Revenue Adjustment)

Customer Class	Est. Usage (thousand gallons)	Current Monthly Bill	Alternative Monthly Bill	Difference (\$)	Difference (%)
Antioch	211,100	\$522,556	\$589,661	\$67,105	12.8%
Pittsburg	212,600	\$499,043	\$512,473	\$13,430	2.7%
Diablo Water District	146,600	\$337,461	\$352,994	\$15,533	4.6%
Martinez	126,000	\$293,189	\$303,421	\$10,233	3.5%
GSWC	46,100	\$149,807	\$153,161	\$3,354	2.2%
Brentwood	50,000	\$116,629	\$118,708	\$2,079	1.8%



# Landscape Irrigation - Metered Customer Sample Impact

(No Revenue Adjustment)

Est. Monthly Usage: 6,985,000 gallons  
Max Monthly Usage: 9,542,000 gallons

Charges	Current Monthly Bill	Alternative Monthly Bill	Difference (\$)	Difference (%)
Monthly Service Charge	\$29.25	\$5.24	-\$24.01	-82.1%
Quantity Charge	\$15,792.92	\$13,900.62	(\$1,892.30)	-12.0%
Demand Charge	\$547.23	\$2,337.79	\$1,790.56	327.2%
Total	\$16,369.40	\$16,243.65	(\$125.75)	-0.8%



# Landscape Irrigation - Metered Customer Sample Impact

(With 6.0% Revenue Adjustment)

Est. Monthly Usage: 6,985,000 gallons  
Max Monthly Usage: 9,542,000 gallons

Charges	Current Monthly Bill	Alternative Monthly Bill	Difference (\$)	Difference (%)
Monthly Service Charge	\$29.25	\$5.56	-\$23.69	-81.0%
Quantity Charge	\$15,792.92	\$14,738.85	(\$1,054.07)	-6.7%
Demand Charge	\$547.23	\$2,465.02	\$1,917.79	350.5%
Total	\$16,369.40	\$17,209.43	\$840.03	5.1%



# Landscape Irrigation - Unmetered Customer Sample Impact

(No Revenue Adjustment)

Sample billable acreage: 0.1 acre

Charges	Current Annual Bill	Alternative Annual Bill	Difference (\$)	Difference (%)
Annual Charge	\$220.96		(\$220.96)	
Annual Service Charge		\$62.90	\$62.90	
Quantity Charge		\$218.98	\$218.98	
Demand Charge		\$59.48	\$59.48	
Total	\$220.96	\$341.36	\$120.40	54.5%



# Landscape Irrigation - Unmetered Customer Sample Impact

(With 6.0% Revenue Adjustment)

Sample billable acreage: 0.1 acre

Charges	Current Annual Bill	Alternative Annual Bill	Difference (\$)	Difference (%)
Annual Charge	\$220.96		(\$220.96)	
Annual Service Charge		\$66.73	\$66.73	
Quantity Charge		\$231.88	\$231.88	
Demand Charge		\$62.70	\$62.70	
Total	\$220.96	\$361.31	\$140.35	63.5%



# Comparison of Residential Water Bill With and Without Untreated Water For Irrigation

(With 6.0% Revenue Adjustment)

Scenarios	Treated Water	Untreated Water	Total Water Usage	Est. Monthly Charges
Scenario 1 100% Treated	670 gpd		670 gpd	\$145.00
Scenario 2 Treated/Untreated	200 gpd	0.10 acres (470 gpd*)	670 gpd	\$104.24
Difference (\$)				\$40.76
Difference (%)				28.1%





# Agricultural Rates



# Alternative Rates

(With 6.0% Revenue Adjustment)

Rate Component	Current Rates	Alternative Rates	Difference (\$)	Difference (%)
Annual Service Charge per acre	\$24.95	n/a		
Monthly Service Charge	n/a	\$5.57/mo		
Quantity Charge	\$124.92/AF (\$0.38/kgal)	\$2.11/kgal	\$1.73/kgal	455%



# Agricultural Sample Rate Impacts

Customer	Current Annual	Alternative Annual	Difference (\$)	Difference (%)
High water usage, moderate acreage	\$1,831.43	\$6,509.04	\$4,677.61	255%
Moderate water usage, small acreage	\$191.03	\$706.15	\$515.12	270%
Low water usage, large acreage	\$4,268.15	\$213.41	(\$4,054.74)	-95%



# Agricultural Phase -In Option

Rate Year	Quantity Charge (\$/AF)	Quantity Charge (\$/kgal)	Year-Over-Year Change
Current	\$124.92	\$0.38	
FY 2019	\$312.45	\$0.96	152.6%
FY 2020	\$499.98	\$1.54	60.4%
FY 2021	\$687.50	\$2.11	37.0%

A portion of miscellaneous revenues are proposed to be used for phase-in purposes



# Next Steps and Schedule



# Current Schedule

Review Draft of Rate Structure Administrative Record	Oct. 3, 2018
2019 Rate Setting Process, Prop 218, Public Outreach	Nov. – Dec.
Public Hearing for 2019 Rates	Jan. 2, 2019
Rates Effective	Feb. 1, 2019



# Thank you!

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# Supplementary Information





# Treated Water Rate Structure Overview

- Fixed charge by meter size
  - › Service and public fire protection charge
  - › Private fire protection charge
  - › Backflow prevention charges
- Variable charge by hundred cubic feet (hcf)
  - › Energy surcharge
  - › Quantity charge



# Rate Comparison

(With 6.0% Revenue Adjustment)

Rate Component	Current Rate	Alternative Rate	Difference (\$)	Difference (%)
Quantity Charge	\$4.2225	\$4.5553	\$0.3328	7.9%
Service and Public Fire Protection Charge - 5/8 inch	\$0.6380	\$0.6638	\$0.026	4.0%
Energy Surcharge- Zone 1	\$0.0767	\$0.0780	\$0.001	1.7%
Private Fire Protection Charge - 2 inch	\$0.0242	\$0.0515	\$0.027	112.8%



# Alternative Rates: Service and Public Fire Protection Charge (With 6.0% Revenue Adjustment)

Service and Public Fire Protection Charge	Current Charge (\$/day)	Alternative Charge (\$/day)	Difference (\$)	Difference (%)
5/8 inch	\$0.6380	<b>\$0.6638</b>	\$0.0258	4.0%
3/4 inch	\$0.9570	<b>\$0.9956</b>	\$0.0386	4.0%
3/4 inch (SFR w/ inside sprinklers)	\$0.6804	<b>\$0.6638</b>	(\$0.0166)	-2.4%
1 inch	\$1.5950	<b>\$1.6592</b>	\$0.0642	4.0%
1 inch (SFR w/ inside sprinklers)	\$0.6865	<b>\$0.6638</b>	(\$0.0227)	-3.3%
1 1/2 inch	\$3.1900	<b>\$3.3182</b>	\$0.1282	4.0%
2 inch	\$5.1041	<b>\$5.3091</b>	\$0.2050	4.0%
3 inch	\$10.2080	<b>\$11.6137</b>	\$1.4057	13.8%
4 inch	\$15.9501	<b>\$20.9044</b>	\$4.9543	31.1%
6 inch	\$31.9002	<b>\$43.1360</b>	\$11.2358	35.2%
8 inch	\$57.4197	<b>\$92.9083</b>	\$35.4886	61.8%
10 inch	\$92.5108	<b>\$139.3623</b>	\$46.8515	50.6%
12 inch	\$137.1692	<b>\$175.8619</b>	\$38.6927	28.2%
Dual 1 1/2 inch	\$6.3801	<b>\$6.6364</b>	\$0.2563	4.0%
Dual 2 inch	\$10.2080	<b>\$10.6181</b>	\$0.4101	4.0%

# Alternative Rates: Backflow (Double Check Valve)

(With 6.0% Revenue Adjustment)

Backflow - Double Check Valve	Current Charge (\$/day)	Alternative Charge (\$/day)	Difference (\$)	Difference (%)
5/8 inch	\$0.0430	\$0.0700	\$0.0270	62.8%
3/4 inch	\$0.0644	\$0.0700	\$0.0056	8.7%
1 inch	\$0.1074	\$0.0770	(\$0.0304)	-28.3%
1 1/2 inch	\$0.2148	\$0.2098	(\$0.0050)	-2.3%
2 inch	\$0.3436	\$0.2273	(\$0.1163)	-33.8%
3 inch	\$0.6874	\$0.6924	\$0.0050	0.7%
4 inch	\$1.0740	\$1.1189	\$0.0449	4.2%
6 inch	\$2.1479	\$1.6958	(\$0.4521)	-21.0%
8 inch	\$3.8701	\$3.2518	(\$0.6183)	-16.0%
10 inch	\$6.2294	\$4.5804	(\$1.6490)	-26.5%
12 inch	\$9.2450	\$4.8951	(\$4.3499)	-47.1%
Dual 1 1/2 inch	\$0.4296	\$0.4196	(\$0.0100)	-2.3%
Dual 2 inch	\$0.6874	\$0.4546	(\$0.2328)	-33.9%

# Alternative Rates: Backflow (Reduced Pressure)

(With 6.0% Revenue Adjustment)

Backflow - Reduced Pressure	Current Charge (\$/day)	Alternative Charge (\$/day)	Difference (\$)	Difference (%)
5/8 inch	\$0.0656	<b>\$0.0945</b>	\$0.0289	44.1%
3/4 inch	\$0.0984	<b>\$0.0945</b>	(\$0.0039)	-4.0%
1 inch	\$0.1638	<b>\$0.1039</b>	(\$0.0599)	-36.6%
1 1/2 inch	\$0.3277	<b>\$0.2833</b>	(\$0.0444)	-13.5%
2 inch	\$0.5245	<b>\$0.3069</b>	(\$0.2176)	-41.5%
3 inch	\$1.0487	<b>\$0.9347</b>	(\$0.1140)	-10.9%
4 inch	\$1.6387	<b>\$1.5105</b>	(\$0.1282)	-7.8%
6 inch	\$3.2770	<b>\$2.2894</b>	(\$0.9876)	-30.1%
8 inch	\$5.9023	<b>\$4.3899</b>	(\$1.5124)	-25.6%
10 inch	\$9.5093	<b>\$6.1836</b>	(\$3.3257)	-35.0%
12 inch	\$14.1040	<b>\$6.6084</b>	(\$7.4956)	-53.1%
Dual 1 1/2 inch	\$0.6556	<b>\$0.5665</b>	(\$0.0891)	-13.6%
Dual 2 inch	\$1.0487	<b>\$0.6137</b>	(\$0.4350)	-41.5%



# Single-Family Residential Customer Impacts

(With 6% Revenue Adjustment)

Usage (gpd)	Current Bi - Monthly Bill	Alternative Bi - Monthly Bill	Difference (\$)	Difference (%)
100	\$72.67	\$76.89	\$4.22	5.8%
200	\$107.07	\$113.96	\$6.89	6.4%
260	\$128.56	\$137.13	\$8.56	6.7%
300	\$141.46	\$151.03	\$9.57	6.8%
400	\$175.85	\$188.09	\$12.24	7.0%
500	\$210.25	\$225.16	\$14.91	7.1%
800	\$313.43	\$336.36	\$22.93	7.3%
1,000	\$382.22	\$410.49	\$28.28	7.4%



# Untreated Water Rate Structure Overview

- Service charge
  - › Metered customers – monthly charge per bill
  - › Unmetered customers – annual charge per account
- Quantity charge
  - › Metered customers – by 1,000 gallons
  - › Unmetered customers – by 0.05 acres (minimum changed from 0.10 acres to 0.05 acres)
- Demand charge
  - › Based on three-year average maximum month usage per account
  - › Not charged to Agricultural customers
  - › Metered customers – by kgal
  - › Unmetered customers – by 0.05 acres



# Alternative Rates

(With 6.0% Revenue Adjustment)

Rate Component	Current Blended Rates	Alternative Rates	Difference (\$)	Difference (%)
Monthly Service Charge – Metered	\$66.09	<b>\$5.56</b>	(\$60.53)	-91.6%
Annual Service Charge – Unmetered	\$0.00	<b>\$66.71</b>	\$66.71	n/a
Quantity Charge – Metered	\$2.18	<b>\$2.11</b>	(\$0.07)	-3.2%
Quantity Charge – Unmetered	\$92.53	<b>\$115.94</b>	\$23.41	25.3%
Demand Charge – Metered	\$0.74	<b>\$3.10</b>	\$2.36	318.9%
Demand Charge – Unmetered	\$0.00	<b>\$31.35</b>	\$31.35	n/a

