



**ORIGINATING SECTION:** Administrative Services

**CONTACT:** Osborn Solitei

**AGENDA DATE:** October 16, 2019

**ITEM NO. 12**

**SUBJECT:** Proposed Untreated Water Rate for Calendar Year 2020

**SUMMARY:**

- The Agency's Mission Statement effectively communicates that the Agency is committed to providing a reliable supply of high quality water in a fiscally responsible way. In carrying out these fiscal responsibilities, the Agency sets rates and fees to recover cost of service.
- To determine the untreated water rates for calendar years (CY) 2020-2022, Zone 7 contracted with Raftelis to conduct a cost of service study for untreated water service. The study calculated rates for three years.
- The study determined the untreated water rates required to adequately recover the costs of the untreated water program. The rates were based on similar methodology applied to previous rates, but recommended two additional cost components: 1) Agency overhead and 2) capital costs related to water supply and reliability.
- Staff met with untreated water customers on August 20, 2019 to share the study findings and to get feedback on the preliminary rates.
- Staff met with the Finance Committee on October 1, 2019 to discuss the share the study findings and to get feedback on the preliminary rates. Members of the public provided comments.
- The Finance Committee recommended the following:
  - › Adopt only one year of rates (CY 2020)
  - › Provide a reconciliation of the CY 2018 untreated water revenue, deliveries and the 2018 actual expenses
  - › Include the Water Supply Management and Water Supply Cost component in the rates
  - › Delay two new additional cost components - the Agency Overhead and Water Supply and Reliability Capital Cost components, to allow for more discussions with stakeholders on the impacts of the rate increases, and to review the current Rules and Regulations of Governing Untreated Water Service and to develop an untreated Water Reliability Policy
  - › Provide explanation of significant variances

- The following table shows all of the proposed untreated water rates for calendar year 2020.

<b>Proposed 2020 Untreated Water Rates</b>	<b>\$/AF</b>
Proposed untreated water rate	\$182
Proposed temporary untreated water rate	\$886
Proposed non-scheduled untreated water rate	\$886

**FUNDING:**

The proposed rates determine the amount of revenue from untreated water sales as a part of operating the Water Enterprise (Fund 100), which equates to approximately \$1 million if the projected demand of 5,500 AF is realized.

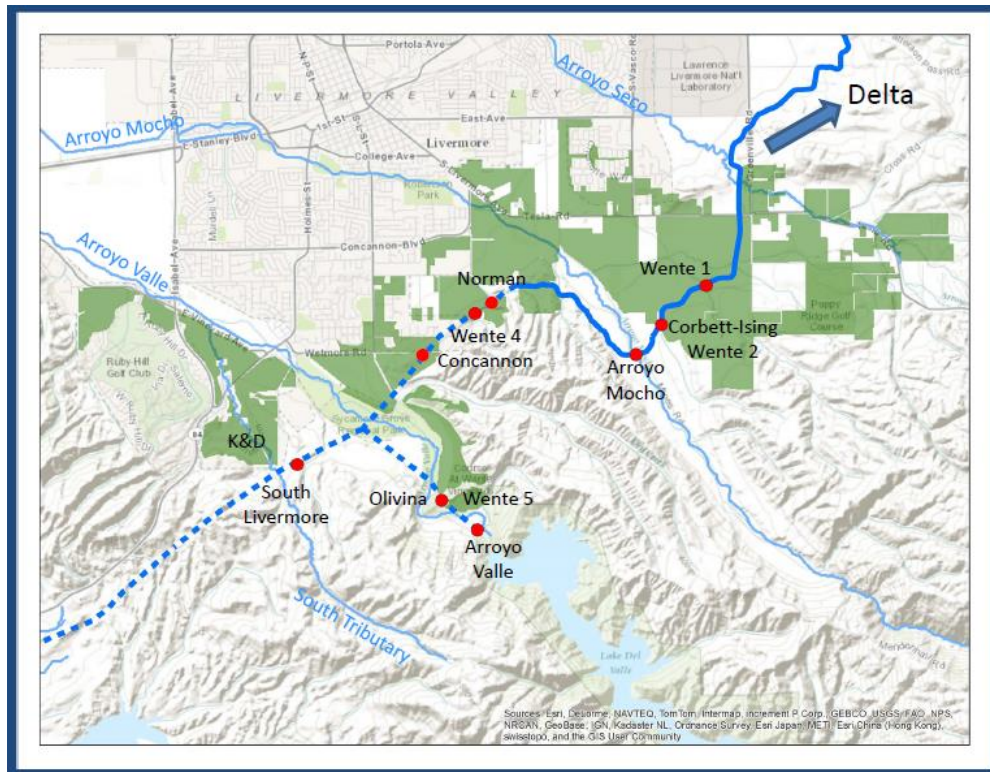
**BACKGROUND:**

**Untreated Water Service**

Untreated water deliveries to the Zone 7 service area from the California Department of Water Resources (DWR) via the South Bay Aqueduct (SBA) began in 1962. Over the years, deliveries increased with the agricultural development of South Livermore. Zone 7 provides untreated water service to 81 untreated water users who, collectively, may request water deliveries of up to 8,104 acre-feet per year.

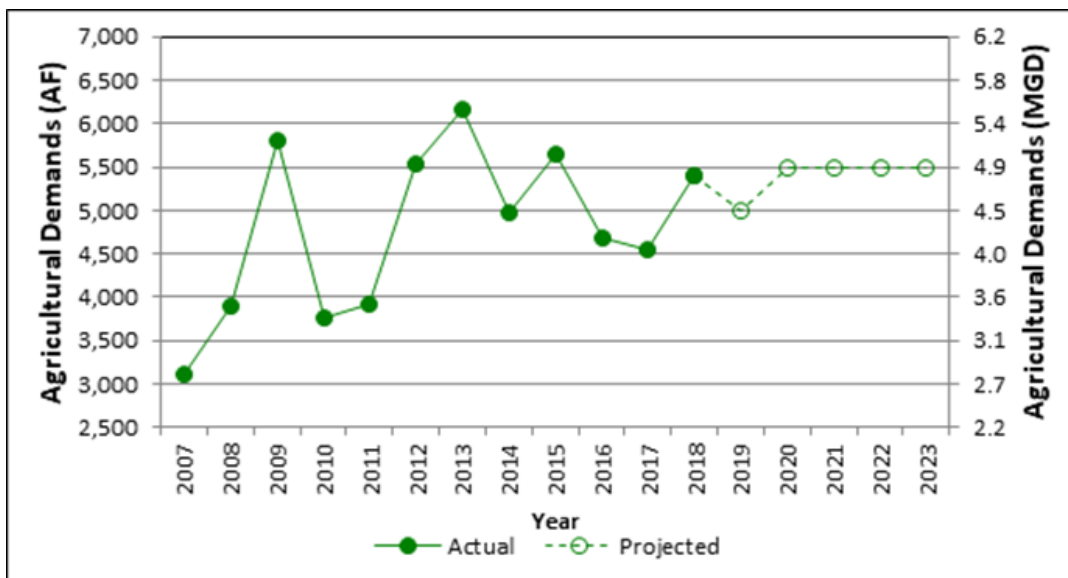
While historically Zone 7 has untreated water contracts with 81 separate water users, only seven of these contractors receive Zone 7 water directly from an SBA turnout. These water users are referred to as "turnout water users." The remaining 74 "remote water users" receive their water deliveries through the turnout water users' respective conveyance facilities. Zone 7's practice has been to invoice the seven turnout water users for all water delivered through the SBA turnouts, which includes water wheeled (delivered through their facilities) to remote water users. The turnout water users, in turn, invoice the respective individual remote water users.

The map below shows the untreated water turnouts and delivery via the South Bay Aqueduct.



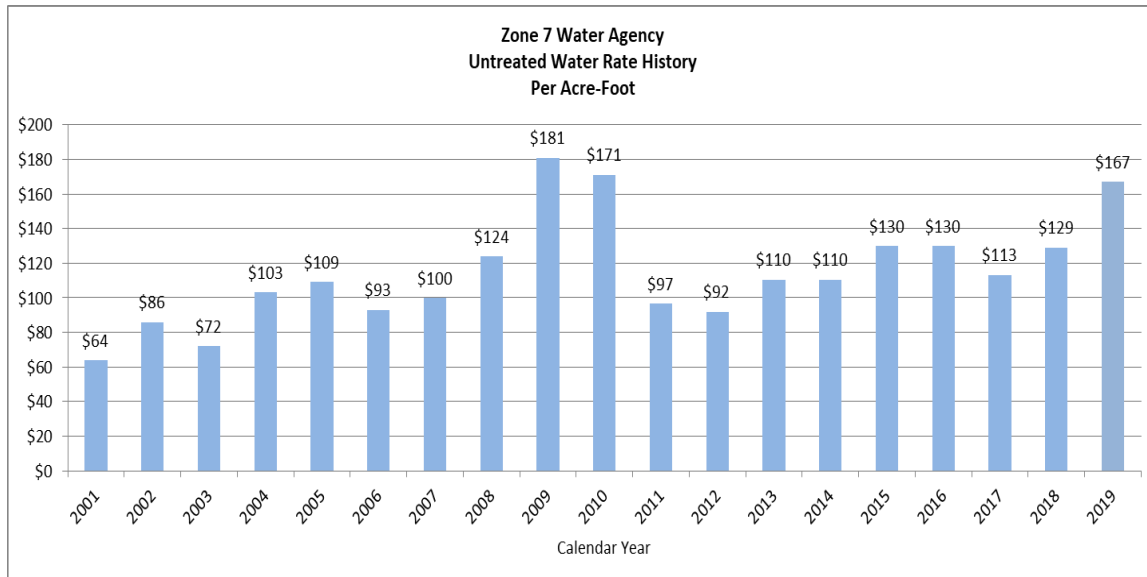
In 2011, Zone 7 transitioned from individual contracts with separate users to Rules and Regulations Governing Water Service. The Rules and Regulations Governing Untreated Water Service reflect Zone 7's actual relationship with the untreated water users and allows Zone 7 to efficiently administer the untreated water program.

The Rules and Regulations retain and clearly document the maximum annual allocation amount for each water user and provide a process for water transfers within Zone 7's service area. A history of untreated water deliveries is shown in the figure below, along with projected future deliveries.



## Current Untreated Water Rate

Zone 7 recovers the cost of providing untreated water service through untreated water rates. The CY 2019 rate is \$167 per acre-foot of water delivered, billed on a monthly basis. The following table shows a history of untreated water rates.



## 2019 Cost of Service Study

To determine the rates for the next three years, the Agency contracted with Raftelis again to review rates for CY 2020 – 2022. The scope of work was expanded to include the following analysis areas:

1. Alternative Rate Structure Analysis – analyze a potential fixed and volume-based component for untreated water rates
2. Financial Reserve Policy Evaluation – evaluate a reserve for untreated water funds
3. Overhead Cost Allocation – evaluate the current Agency-wide overhead allocations (e.g. central administration cost)
4. Untreated Water Rates – develop a multi-year rate schedule for untreated rates
5. Benchmarking – perform a survey of other agency's untreated rates

The objectives of alternatives rate structures are as follows:

- › Maintaining and ensuring financial sufficiency in case of fluctuating water supply costs primarily due to the variability of the State Water Project annual allocations
- › Establishing equity between treated and untreated water systems in case of over- or under-collecting untreated water rate revenues
- › Increasing equity among untreated customers due to fluctuations in water deliveries

### 1. Analysis Area – Fixed Charge & Volume-Based Rates

Raftelis explored a potential fixed charge component to rates. A fixed charge may increase equity amongst customers due to fluctuations in water use. It may also mitigate risks associated with water supply cost changes.

#### Raftelis' Recommendation

Based on the analysis, Raftelis does not recommend a fixed charge for the following reasons:

- › to maintain a simplified rate structure.

- › all turnout users' water deliveries remain stable over 3, 5, and 10 years with no fluctuations in water use.

Raftelis recommends a water readjustment charge/credit, which will true-up water supply costs in the prior year to account for potential changes.

## **2. Analysis Area – Financial Reserve Policy Evaluation**

Raftelis explored a potential reserve policy for untreated water. Similar to a fixed charge, establishing a reserve may mitigate risk associated with water supply cost changes and increase equity between treated and untreated water due to potentially over- or under-collecting revenues. Although implementing a reserve policy and/or a fixed charge component may meet the Agency's objectives, the administrative cost and burden to the Agency outweighs the potential benefit.

### **Raftelis' Recommendation**

Raftelis does not recommend a reserve policy or fixed charge for the untreated water system, but rather adopting three years of rates and an annual water readjustment charge/credit based on acre-feet of water deliveries. The water readjustment charge/credit is discussed further in the section below.

### **Raftelis' Recommendation - Rates Readjustment Charge/Credit**

A true-up of water supply costs from prior years will ensure that the Agency can collect sufficient revenues to meet its water supply costs. Implementing a water readjustment charge, which can be an additional charge or a credit depending on the water supply costs, will ensure that the Agency is not over- or under-collecting from untreated water customers. The adjustment may be an additional charge or a credit. The true-up shall be for water supply costs only, and will not true-up the overhead, administrative or capital cost components of the proposed rates.

The first adjustment could occur in 2021 based on a true-up of the 2019 rate water supply component. Actual water supply costs for 2019 will be available in mid-2020. Therefore, the water readjustment charge/credit to true up water supply costs in 2019 will be effective January 1, 2021 because the Agency adopts rates prior to the effective start date. The Agency will repeat the same process for every year of untreated water rates and water readjustment charges/credits.

## **3. Analysis Area - Agency Overhead Component**

Overhead costs are non-labor costs that are necessary to run the Agency.

Examples include utilities, central administration, administration building, Board of Directors, etc. Recovered as a percentage on top of labor costs (currently proposed at 51.8%).

## **4. Analysis Area - Untreated Water Rates**

Raftelis' recommended untreated water rate includes three components:

- A. Water Supply Management Costs & Overhead – recovers water supply management labor and related Agency overhead costs (the overhead portion of this rate component is newly proposed)
- B. Water Supply – recovers water purchase costs and additional supply and reliability projects
- C. Capital – recovers a portion of certain water supply and reliability capital project costs (this cost component is also newly proposed)

**(A) Water Supply Management Cost Component**

The current untreated water rate includes a water supply management cost component for Agency staff costs related to water supply management. The Agency is committed to providing a reliable supply of high quality water for municipal, industrial and agricultural (untreated) customers. In doing so, staff spends a considerable amount of time managing the Agency’s water supply portfolio. The programs applicable to the untreated water program are described in detail below.

<b>PROGRAM</b>	<b>DESCRIPTION</b>
Bay Delta/California Water Fix/Delta Conveyance (no costs in the 2020 rate)	Administration related to the Bay Delta, including Bay Delta Conservation Plan, Delta Habitat Conveyance and Conservation Program, California Water Fix and now the Delta Conveyance project.
Byron Bethany Irrigation District	Administration of the BBID contract and BBID water purchases.
Cawelo Groundwater Banking Program	Administration, operation, and maintenance of Cawelo.
Groundwater Basin Management and Monitoring <sup>1</sup>	Groundwater and Storm water monitoring, including toxic site monitoring. Groundwater management, including artificial recharge management
Local Water Rights	Acquisition, maintenance, and renewal of local water rights.
Other Water Supplies	Evaluation of water supplies not specific to SWP, BBID, and Bay Delta.
Semitropic Groundwater Banking Program	Administration, operation, and maintenance of Semitropic.
State Water Project	Administration of the State Water Project.
Supply Source & Conveyance Administration	General administration and support related to the Supply Source & Conveyance Program.
Untreated Water Program	Execution, management, and administration of the Untreated Water Program.
Water Storage Administration	General administration and support related to the Water Storage Program.
Water Utility Planning <sup>2</sup>	Operational planning of water supply and the water utility and day-to-day water supply management activities.

<sup>1</sup>Does not include Flood Protection activities. Flood related activities are charged to a separate Flood fund, Fund 200 – Flood Protection Operations.

<sup>2</sup>Does not included activities related to the treatment of raw water. These activities are charged to a separate Water Treatment Administration program.

**(B) Water Supply Component**

The sources described below are used to meet treated water demands from municipal and industrial customers (retailers and direct retail) and untreated water demands from agricultural customers. Excess surface water supplies are placed into storage either locally or remotely for future use as needed. The annual Water Supply Operations Plan identifies the subset of supplies available and needed to meet the following year’s projected demands. Costs for these supplies are included in the rate calculation for both treated and untreated water customers.

<b>WATER SUPPLY</b>	<b>DESCRIPTION</b>
Table A	This source is Zone 7's portion of the SWP annual allocation and represents the largest portion of Zone 7's 'new' water each year. Zone 7's maximum allocation is 80,619 acre-feet (AF) annually. The projected long-term average allocation is 62% or about 50,000 AF; in the last ten years, the average has been closer to 40,000 AF.
Article 21	This is SWP surplus water that is made available, in addition to Table A water, when there is SWP water available that cannot be stored in San Luis Reservoir because it is full.
Turnback Pool	This is water made available by other SWP contractors who wish to sell excess supply.
BBID	Whenever BBID has surplus supply, water can be made available through a transfer agreement with BBID, a non-SWP contractor, subject to approvals by the Department of Water Resources (DWR) and the Bureau of Reclamation. The amount varies up to 5,000 AF annually. For planning purposes, BBID water is presumed unavailable this year.
Lake Del Valle (Local Water):	Zone 7 has a water right for Arroyo Valle water captured in Lake Del Valle, which becomes available for use once it has been stored for 30 days. The annual average yield of this source is 7,300 AF. Water captured in Lake Del Valle during the current year needs to be used within the following year.
Yuba Accord	This water is available mostly in dry years through agreement with DWR and Yuba County Water Agency. Zone 7 gets about 1% of available water.
Dry Year Transfer Program	During dry years, the State Water Contractors negotiate water purchases with farmers north of the Delta and makes that water available to interested SWP contractors.
Local Groundwater	Zone 7 recharges the Livermore Valley groundwater basin with surface water and uses groundwater for peaking, dry years, and emergencies. Zone 7 only pumps what it has stored; over the last fifteen years, the average Zone 7 recharge is 8,000 AF per year, with the long-term average groundwater pumping rate at 7,300 AF per year. The estimated maximum pumping capacity is 34,000 AF per year. The basin has 126,000 AF of operational storage capacity, which is the storage capacity above historical lows.
Article 56 (Carryover)	This is unused annual allocation of Table A water, which rolls over as carryover for use in future years by individual SWP contractors. In most years, this water remains in San Luis Reservoir, but in wet years such as 2017, as the reservoir fills due to available Delta pumping and DWR needs more storage capacity, this water is gradually converted to SWP water and is lost to Zone 7. When this happens, Article 21 water (see above) is offered to the SWP contractors as surplus water. Each year, Zone 7 typically reserves 10,000-15,000 AF as carryover to provide a buffer against varying Table A allocation.
Offsite Groundwater Banks	Zone 7 has agreements with Semitropic Water Storage District and Cawelo Water District in Kern County for 78,000 AF and 120,000 AF of storage capacity, respectively. Zone 7 recovers water from these banks when needed during dry years (e.g., in 2014 and 2015). Recovered water is delivered via exchange through the SBA as surface water conveyed through the Delta.

## **Water Supply and Reliability Capital Component**

As described in the Fiscal Year 2018-19 Ten-Year Water System Capital Improvement Plan and the 2019 Water Supply Evaluation Update, major investments in water supply and reliability projects are currently anticipated in the coming years to meet Zone 7's Reliability Policy. The Reliability Policy relates to treated water service, however, Zone 7 endeavors to provide a similar level of reliability for untreated water service. Untreated water deliveries are approximately 20% of total water deliveries. West Yost Associates was hired to conduct the Water Supply Cost Allocation Study, whose main purpose is to evaluate and recommend how the capital costs for future water supply and reliability projects should be allocated between existing and future water customers. Costs allocated to existing water customers would generally be paid through water rates, while costs allocated to future water customers would be paid through connection fees.

The study included the development of cost allocation principles, evaluation of existing and future water demand conditions, review of planned water supply and reliability projects and their benefits to existing and future water users, and cost allocation recommendations for each project. The study's findings will inform the funding analysis for Zone 7's Capital Improvement Program, future water rate studies, and future connection fee studies. More details on the Cost Allocation Study are included in this agenda package in Item No. 11.

The Agency's Water Supply Reliability Policy does not apply to untreated water supplies. The Agency does have rules and regulations for the delivery of untreated water supplies to its untreated water customers, but there is no specific policy for the reliability of untreated water supplies. The untreated water service rules and regulations indicate that the Agency does not guarantee a full supply of water free from interruptions; however, the Agency shall exercise reasonable diligence to furnish a continuous and adequate supply of water and avoid any shortages and interruptions in untreated water supplies. If existing untreated water customers desire a higher water supply reliability they could benefit from some of the future water supply projects described below. Under such a scenario, it would be appropriate for existing untreated water customers to share in the costs allocated to existing treated water customers for those projects. The following planned projects would provide benefits to the existing untreated water customers:

- › Chain of Lakes Pipeline: Would free up surface water supply that could be used to serve untreated water customers during droughts or partial Delta outages
- › Los Vaqueros Expansion: Untreated water customers would benefit by being able to receive supplies in the event of a Delta outage
- › Delta Conveyance: Untreated water customers would benefit from increased delivery reliability from the SWP

The Agency is planning to coordinate with untreated water customers over the next several months to discuss potential level of service options and determine if there is an interest by untreated water customers to improve their water supply reliability. Based on these discussions, the Agency will determine the appropriate costs to be allocated to untreated water customers and included in future untreated water rates.



## **DISCUSSION:**

The proposed rates based on Raftelis' recommendations were presented to the Finance Committee on October 1, 2019. The Finance Committee recommended against adding a Water Supply and Reliability Capital Component to the rate structure because there is no Water Reliability Policy for Untreated Water Service and the Rules and Regulations governing Untreated Water Service were last update 2011. The members of the agricultural community, through the Tri Valley Conservancy, requested a delay on the adoption any rate increases for 1-2 years to allow time to fully evaluate the potential impacts of the proposed rate changes on local agriculture. The committee suggested that adopting rates for just one year will allow more time in 2020 to address both the committee's and community's concerns. The Finance Committee specifically recommended the following:

- › Adopt only one year of rates (CY 2020)
- › Provide a reconciliation of the CY 2018 untreated water revenue, deliveries and the 2018 actual expenses.
- › Include the Water Supply Management and Water Supply Cost component in the rates
- › Do not include the recommended Agency overhead cost component
- › Do not include the recommended Water Supply and Reliability Capital Cost component to allow for more time to discuss a untreated reliability policy and revisit the Rules and Regulations governing Untreated Water Service

### **Untreated Water Rate Calculation based on the Finance Committee's recommendation:**

The untreated water rate is calculated in the following steps:

1. Project water deliveries to the untreated and treated water systems based on delivery requests and trends
2. Determine staff costs for water supply management programs that serve one or both of the systems. Untreated water program administration costs are applied directly to the untreated water rate.
3. Apply water supply unit costs per unit of water purchased, factoring in certain supplies such as local Lake Del Valle water that have no or minimal cost
4. Project the amount of water purchased from each source
5. Calculate the total costs of water supply by multiplying unit costs with amount of water purchased and include all fixed costs (water rights, etc.)
6. Divide all costs by the water deliveries of each system dependent upon benefit and use
7. Result: \$182 per AF for CY 2020
8. Under this methodology, the projected rates for CY 2021 and CY 2022 are \$201 per AF and \$207, respectively.

The projected water delivery for untreated water is approximately 5,500 AF in 2020 for treated water it is 33,770 AF. The water supply unit costs and projected water purchases are based on the 2020 Water Operations Plan. All water costs, excluding fixed State Water Project costs paid through property taxes, are used to calculate the untreated water rate per unit of water.

Attachment A shows the untreated water rate calculation used to determine the preliminary CY 2020 rate. The table below explains significant variances for the Water Supply Cost components that are shown in Attachment A.

Water Supply	2019 Adopted	2020 Proposed	Variance	Explanation
Other Water Transfers	\$1,000,000	\$1,140,000	14%	Unit rate increased from \$500 AF to \$570
Yuba Costs/Dry Year Program	\$80,000	\$940,000	1075%	Purchase amount increased from 200 AF to 2,000 AF due to a projected 30% SWP allocation in CY 2020
State Water Project Transportation Variable Cost	\$2,170,000	\$1,673,000	-23%	2019 costs assumed purchasing 29,800 AF. The 2020 costs assumes purchasing 23,900 AF due to a projected 30% SWP allocation in CY 2020.

The Water Supply Management Component of the rate consists of staff costs associated with managing water supplies. The costs recovered in the rate are based on prior year actual staff costs cost plus a 3% Board-approved cost of living adjustment (COLA). The table below explains significant variances for the Water Supply Management components that are shown in Attachment A.

Water Supply Management Program	2019 Adopted	2020 Proposed	Variance	Explanation
Other Water Supplies	\$26,000	\$29,103	12%	Slight increase in labor hours for pursuing other water supplies (i.e. BBID, and River Garden Farms), and a 3% COLA
Untreated Water Program	\$8,000	\$16,131	102%	Increase in labor hours to complete the 2018 Untreated Cost of Service Study and a 3% COLA
Water Storage Administration	\$7,200	\$10,638	48%	Increase in labor hours for State Water Project Contractor's meetings regarding matters related to out of basin ground water banking programs and a 3% COLA.
Water Utility Planning	\$290,000	\$397,392	37%	Increased in labor hours for developing the 2019 Water Supply Evaluation and a 3% COLA

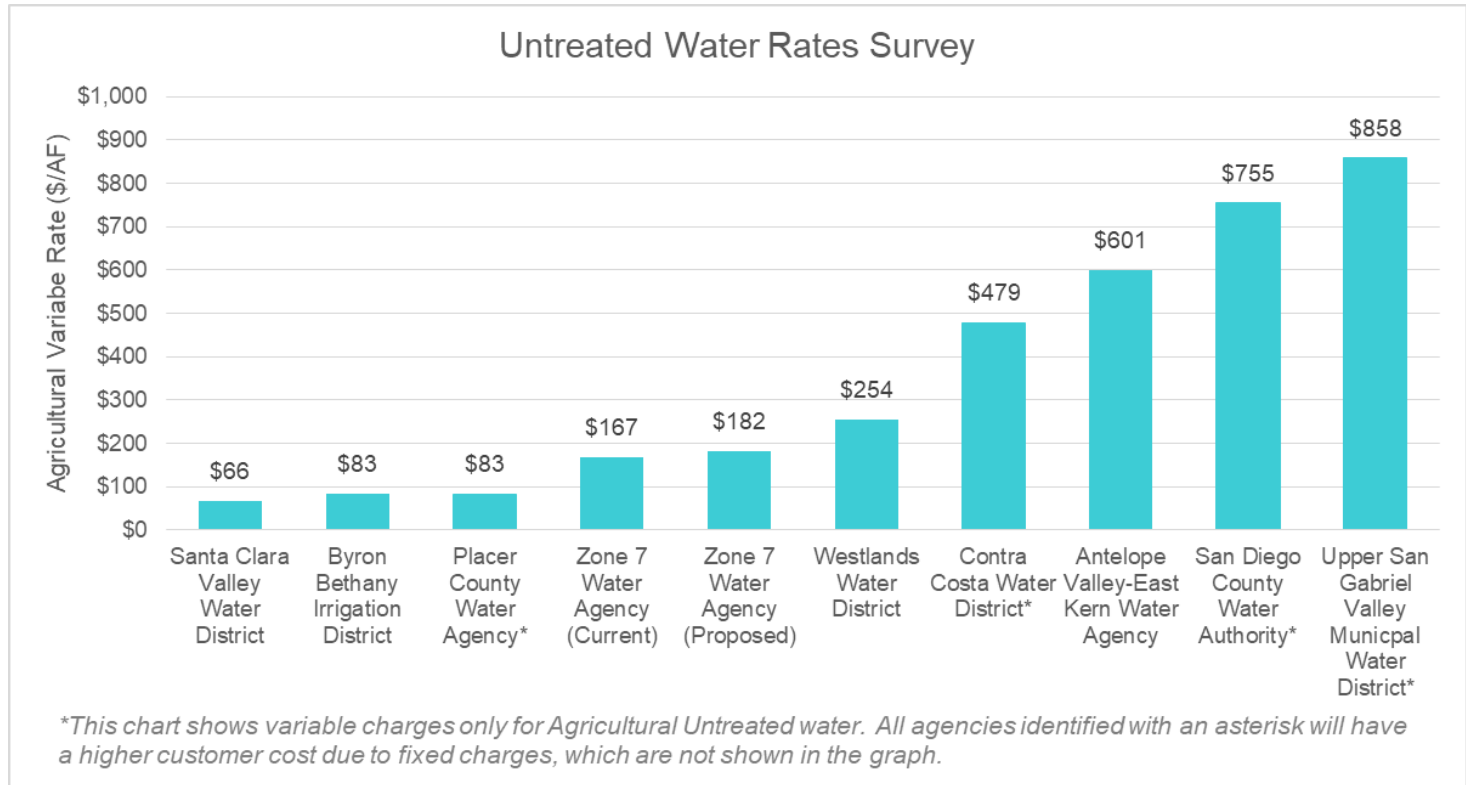
## **OTHER UNTREATED WATER RATES**

**Temporary Untreated** – This rate includes most of the cost elements of the untreated water rate plus the State Water Project Supply Costs that are paid with property taxes. The need for temporary services results from the inability of customers to obtain water in the outlying areas of the valley. The use of these services is limited. The temporary untreated water rate is based on the estimated cost of imported water, Zone 7 staff costs related to water supply management, Bay-Delta related costs and supplemental water purchases divided by the estimated customer deliveries minus the estimated available water from the Del Valle reservoir. The proposed rate for temporary untreated water is \$886 per AF or \$2.72 per 1,000 gallons.

**Non-Scheduled Untreated Water** – Non-scheduled water is all untreated water deliveries exceeding scheduled deliveries by more than 10% in any year. It is based upon the temporary untreated water rate. The proposed rate for non-scheduled untreated water is \$886 per AF or \$2.72 per 1,000 gallons.

**5. Benchmarking**

Raftelis conducted a survey of other agency’s untreated water rates. The chart below compares untreated and/or agricultural water rates.



**RECOMMENDED ACTION:**

Adopt the attached Resolution

**ATTACHMENT(S):**

- › Resolution
- › Attachment A - Zone 7 Proposed Untreated Water Rate Calculation
- › Attachment B - Zone 7 Proposed Temporary Untreated Water Rate Calculation
- › Attachment C - 2018 Untreated Water Rate Reconciliation

ZONE 7  
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

RESOLUTION NO.

INTRODUCED BY  
SECONDED BY

**Adoption of the Untreated Water Rates for 2020**

BE IT RESOLVED by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District that the following rate schedule for Untreated Water, Temporary Untreated Water, and Non-Scheduled Untreated Water Services, be adopted:

FIRST, for Untreated Water Service, a DELIVERY CHARGE of \$182 per acre-foot for all metered water delivered to each customer per month.

SECOND, for Temporary Untreated Water Service, an initial service establishment charge of \$125 per turnout for each new direct connection to the Zone system or a system supplying the Zone system; and

A monthly service charge of \$21 per turnout; and

A charge of \$886 per AF or \$2.72 per 1000 gallons for temporary untreated water service for all water delivered monthly based on total meter readings or as may be otherwise determined by Zone 7.

THIRD, for Non-Scheduled Untreated Service, a delivery charge of \$886 per acre-foot for all non-scheduled untreated water delivered to each customer.

BE IT FURTHER RESOLVED that said rate schedule for Untreated Water Services, collectively, shall be effective on January 1, 2020, and shall end on the next effective date for such water rates as adopted by the Board.

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 16, 2019.

By: \_\_\_\_\_  
President, Board of Directors

## Attachment A Proposed Untreated Water Rate Calculation

				2020 Proposed Rate	
Calendar Year	2019 Adopted Rate	2020 Proposed Rate	Acre-Feet	Unit Cost per Acre-Foot <sup>1</sup>	
Planned Treated and Untreated Water Deliveries (Acre-Feet)			38,290	39,270	
Water Supply	<b>Water Transfers</b>				
	Byron Bethany Irrigation District	\$90,000	\$90,000	39,270	\$2
	Other Water Transfers (\$570 x 2000AF) <sup>2</sup>	\$1,000,000	\$1,140,000	39,270	\$29
	<b>Groundwater Banking Programs</b>				
	Cawelo Recovery	-	-		
	Semitropic Recovery (\$170 X 4500AF) <sup>2</sup>	-	\$765,000	39,270	\$19
	Cawelo Storage	\$370,000	\$0	39,270	\$0
	Semitropic Storage	\$200,000	\$0	39,270	\$0
	Semitropic O&M (\$7.13 x 65,000 AF) <sup>2</sup>	\$480,000	\$463,294	39,270	\$12
	<b>Local Water Supplies</b>				
	Del Valle Water Rights	\$3,000	\$3,000	39,270	\$0
	<b>State Water Project</b>				
	Yuba Costs/Dry Year Program (\$470 x 2000 AF) <sup>2</sup>	\$80,000	\$940,000	39,270	\$24
	Multi-Year Pool Program	-	-	39,270	\$0
Bay-Delta Related Costs/Water Supply Reliability Projects	\$500,000	\$500,000	39,270	\$13	
State Water Project Transportation Variable Cost <sup>3</sup>	\$2,170,000	\$1,673,000	39,270	\$43	
<b>Total Water Supply Costs</b>	<b>\$4,893,000</b>	<b>\$5,574,294</b>		<b>\$142</b>	
Water Supply Management	<b>Zone 7 Staff Costs by Program<sup>4</sup></b>				
	Byron Bethany Irrigation District	\$4,500	\$1,123	39,270	\$0
	Cawelo	\$1,600	\$1,684	39,270	\$0
	Groundwater Monitoring and Management	\$944,000	\$902,628	39,270	\$23
	Local Water Rights	\$23,000	\$24,069	39,270	\$1
	Other Water Supplies	\$26,000	\$29,103	39,270	\$1
	Semitropic	\$3,100	\$1,123	39,270	\$0
	State Water Project	\$127,000	\$96,614	39,270	\$2
	Supply Source & Conveyance Administration	\$20,800	\$842	39,270	\$0
	Untreated Water Program	\$8,000	\$16,131	5,500	\$3
	Water Storage Administration	\$7,200	\$10,638	39,270	\$0
	Water Utility Planning	\$290,000	\$397,392	39,270	\$10
<b>Total Zone 7 Staff Costs</b>	<b>\$1,455,200</b>	<b>\$1,481,347</b>		<b>\$40</b>	
<b>Total Water Supply and Zone 7 Staff Costs</b>		<b>\$6,348,200</b>	<b>\$7,055,641</b>		
<b>Untreated Water Rate (rounded) per Acre-Foot</b>		<b>\$167</b>	<b>\$182</b>		<b>\$182</b>

<sup>1</sup> Unit cost per acre-foot that are shown as \$0 equate to less than one dollar when allocated amongst total acre-feet.

<sup>2</sup> Price X Quantity information is provided for 2020 cost components.

<sup>3</sup> Factors in zero variable costs for Lake Del Valle runoff. Does not include State Water Project Fixed charges that are paid through property taxes of approximately \$25M annually.

<sup>4</sup> Zone 7 staff costs consist of Water Supply Management costs only, and does not include Flood Protection activities. Flood related activities are charged to a separate Flood fund, Fund 200 – Flood Protection Operations.

## Attachment B

### Zone 7 Proposed Temporary Untreated Water Rate Calculation

<b>Zone Water Agency Proposed Temporary Untreated Water Rate Calculation for 2020</b>	
1. Planned Treated & Untreated Water Deliveries (Acre-feet)	39,270
<b><i>Estimated Expenses</i></b>	<b><i>Amount</i></b>
2. a) State Water Supply	\$27,587,232
b) Off-Aqueduct Power Facilities	\$40,768
c) Variable Transportation Water Charges	\$1,673,000
d) Cawelo Recovery	-
e) Semitropic Recovery	\$765,000
f) Cawelo Storage	-
g) Semitropic Storage	-
h) Semitropic O&M	\$463,294
i) Byron Bethany Irrigation District	\$90,000
j) Yuba Dry Year Purchase Program	\$940,000
k) Bay-Delta Related Costs/Additional Supply Reliability Projects	\$500,000
l) Other Water Transfers	\$1,140,000
3. Total Water Supply Costs	\$33,199,294
4. Unit Cost per AF(3 ÷ 1)	\$845.4
5. Zone 7 Staff costs per AF (derived from Untreated Water Calculation)	\$40.2
6. Total Unit Cost (4+5) in \$ per AF	\$886
Or in \$ per 1,000 gallons	\$2.72

## Attachment C

### 2018 Untreated Water Rate Reconciliation Example<sup>1</sup>

	Calendar Year	2018 Rate	2018 Actual
	Planned Treated and Untreated Water Deliveries (Acre-Feet) <sup>1</sup>	37,167	37,167
Water Supply	<b>Water Transfers</b>		
	Byron Bethany Irrigation District	\$90,000	\$90,000
	Other Water Transfers	\$1,138,000	\$666,507
	<b>Groundwater Banking Programs</b>		
	Semitropic Recovery	\$1,000,000	-
	Cawelo Storage	-	\$562,242
	<b>Local Water Supplies</b>		
	Del Valle Water Rights	\$3,000	\$3,000
	<b>State Water Project</b>		
	Yuba Costs/Dry Year Program	\$10,000	\$839,904
	Bay-Delta Related Costs/Water Supply Reliability Projects	\$209,056	-
State Water Project Transportation Variable Cost <sup>2</sup>	\$2,079,122	\$2,101,728	
<b>Total Water Supply Costs</b>	<b>\$4,529,178</b>	<b>\$4,263,380</b>	
Water Supply Management	<b>Zone 7 Staff Costs by Program</b>		
	Byron Bethany Irrigation District	\$8,101	\$4,516
	Other Water Supplies	\$33,140	\$25,914
	State Water Project	\$216,610	\$129,668
	Untreated Water Program	\$10,121	\$6,431
	<b>Total Zone 7 Staff Costs</b>	<b>\$267,972</b>	<b>\$166,529</b>
<b>Total Water Supply and Zone 7 Staff Costs</b>	<b>\$4,797,150</b>	<b>\$4,429,909</b>	
<b>Untreated Water Rate (rounded) per Acre-Foot</b>	<b>\$129</b>	<b>\$120</b>	

	Revenue Comparison	2018 Rate	2018 Actual
	Untreated Water Deliveries in acre-feet	5,500	5,407
	Untreated Water Rate Revenue (deliveries x \$129 AF)	\$709,500	\$697,503

<sup>1</sup>This is an example of a cost reconciliation and is not the basis for a credit or additional charge. This is not the same calculation Raftelis recommends for the Water Supply Re-adjustment Charge/Credit, which will be based on Water Supply costs only (i.e. will not include Water Supply Management labor costs)

<sup>2</sup>For comparative purposes, the water sales amounts used to develop the rate, not actuals, are used in this reconciliation