

Water Rate Analysis

Prepared by Rae Bell for April 12, 2022 meeting date

The Rural Community Assistance Corporation (RCAC) conducted a financial analysis & rate study that was completed in October of 2021. The State Water Board Division of Finance (DFA) funded the analysis. Copies of the rate study were distributed last October. Additional copies have been placed at the Post Office. Attached is my analysis of the rate proposal, prepared in the most transparent fashion that I could come up with. This is not an endorsement.

Analysis of proposed rate structure.

The proposed rate structure meets three key objectives: **1.** It brings the water rate structure into compliance with prop. 218 rules (State Law), mainly the rule that says all customers must be charged the same RATE PER GALLON unless it can be demonstrated that the cost of providing water to specific customers is different. **2.** It covers both short-term operating costs and provides for long-term capital replacement of infrastructure (equipment, pipelines etc.). **3.** It encourages water conservation. Currently (early April 2022) the Ram Spring is flowing lower than we have ever seen it at this time of the year. (Looks like late summer flow)

Additionally, the flat rate covers fixed costs that do not change regardless of water production amounts while the per gallon rate covers variable expenses that increase with increased water production. An example of a fixed cost is the district's annual insurance premium (approx. \$5,000 per year), an example of a variable cost is electricity to run the pumps.

All costs are expected to increase over time, due to inflation. The proposed rate structure includes a five-year gradual rate increase to avoid the need for a larger lump sum rate increase at a future date.

A chart of the average monthly water use of all ACWD customers for the year 2021 is attached at the end of this document. Here are a few statistics:

There were 54 Active accounts in 2021 (we are down to 53 as of this writing)

12-month average use tally:

- No water = 6 customers
- 1 to 999 gallons per month = 19 customers
- 1,000 to 3,000 gallons per month = 13 customers
- 3,001 to 5,000 gallons per month = 5 customers
- 5,001 to 8,000 gallons per month = 6 customers
- 8,001 to 10,000 gallons per month = 2 customers
- Over 10,000 gallons per month = 3 customers

Of note is the fact that 10 customers had a bad leak one month that pushed them into a higher water use category. (This was the case with two out of the six highest water users)

Examples of what water bills would look like under the proposed rate structure:

We are not comparing “apples to apples” because the current and proposed rate structures are different. Water use is the main factor that influences the amount of the rate change and it varies greatly: higher water use means a higher percentage of rate change.

Looking at a low water use customer, this one had average monthly use of 700 gallons. This is the largest category of customers based on 2021 usage data.

Year 1

7 mos @ 200 gallons = \$39.60 per month

1 mos @ 600 gallons = \$40.80

1 mos @ 1,000 gallons = \$42.00

3 mos @ 2,000 gallons = \$45.00 per month

Average monthly water cost for the year = \$41.25 Approximately a 3% increase over the current rates.

Year 2

7 mos @ 200 gallons = \$40.77 per month

1 mos @ 600 gallons = \$41.97

1 mos @ 1,000 gallons = \$43.17

3 mos @ 2,000 gallons = \$46.17

Average monthly water cost for the year = \$42.42

Year 3

7 mos @ 200 gallons = \$41.98 per month

1 mos @ 600 gallons = \$43.18

1 mos @ 1,000 gallons = \$44.38

3 mos @ 2,000 gallons = \$47.38

Average monthly water cost for the year = \$43.63

Year 4

7 mos @ 200 gallons = \$43.22 per month

1 mos @ 600 gallons = \$44.42

1 mos @ 1,000 gallons = \$45.62

3 mos @ 2,000 gallons = \$48.62

Average monthly water cost for the year = \$44.87

Year 5

7 mos @ 200 gallons = \$44.49 per month

1 mos @ 600 gallons = \$45.69

1 mos @ 1,000 gallons = \$46.89

3 mos @ 2,000 gallons = \$49.89

Average monthly water cost for the year = \$46.14

Average mid-range use customer monthly average 2,460 gallons. This is the second largest category of customers based on 2021 usage data.

Year 1

5 mos @ 1,000 gallons = \$42.00 per month

2 mos @ 2,000 gallons = \$45.00 per month

2 mos @ 3,000 gallons = \$48.00 per month

3 mos @ 4,000 gallons = \$51.00 per month

Average monthly water cost for the year = \$45.75 approx. 13% higher than the current rate

Year 2

5 mos @ 1,000 gallons = \$43.17 per month

2 mos @ 2,000 gallons = \$46.17 per month

2 mos @ 3,000 gallons = \$49.17 per month

3 mos @ 4,000 gallons = \$52.17 per month

Average monthly water cost for the year = \$46.92

Year 3

5 mos @ 1,000 gallons = \$44.38 per month

2 mos @ 2,000 gallons = \$47.38 per month

2 mos @ 3,000 gallons = \$50.38 per month

3 mos @ 4,000 gallons = \$53.35 per month

Average monthly water cost for the year = \$48.13

Year 4

5 mos @ 1,000 gallons = \$45.62

2 mos @ 2,000 gallons = \$48.62 per month

2 mos @ 3,000 gallons = \$51.62 per month

3 mos @ 4,000 gallons = \$54.62 per month

Average monthly water cost for the year = \$49.37

Year 5

5 mos @ 1,000 gallons = \$46.89

2 mos @ 2,000 gallons = \$49.89 per month

2 mos @ 3,000 gallons = \$52.89 per month

3 mos @ 4,000 gallons = \$55.89 per month

Average monthly water cost for the year = \$50.64

High range water user Average monthly use 5,191 gallons. 10 customers used this amount or more in 2021 but 6 of those had one month with a leak.

Year 1

4 mos @2,000 gallons = \$45.00 per month

1 mos @ 3,000 gallons = \$48.00

2 mos @ 4,000 gallons = \$51.00 per month

1 mos @ 6,000 gallons = \$57.00

1 mos @ 7,000 gallons = \$60.00

2 mos @ 9,000 gallons = \$66.00 per month

1 mos @ 13,000 gallons = \$78.00 (for 13,000 gallons add \$9.00 to 10,000 gallon rate)

Average monthly water cost for the year = \$54.75 Approximately 27% higher than the current rate, (actually a little less because the analysis gets more complicated with months of over 8,000 gallons of water use).

Year 2

4 mos @2,000 gallons = \$46.17 per month

1 mos @ 3,000 gallons = \$49.17

2 mos @ 4,000 gallons = \$52.17 per month

1 mos @ 6,000 gallons = \$58.17

1 mos @ 7,000 gallons = \$61.17

2 mos @ 9,000 gallons = \$67.17 per month

1 mos @ 13,000 gallons = \$79.17

Average monthly water cost for the year = \$ 55.92

Year 3

4 mos @2,000 gallons = \$47.38 per month

1 mos @ 3,000 gallons = \$50.38

2 mos @ 4,000 gallons = \$53.38 per month

1 mos @ 6,000 gallons = \$59.38

1 mos @ 7,000 gallons = \$62.38

2 mos @ 9,000 gallons = \$68.38 per month

1 mos @ 13,000 gallons = \$80.38

Average monthly = \$57.13

Year 4

4 mos @2,000 gallons = \$48.62 per month

1 mos @ 3,000 gallons = \$51.62

2 mos @ 4,000 gallons = \$54.62 per month

1 mos @ 6,000 gallons = \$60.62

1 mos @ 7,000 gallons = \$63.62

2 mos @ 9,000 gallons = \$69.62 per month

1 mos @ 13,000 gallons = \$81.62 Average monthly = \$58.37

Year 5

4 mos @2,000 gallons = \$49.89 per month

1 mos @ 3,000 gallons = \$52.89

2 mos @ 4,000 gallons = \$55.89 per month

1 mos @ 6,000 gallons = \$61.89

1 mos @ 7,000 gallons = \$64.89

2 mos @ 9,000 gallons = \$70.89 per month 1 mos @ 13,000 gallons = \$82.89 Average monthly = \$59.64

2021 twelve month av. use by customer

2021 monthly average use			
-	vacant		
-	vacant		
-	vacant		
-	vacant		
-	vacant		
-	vacant		
10	seasonal		
10	seasonal		
18	seasonal		
18	seasonal		
44	seasonal		
79	seasonal		
107	seasonal		
124			
436			
438			
498			
503			
532			
573			
627			
628			
633			
700			
721			
1,083			
1,779	Bad leak one month		
1,873			
1,919	Normal use more in summer		
2,204	Normal use more in summer		
2,205	Normal use more in summer		
2,229	Bad leak one month		
2,441	Normal use more in summer		
2,460	Normal use more in summer		
2,539	Bad leak one month		
2,767	Normal use more in summer		
2,938	Normal use more in summer		
2,965	Normal use more in summer		
3,604	Bad leak one month		
3,717	Normal use more in summer		
4,628	Normal use more in summer		
4,919	Normal use more in summer		
4,992	Bad leak one month		
5,175	Normal use more in summer		
5,191	Normal use more in summer		
5,664	Leak one month		
6,567	Bad leak one month		
6,758	Bad leak one month		
7,842	Waters heavily in the summer		
9,108	Waters heavily in the summer		
9,908	Had a leak one month		
10,321	Waters heavily in the summer		
16,973	Bad leak one month		
17,198	Waters heavily in the summer		
158,665	TOTAL		
2,938	AVERAGE		

CRWA Rate Proposal Examples

Flat Rate year 1	gallons	gallon cost	total bill		Flate Rate Year 2	gallons	gallon cost	total bill		Flate Rate Year 3	gallons	gallon cost	total bill
\$ 39.00	200	\$ 0.60	\$ 39.60		\$ 40.17	200	\$ 0.60	\$ 40.77		\$ 41.38	200	\$ 0.60	\$ 41.98
\$ 39.00	600	\$ 1.80	\$ 40.80		\$ 40.17	600	\$ 1.80	\$ 41.97		\$ 41.38	600	\$ 1.80	\$ 43.18
\$ 39.00	1,000	\$ 3.00	\$ 42.00		\$ 40.17	1,000	\$ 3.00	\$ 43.17		\$ 41.38	1,000	\$ 3.00	\$ 44.38
\$ 39.00	2,000	\$ 6.00	\$ 45.00		\$ 40.17	2,000	\$ 6.00	\$ 46.17		\$ 41.38	2,000	\$ 6.00	\$ 47.38
\$ 39.00	3,000	\$ 9.00	\$ 48.00		\$ 40.17	3,000	\$ 9.00	\$ 49.17		\$ 41.38	3,000	\$ 9.00	\$ 50.38
\$ 39.00	4,000	\$ 12.00	\$ 51.00		\$ 40.17	4,000	\$ 12.00	\$ 52.17		\$ 41.38	4,000	\$ 12.00	\$ 53.38
\$ 39.00	5,000	\$ 15.00	\$ 54.00		\$ 40.17	5,000	\$ 15.00	\$ 55.17		\$ 41.38	5,000	\$ 15.00	\$ 56.38
\$ 39.00	6,000	\$ 18.00	\$ 57.00		\$ 40.17	6,000	\$ 18.00	\$ 58.17		\$ 41.38	6,000	\$ 18.00	\$ 59.38
\$ 39.00	7,000	\$ 21.00	\$ 60.00		\$ 40.17	7,000	\$ 21.00	\$ 61.17		\$ 41.38	7,000	\$ 21.00	\$ 62.38
\$ 39.00	8,000	\$ 24.00	\$ 63.00		\$ 40.17	8,000	\$ 24.00	\$ 64.17		\$ 41.38	8,000	\$ 24.00	\$ 65.38
\$ 39.00	9,000	\$ 27.00	\$ 66.00		\$ 40.17	9,000	\$ 27.00	\$ 67.17		\$ 41.38	9,000	\$ 27.00	\$ 68.38
\$ 39.00	10,000	\$ 30.00	\$ 69.00		\$ 40.17	10,000	\$ 30.00	\$ 70.17		\$ 41.38	10,000	\$ 30.00	\$ 71.38
Flate Rate Year 4	gallons	gallon cost	total bill		Flate Rate Year 5	gallons	gallon cost	total bill					
\$ 42.62	200	\$ 0.60	\$ 43.22		\$ 43.89	200	\$ 0.60	\$ 44.49					
\$ 42.62	600	\$ 1.80	\$ 44.42		\$ 43.89	600	\$ 1.80	\$ 45.69					
\$ 42.62	1,000	\$ 3.00	\$ 45.62		\$ 43.89	1,000	\$ 3.00	\$ 46.89					
\$ 42.62	2,000	\$ 6.00	\$ 48.62		\$ 43.89	2,000	\$ 6.00	\$ 49.89					
\$ 42.62	3,000	\$ 9.00	\$ 51.62		\$ 43.89	3,000	\$ 9.00	\$ 52.89					
\$ 42.62	4,000	\$ 12.00	\$ 54.62		\$ 43.89	4,000	\$ 12.00	\$ 55.89					
\$ 42.62	5,000	\$ 15.00	\$ 57.62		\$ 43.89	5,000	\$ 15.00	\$ 58.89					
\$ 42.62	6,000	\$ 18.00	\$ 60.62		\$ 43.89	6,000	\$ 18.00	\$ 61.89					
\$ 42.62	7,000	\$ 21.00	\$ 63.62		\$ 43.89	7,000	\$ 21.00	\$ 64.89					
\$ 42.62	8,000	\$ 24.00	\$ 66.62		\$ 43.89	8,000	\$ 24.00	\$ 67.89					
\$ 42.62	9,000	\$ 27.00	\$ 69.62		\$ 43.89	9,000	\$ 27.00	\$ 70.89					
\$ 42.62	10,000	\$ 30.00	\$ 72.62		\$ 43.89	10,000	\$ 30.00	\$ 73.89					