Arbuckle Public Utility District Water Rate Study

Water System #CA0610001

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August 2024

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Funded by: USDA Rural Development

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Executive summary

Arbuckle Public Utility District (APUD) provides its consumers with clean, safe drinking water services to 952 connections in the service area.

APUD requested a water rate analysis to evaluate four primary areas. These are:

- Determine an adequate rate structure.
- Analyze reserve requirements for system sustainability.
- Review equitability of current rate structure and any recommended rate structure adjustment(s)
- Compare affordability of current rate and any recommended rate structure adjustment(s)

APUD water enterprise suffered operating losses in FYE 6/30/2023 and FYE 6/30/2024 in the amounts of $93,689 and $97,838, respectively. Higher losses are projected for future years because of increased costs due to inflation projected at 4% annually.

APUD current water rates against projected water costs	
Water Service Revenue	391,706
Opeerating Costs	531,890
Debt Service	0.00
Operating Reserves	17,487
Emergency Reserves	5,000
CRP Reserves	207,226
Total Costs	761,603
Net Operating Revenue Over/(Under) Operating Costs	(370,046)
Non-Operating Revenue (Property Taxes)	49,000
Net Income/(Losses)	(321,046)

To fully recover operating costs and fund operating, emergency and replacement reserves at an average of approximately $229,713 annually, a rate adjustment is necessary. In reviewing APUD's current rate structure and, because only a small portion of the connections are metered (3.78%), RCAC recommends all connections be charged a flat rate according to connection size until such time as meters have been installed for all connections. RCAC offered three rate adjustment options. In the proposed rate adjustment options, all connections are charged a flat rate determined by connection size with no consideration to type or class of connection. The difference between each option is the amount that will be funded annually for Capital Replacement Reserves.

Rate Option #1

Rate Adjustment Option #1 funds the full Capital Replacement Reserves at $207,226 annually.

Rate Adjustment Option #1 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	714,180	735,391	757,600	780,631	804,440	3,792,243
Bad Debts	(1,428)	(1,471)	(1,515)	(1,561)	(1,609)	(7,584)
Total Revenue	712,752	733,920	756,085	779,070	802,831	3,784,658
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435

Rate Adjustment Option #1 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	207,375	207,375	207,375	207,375	207,375	1,036,336
Total Costs	761,752	782,920	805,085	828,070	851,831	4,029,658
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0.00	0.00	0.00	0.00	0.00	0.00

Rate Adjustment Option #1 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	45.85	47.21	48.64	50.12	51.65
1"	76.42	78.69	81.06	83.53	86.08
1.5"	152.84	157.38	162.13	167.06	172.15
2"	244.54	251.80	259.41	267.29	275.45

Rate Option #2

Rate Adjustment Option #2 reduces the annual Capital Replacement Reserves to approximately $150,000 annually.

Rate Adjustment Option# 2 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	656,728	678,006	700,245	723,283	747,151	3,505,414
Bad Debts	(1,313)	(1,356))	(1,400)	(1,447)	(1,494)	(7,011)
Total Revenue	655,415	676,650	698,845	779,070	802,831	3,498,403
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	207,375	149,998	150,065	150,046	149,934	750,082
Total Costs	761,752	725,650	747,845	770,837	794,657	3,743,403
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0..00	0.00	0.00	0.00	0.00	0.00

Rate Adjustment Option #2 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	42.16	43.53	44.96	46.44	47.97
1"	70.27	72.55	74.93	77.39	79.95
1.5"	140.54	145.10	149.86	154.79	159.89
2"	224.87	232.15	239.77	247.66	255.83

Rate Option #3

Rate Adjustment Option #3 further reduces the funding of Capital Replacement Reserves to approximately $100,000 annually.

Rate Adjustment Option #3 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	606,720	627,955	650,122	673,202	697,100	3,255,099
Bad Debts	(1,213)	(1,256)	(1,300)	(1,346)	(1,394)	(6,510)
Total Revenue	**605,507**	**626,699**	**648,822**	**671,855**	**695,706**	3,498,403
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	100,130	100,047	100,043	100,064	99,983	500,267
Total Costs	654,507	675,699	697,822	720,855	744,706	3,493,589
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0..00	0.00	0.00	0.00	0.00	0.00

Rate Adjustment Option #3 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	38.95	40.32	41.74	43.22	44.75
1"	64.92	67.19	69.56	72.03	74.59
1.5"	129.84	134.39	139.13	144.07	149.18
2"	207.75	215.02	222.61	230.51	238.69

RCAC recommends APUD monitor rate revenue against costs monthly to manage cash flow and review the rates annually. A comprehensive rate analysis should be conducted if there are any significant changes in the cost of service or no later than five years.

1. Introduction

Rural Community Assistance Corporation

Founded in 1978, RCAC provides training, technical, and financial resources, and advocacy so rural communities can achieve their goals and visions. Since 1978, our dedicated staff and active board, coupled with our key values: leadership, collaboration, commitment, quality, and integrity, have helped effect positive change in rural communities across the West.

RCAC's work includes environmental infrastructure (water, wastewater, and solid waste facilities), affordable housing development, economic and leadership development, and community development finance. These services are available to communities with populations of fewer than 50,000, other nonprofit groups, tribal organizations, farmworkers, colonias and other specific populations. Headquartered in West Sacramento, California, RCAC's employees serve rural communities in 13 western states and the Pacific islands.

Purpose of this study

An accurate and useful rate analysis not only identifies the total annual revenue required by a utility to conduct its normal day-to-day operations, but it also anticipates and plans for future operating and capital needs. Furthermore, the analysis attempts to determine whether the projected revenue under existing rates will satisfy those needs. The primary objective of this process is to ensure that the utility can obtain sufficient funds to develop, construct, operate, maintain, and manage its water system on a continuing basis, in full compliance with federal, state, and local requirements.

Governing body responsibilities

Governing body responsibilities for the system operation include maintaining sufficient revenue and reserves to provide for ongoing maintenance for the foreseeable future. The ultimate responsibility of the governing body is to ensure preserved public health and compliance with environmental regulations.

Guiding principles in a rate study

Sustainability

Water rates should cover the costs to the water utility to allow it to provide water services for the foreseeable future and prepare for system repair and replacement. This will allow the system to continue to provide safe drinking water to future generations.

Fair

Water rates should be fair to all rate payers. The utility should not charge more for water than the cost to provide the water. However, the costs should include operations, maintenance, reserves, and all other costs related to the production, treatment, and distribution of potable water now and in the foreseeable future. Therefore, the proposed rates are based on the water utility budget, needed capital repair and replacement, and historic water consumption.

Water conservation

Water conservation is a key element of rate studies. Clean and safe water is limited, and inappropriate use of this resource negatively impacts community members.

Justifiability

Rates should be easily justifiable. When determining rate recommendations, RCAC considers if the proposed rates are necessary and justifiable, given the true costs of operating the system safely.

State or funder specific requirements.

The Arbuckle Public Utility District water system is not under funder requirements for reserves and rates. However, the governing body is obligated by its responsibilities to provide for sufficient reserves and long-term sustainability.

Disclaimer

The findings, recommendations and conclusions contained in this rate analysis are based on financial information provided to RCAC by Arbuckle Public Utility District. Although reasonable care was taken to ensure the reliability of this information, no warranty is expressed or implied as to the correctness, accuracy or completeness of the information contained herein. Any action taken on the basis of such findings, recommendations or conclusions is undertaken at the discretion of Arbuckle Public Utility District. In no event will RCAC or its partners, employees or agents be liable for any decision made or action taken in reliance on the information contained in this analysis.

2. Arbuckle Public Utility District

Community

Arbuckle is a census designated place (CDP) in Colusa County, California. The population is 3,072 according to the 2020 census. Arbuckle is situated in the southerly portion of Colusa County, approximately twenty miles southwest of the City of Colusa, the county seat. Land surrounding Arbuckle is agriculture including cultivated annual crops, and both active and unmaintained orchards (primarily almond), Regional access is provided by the north-south running Interstate 5, along with Old Highway 00 West running alongside Interstate 5.

The Arbuckle Revitalization Committee describes Arbuckle as follows:

> *We are located about 45 minutes north of Sacramento, nested in the southern part of Colusa County. Arbuckle is characterized by a small-town charm and filled with beautiful agricultural views. We are currently revitalizing downtown Arbuckle with the efforts of the Arbuckle Revitalization Committee, local community members and businesses.*

Water District

Arbuckle Public Utility District (APUD) was formed in 1939 and provides water and sewer services to the residents within its boundaries. APUD is governed by a three-member Board of Directors that is elected by the residents of the district. According to a Median Household Income Survey conducted by RCAC in November 2019, the APUD service area has a Median Household Income (MHI) of $39,000. APUD provides domestic water service to 952 connections.

Water System Description

APUD has four groundwater wells, but generally only runs one or two at a time. The average amount of water pumped each day is approximately one million gallons, with a yearly total of approximately 340 million gallons. The total pumping is 3.6 million gallons daily, Most of the original pipes have been replaced with asbestos-cement (“AC”) pipes, though some small ductile iron pipes remain in use. The distribution system consists of mostly 6-inch, 8-inch, and 10-inch pipes. Water is treated with chlorine at the wellheads as it is pumped out of the ground. There are no major problems with the system and there are no planned upgrades or changes.

The current system has the capacity to pump an additional 2.6 million gallons per day above existing pumping levels. This additional pumping capacity is adequate to serve approximately 2,132 additional connections without making any significant upgrades to the system. The existing water distribution infrastructure is in good working order.

The current municipal water system in Arbuckle has adequate supply and distribution capacity to accommodate full development of all housing sites listed in the inventory. Individual projects would require the expansion of distribution infrastructure to the project site, but upgrades to the overall system would not be required.

The APUD water system has good water quality. The water is tested every year, and the Consumer Confidence Report (CCR) is made available to the rate payers.

APUD has fourteen miles of water line to serve one-hundred twenty-one fire hydrants. The lines are constructed of Asbestos-Cement (65%), PVC (39%) or iron (5%). There are no storage tanks, but the system uses a hydro-pneumatic pressure system.

Sizes of Water Lines	
Size of Line	Percent of Lines
10 Inch	10%
8 Inch	15%
6 Inch	60%
4 Inch	10%
2 Inch	5%

APUD Water Wells			
Water Well	Location	Gallons per Minute	Power Source
Well #1	Wildwood Rd, & Hillgate Rd,	1,000	Electric with a gear head Natural Gas Motor
Well #2	Lucas Street & Park Avenue	750	Electric with a gear head Propane Motor
Well # 3A	Fifth Street & Gale Avenue	900	Electric with a Diesel Motor that starts automatically when the electricity goes off and the water pressure drops to a set point
Well #4		1,200	Electric with a variable drive controlled by system water pressure
Total Capacity		3.850	

APUD Water Service Connections			
Type	Unmetered	Metered	Total
Residential – In District	882	0	882
Residential – Out of District	0	11	11
Commercial	34	9	43
School	0	9	9
Medical	0	2	2
Park	0	2	2
CALTRANS	0	3	3
Total	916	36	952

APUD is aware of the need to install water meters for all connections. To complete this project, APUD would need to increase water rates or qualify for a grant or loan. APUD is also concerned that the installation of water meters would require the services of a meter reader. However, the most up-to-date meters can electronically submit data on water use to the APUD computers. Districts where water meters have been installed have found that leaks are discovered and when these are eliminated the use of water and pumping costs go down.

Because charging a small percentage of customers a base rate plus a usage rate while the majority of customers are only being charged a base rate may be in conflict with California Proposition 218 (Prop 218), RCAC recommends all customers be charged a flat rate until such time as meters for all connections are installed.

Customer water use

When analyzing water rates, it is important to understand existing patterns of consumption among the system's customers. A substantial portion of customers may use a small percentage of water, and a small portion of customers may use a significant percentage. Understanding how customers use water is important when you are considering seasonal operational needs, infrastructure replacement and water use efficiency, to name a few considerations. Because APUD does not meter most of its connections, it is impossible to analyze existing patterns of consumption of the system's customers.

Future population and usage projections

The APUD does not anticipate a material increase in connections in the upcoming five years.

3. Current financial condition and analysis

Rate structures

The following are types of rates structures common to drinking water systems:

- **Uniform flat rate:** Customers pay the same amount regardless of the quantity of water used. This type of rate is easiest to administer; however, it is not fair to the lowest water users and can promote high consumption, which then may cost the utility more to provide that water.
- **Single or uniform block rate:** Customers are charged a constant price per volume regardless of the amount of water used. The cost per block of water is often added to a minimum charge, or base rate, for having service available. This rate tends to be more equitable to customers as the cost to customer is in direct proportion to the amount use.
- **Inclining or increasing block rate:** This rate is designed to promote water use efficiency, as the price of water increases as the amount used increases.

APUD Current Rate Structure

APUD's currently uses a flat rate for some connections, a tiered rate for other connections and a base rate plus uniform usage rate for others. The current rate structure seems unnecessarily complex and does not conform with Prop 218 regulations.

APUD Current Water Base Rate Structure	
Type of Service	Monthly Charge
In District Residential:	
¾ inch flat water service rate	$ 24.00
1-inch flat water service rate	$ 25.00
1 ½ inch flat service rate	$ 34.32
2-inch flat service rate	$ 38.61
3-inch flat service rate	$ 59.29
Out of District Residential"	
¾ inch metered water service rate	$ 45.38
1-inch metered water service rate	$ 48.00
2-inch metered service rate	$ 56.00
Cal Trans:	
2 Inch metered rate	$ 36.90
3 Inch metered rate	$ 58.30
Other Connections:	
Park – ACR minimum rate	$ 38.61
Park Water	$420.20
Church	$ 24.00
Church & Parsonage	$ 46.37
Coin Operated Laundry	$ 33.09
School Day Care	$ 22.00
Grammar School	$290.76
High School	$290.76
School District Office	$ 22.00
Medical Facility	$ 25.00
Mini-Storage	$ 38.62

APUD Current Water Base Rate Structure	
Type of Service	Monthly Charge
Cemetery	$ 657.64
Hotels	$ 25.80
Grocery	$ 25.80
Small Business	$ 24.00
Miscellaneous	$ 25.00

APUD Current Usage Rates		
Class	Allowance in Base Rate	Rate per CF
School	20,000 CF	$0.004
In District	2,170 CF	$0.0078
Out of District	2,170 CF	$1.00
Coin-Op Laundry	3,000 CF	$ 0.0078
Retail	2,280 CF	$ 0.0071
Park ARC	0	$ 0.0078
Cal Trans	0	$ 0.0078

Affordability index

The affordability index measures the burden of costs passed from the water utility to the users against the median household income for the area and is used by funding agencies to determine grant and low interest loan eligibility. According to the SWRCB affordability risk guidelines, rates with affordability up to 1.5% of the MHI are considered no risk. Rates between 1.5% to 2.5% are considered a medium risk. According to the 2019 MHI Survey conducted by RCAC, Arbuckle has an MHI of $39,000.

$$\textit{Affordability index} = \frac{\text{Annual residential bill for 600 CF of water usage monthly}}{\text{the community annual MHI}}$$

Current Rate Affordability Index					
In District Residential Connections					
CF per Month	600	600	600	600	600
Connection Size	¾"	1"	1.5"	2"	3"
Usage Rate	0.00	0.00	0.00	0.00	0.00
Base Rate	24.00	25.00	34.32	38.61	59.29
Annual Bill	288.00	300.00	411.84	463.32	711.48
MHI	39,000.00	39,000.00	39,000.00	39,000.00	39,000.00
Affordability Index	0.74%	0.77%	1.06%	1.19%	1.82%

CF per Month	600	600	600
Connection Size	¾"	1"	2"
Usage Rate	$ 0.00	$ 0.00	$ 0.00
Base Rate	$ 45.38	$ 48.00	$ 56.00
Annual Bill	$ 544.56	$ 576.00	$ 672.00
MHI	$39,000.00	$39,000.00	$39,000.00
Affordability Index	1.40%	1.48%	1.72%

Five-year budget forecast

The budget was developed by reviewing historic costs and applying the current inflation rate of 4% to project forward for five years. Assumptions used when developing the 2024/2025 budget include:

- The costs for Parts and Supplies were an unusually large amount for the year ended 6/30/2024. Rather than project that amount forward, RCAC based the 2024/2025 budget on three year's average costs. Subsequent years were projected at an annual inflation increase of 4%.
- Board expenses were budgeted at $700 for the 2024/2025 fiscal year. Subsequent years were projected at an annual inflation increase of 4%.
- All other costs were budgeted using the year ended 6/30/2024 actual costs plus a 4% inflation increase. Subsequent years were projected at an annual inflation increase of 4%.
- Operating Reserves were budgeted to fund 60 days of cash over the five-year period. The days of cash was based on the first year's budgeted operating costs. The amount included in each year's budget is $17,487.
- APUD estimated the water enterprise had approximately $275,000 cash in bank at 6/30/2023. Of that, it was assumed that $75,000 was intended for emergency reserves. The General Manager felt that the amount of $100,000 in Emergency Reserves would be adequate. The shortage of $25,000 was included in the budget to be funded over the five-year period at $5,000 annually.
- A Capital Replacement Reserve (CRP) annual reserve funding calculation was completed by RCAC based on the APUD equipment list and the General Manager's estimated remaining life of each piece of equipment. With the assumption that the remaining cash in bank of $200,000 is Board designated as reserves for planned replacement of the water system as it wears out or becomes obsolete, the annual amount of additional funding to the CRP is $207,226.49.

APUD Water Enterprise 5-Year Cost Projections	Quickbooks 6/30/2024	Projected 6/30/2025	Projected 6/30/2026	Projected 6/30/2027	Projected 6/30/2028	Projected 6/30/2029
Operating Expenses:						
Board Expenses	$ -	$ 700	$ 728	$ 757	$ 787	$ 819
Salaries & Wages	$ 43,390	$ 45,126	$ 46,931	$ 48,808	$ 50,760	$ 52,791
Payroll Tax Expense	$ 8,331	$ 8,664	$ 9,011	$ 9,371	$ 9,746	$ 10,136
EUI	$ -	$ -	$ -	$ -	$ -	$ -
Employee Benefits		$ -	$ -	$ -	$ -	$ -
OPEB expense		$ -	$ -	$ -	$ -	$ -
Commercial Pkg. Insurance	$ 20,851	$ 21,685	$ 22,552	$ 23,455	$ 24,393	$ 25,368
Health Insurance	$ 17,449	$ 18,147	$ 18,873	$ 19,628	$ 20,413	$ 21,229
Dental Insurance	$ 538	$ 560	$ 582	$ 605	$ 630	$ 655
Worker's Compensation Insurance	$ 13,910	$ 14,466	$ 15,045	$ 15,646	$ 16,272	$ 16,923
Professional Fees -Planning & Development	$ -	$ -	$ -	$ -	$ -	$ -
Accounting - Pre Audit	$ 1,050	$ 1,092	$ 1,136	$ 1,181	$ 1,228	$ 1,277
Accounting - Audit	$ 5,513	$ 5,733	$ 5,962	$ 6,201	$ 6,449	$ 6,707
Professioanl Fees - Legal	$ 23,731	$ 24,680	$ 25,668	$ 26,694	$ 27,762	$ 28,873
Professional Fees - Consulting	$ -	$ -	$ -	$ -	$ -	$ -
Repairs - Computer Repairs	$ -	$ -	$ -	$ -	$ -	$ -
Repairs - Equipment	$ -	$ -	$ -	$ -	$ -	$ -
Travel	$ -	$ -	$ -	$ -	$ -	$ -
Telephone	$ 2,391	$ 2,486	$ 2,586	$ 2,689	$ 2,797	$ 2,908
Printing & Reproduction	$ 94	$ 98	$ 102	$ 106	$ 110	$ 114
Continuing Education	$ -	$ -	$ -	$ -	$ -	$ -
Office Supplies	$ 8,253	$ 8,583	$ 8,927	$ 9,284	$ 9,655	$ 10,041
Penalties	$ -	$ -	$ -	$ -	$ -	$ -
Public Notices & Recruitment	$ -	$ -	$ -	$ -	$ -	$ -
Bank Charges	$ 54	$ 56	$ 59	$ 61	$ 63	$ 66
Dues, Subscriptions & Fees	$ 859	$ 893	$ 929	$ 966	$ 1,005	$ 1,045
Salaries & Wages	$ 61,872	$ 64,346	$ 66,920	$ 69,597	$ 72,381	$ 75,276
Employee Benefits	$ 8,409	$ 8,745	$ 9,095	$ 9,458	$ 9,837	$ 10,230
Plant Repairs	$ 1,814	$ 1,887	$ 1,962	$ 2,041	$ 2,122	$ 2,207
Equipment Reparis	$ 4,376	$ 4,551	$ 4,733	$ 4,922	$ 5,119	$ 5,324
General Repairs & Maintenance	$ 4,250	$ 4,420	$ 4,597	$ 4,781	$ 4,972	$ 5,171
Vehicle Repairs		$ -	$ -	$ -	$ -	$ -
Equipment Rental	$ 2,984	$ 3,103	$ 3,227	$ 3,356	$ 3,490	$ 3,630
Gas & Electric	$ 177,036	$ 184,117	$ 191,482	$ 199,141	$ 207,107	$ 215,391
Propane	$ 677	$ 704	$ 732	$ 762	$ 792	$ 824
Waste Removal	$ 254	$ 264	$ 275	$ 286	$ 297	$ 309
Automobile Expense	$ 2,952	$ 3,070	$ 3,193	$ 3,321	$ 3,454	$ 3,592
Testing Fees	$ 4,083	$ 4,246	$ 4,416	$ 4,593	$ 4,777	$ 4,968
Chemcials	$ 2,821	$ 2,933	$ 3,051	$ 3,173	$ 3,300	$ 3,432
Parts & Supplies	$ 52,758	$ 26,234	$ 27,283	$ 28,374	$ 29,509	$ 30,690
Contract Labor	$ 63,735	$ 66,284	$ 68,936	$ 71,693	$ 74,561	$ 77,543
Regulatory Fees & Licenses	$ 3,860	$ 4,015	$ 4,175	$ 4,342	$ 4,516	$ 4,696
Depreciation						
Total Operating Expenses	$ 538,293	$ 531,890	$ 553,165	$ 575,292	$ 598,304	$ 622,236
Plus Reserve Account Funding:						
Operating Reserve		$ 17,487	$ 17,487	$ 17,487	$ 17,487	$ 17,487
Emergency Reserve		$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
CIP Reserve		$ 207,226	$ 207,226	$ 207,226	$ 207,226	$ 207,226
Total Reserve Funding	$ -	$ 229,713	$ 229,713	$ 229,713	$ 229,713	$ 229,713
Total Cost of Service	$ 538,293	$ 761,603	$ 782,879	$ 805,006	$ 828,017	$ 851,949

Fixed versus variable expenses

Water must be available to customers at all times whether the customer is using the water or not. A large share of water system costs are associated with bringing the first drop of water to the customer's tap, regardless of whether any water is used. Fixed costs are those that must be recovered by APUD water enterprise to ensure that drinking water is available to its customers.

Fixed costs are usually recovered from each customer on an equal basis through the use of a minimum fee (the bi-monthly base fee). Fixed costs may cover 100% of some expenses in a system's budget, but only a portion of other types of expenses. For example, fixed expenses generally include all debt service expenses on construction loans, financial reserves for emergencies or equipment replacement, and overhead costs, like insurance and bonding. Fixed costs should also include a portion of other system operating expenses. For example, a percentage of chemical costs to make the water safe will be needed to have the water available to the connections but as the water is delivered, it will require more treatment.

The method for identifying all or part of some expenses as fixed costs involves determining to what extent each of the line item expenses in the budget benefits every customer of the system regardless of their level of usage. This is a determination that each utility must make for itself. Fixed costs should generally be recovered in a system's minimum bill, the minimum monthly fee charged equally to each customer within each customer connection size (3/4 -inch, 1-inch, etc.).

Variable costs are system expenses that are more directly related to how much water is pumped, treated, stored and distributed. Most costs for electricity, chemicals and repairs can be classified as variable costs because they are directly related to the amount of water customers use. To recover variable expenses, rate structures use a "consumption charge" or "flow charge" per volume, such as per thousand gallons or hundred cubic feet. In reviewing costs with APUD staff, it is estimated that 75% of the water systems costs are fixed while 25% are variable.

APUD Water Enterprise Estimated Fixed/Variable Costs	5-Year Average	% Fixed	$ Fixed	$ Variable
Operations and Maintenance Expenses				
Board Expenses	$ 758	100%	$ 758	$ -
Salaries & Wages	$ 48,883	100%	$ 48,883	$ -
Payroll Tax Expense	$ 9,386	100%	$ 9,386	$ -
Commercial Pkg. Insurance	$ 23,491	100%	$ 23,491	$ -
Health Insurance	$ 19,658	100%	$ 19,658	$ -
Dental Insurance	$ 606	100%	$ 606	$ -
Worker's Compensation Insurance	$ 15,670	100%	$ 15,670	$ -
Accounting - Pre Audit	$ 1,183	100%	$ 1,183	$ -
Accounting - Audit	$ 6,210	100%	$ 6,210	$ -
Professioanl Fees - Legal	$ 26,735	100%	$ 26,735	$ -
Telephone	$ 2,693	100%	$ 2,693	$ -
Printing & Reproduction	$ 106	100%	$ 106	$ -
Office Supplies	$ 9,298	100%	$ 9,298	$ -
Bank Charges	$ 61	100%	$ 61	$ -
Dues, Subscriptions & Fees	$ 968	100%	$ 968	$ -
Salaries & Wages	$ 69,704	100%	$ 69,704	$ -
Employee Benefits	$ 9,473	100%	$ 9,473	$ -
Plant Repairs	$ 2,044	75%	$ 1,533	$ 511
Equipment Reparis	$ 4,930	100%	$ 4,930	$ -
General Repairs & Maintenance	$ 4,788	75%	$ 3,591	$ 1,197
Equipment Rental	$ 3,361	100%	$ 3,361	$ -
Gas & Electric	$ 199,447	2%	$ 3,989	$ 195,458
Propane	$ 763	0%	$ -	$ 763
Waste Removal	$ 286	100%	$ 286	$ -
Automobile Expense	$ 3,326	100%	$ 3,326	$ -
Testing Fees	$ 4,600	100%	$ 4,600	$ -
Chemcials	$ 3,178	50%	$ 1,589	$ 1,589
Parts & Supplies	$ 28,418	100%	$ 28,418	$ -
Contract Labor	$ 71,804	100%	$ 71,804	$ -
Regulatory Fees & Licenses	$ 4,349	100%	$ 4,349	$ -
Total Operation and Maintenance Expenses:	$ 576,177		$ 376,659	$ 199,518
General and Administrative Expenses				
Operating Reserve Funding	$ 17,487	100%	$ 17,487	$ -
Emergency Reserve Funding	$ 5,000	100%	$ 5,000	$ -
Replacement of Existing Capital Assets	$ 207,226	100%	$ 207,226	$ -
Total General and Administrative Expenses:	$ 229,713		$ 229,713	$ -
Total All Expenses	$ 805,891		$ 606,373	$ 199,518
Fixed-Variable as % of all Expenses			75%	25%

4. Water system reserves

Reserves overview

Reserves are an accepted way to stabilize and support a utility's fiscal management. Small systems usually fund the operating expenses but often do not consider putting money aside for a specific upcoming financial need or project, or for an amount that can be used to provide rate stabilization in years when revenues are unusually low, or expenditures are unusually high. The rationale for maintaining adequate reserve levels is two-fold. First, it helps to ensure that the utility will have adequate funds available to meet its financial obligations in times of varying needs. Second, it provides a framework around which financial decisions can be made to determine when reserve balances are inadequate or excessive and what specific actions need to be taken to remedy the situation.

Utility reserve levels can be thought of as a savings account. Reserve balances are funds that are set aside for a specific cash flow requirement, financial need, project, task, or legal covenant. Common reserve balances are established around the following four areas: operating reserve, capital replacements and replacement, emergency, and debt service reserves. These balances are maintained to meet short-term cash flow requirements, and at the same time, minimize the risk associated with meeting financial obligations and continued operational needs under adverse conditions.

Debt service reserve

Water utilities that have issued debt to pay for capital assets will often have required reserves that are specifically defined to meet the legal covenants of the debt. Normally, debt service reserve represents an amount equal to one full annual loan payment and can be accumulated to this level over a period of five to 10 years. APUD had no debt at the time of this analysis, so no debt reserve is required or necessary.

Operating reserve

Operating reserves are established to provide the utility with the ability to withstand short-term cash flow fluctuations. There can be a significant length of time between when a system provides a service and when a customer pays for that service. In addition, a system's cash flow can be affected by weather and seasonal demand patterns.

The State of California Water Resources Control Board conducted a needs assessment in 2024. The results of their findings are outlined in the table below.

State Water Resources Control Board Needs Assessment – Cash on Hand Valuation		
No Risk	Medium Risk	High Risk
>90 Days	30 – 90 Days	< 30 Days

Because of potential delays in collecting payment, many utilities attempt to keep an amount of cash equal to at least 90 days or 25 percent of their annual O&M expenses in an operating reserve to mitigate potential cash flow problems. It was determined that APUD will fund 60 days of cash based on the first year's operating costs of $531,890 in this rate analysis.

2025 Operating Costs	Daily Operating Cost	60 Days of Operating Costs	Annual Amount to Reserve to Accumulate over 5 Years
$531,890	$1,457.23	$87,434	$17,487

Emergency reserve

In addition to operating reserves, emergency reserves are a crucial tool for financial sustainability. Emergency reserves are intended to help utilities deal with short-term emergencies which arise from time to time, such as main breaks or pump failures. The appropriate amount of emergency reserves will vary with the size of the utilities and should depend on major infrastructure assets. An emergency reserve is intended to fund the immediate replacement or reconstruction of the system's single most critical asset, an asset whose failure will result in an immediate water outage or threat to public safety. In discussing APUD's water system with the General Manager, it was determined that the amount of $100,000 in emergency reserves would be adequate. APUD has already accumulated $75,000. To fund the additional $25,000, $5,000 annually for the five-year period will be added to the emergency reserve funds.

Capital replacement reserve

A capital replacement reserve (also called a repair and replacement reserve) is intended to be used for replacing system assets that have become worn out or obsolete. Unlike the emergency reserve fund, these reserves are intended to be used for planned replacements and improvements. Annual depreciation is frequently used to estimate the minimum level of funding for this capital reserve. But it is important to understand that depreciation expense is an accounting concept for estimating the decline of an asset's useful life and does not represent the current or future replacement cost of that asset. As an example, a brand-new system with a construction cost of $1 million and a service life of one hundred years would, in theory, be depreciating $10,000 per year to fully depreciate the equipment at the end of the 100-year period. However, the equipment will cost much more than the initial investment of $1 million when it is time to replace it.

To initiate a capital improvement plan, a small water or sewer system will start with a list of assets that includes the remaining service life, theoretical replacement costs in today's dollars and the remaining service life. It then calculates the monthly and annual reserve that must be collected from each customer to fully capitalize the replacement cost of each asset. In reality, the assets will fail and be replaced gradually, but the replacement cost of water system assets is often a shock to small systems that are struggling to keep rates reasonable.

Asset	Year Acquired	Purchase Cost	Current Age	Estimated Remaining Life	Estimated Future Cost	Fund with Cash	Fund with Grant	Fund with Loan	Existing Reserves	Annual Reserve Required
Well #1	1958	14,606	66	10	110,316	20%	0%	80%	2,444	1,913
Well #2	1958	7,584	66	10	57,281	100%	0%	0%	6,345	4,966
Tank & Pipe	1958	97,196	66	10	734,103	20%	0%	80%	16,264	12,728
Tank & Pipe	1958	3,052	66	10	23,051	100%	0%	0%	2,553	1,998
Tank & Pipe	1960	7,825	64	10	56,253	100%	0%	0%	6,231	4,877
Tank & Pipe	1961	1,715	63	10	12,028	100%	0%	0%	1,332	1,043
Tank & Pipe	1962	10,555	62	10	72,222	100%	0%	0%	8,000	6,261
Fence	1963	973	61	15	7,903	100%	0%	0%	720	461
Tank & Pipe	1964	26,263	60	10	171,045	20%	0%	80%	3,789	2,966
Well	1965	11,392	59	10	72,384	100%	0%	0%	8,018	6,275
Tank & Pipe	1967	69,037	57	10	417,518	20%	0%	80%	9,250	7,239
Equipment	1968	1,059	56	5	5,136	100%	0%	0%	692	878
Pipeline	1971	6,505	53	5	29,294	100%	0%	0%	3,948	5,011

Asset (Continued)	Year Acquired	Purchase Cost	Current Age	Estimated Remaining Life	Estimated Future Cost	Fund with Cash	Fund with Grant	Fund with Loan	Existing Reserves	Annual Reserve Required
Well #3	1974	36,880	50	5	154,224	20%	0%	80%	4,157	5,276
Fence	1975	1,297	49	5	5,291	100%	0%	0%	713	905
Pipeline	1975	7,800	49	5	31,822	100%	0%	0%	4,289	5,443
Equipment	1976	2,589	48	5	10,305	100%	0%	0%	1,389	1,763
Pipeline	1977	35,606	47	5	138,265	20%	0%	80%	3,727	4,730
Pipeline - Alexander	1978	71,086	46	5	269,308	20%	0%	80%	7,259	9,213
Pipeline - Wall	1978	9,522	46	5	36,074	100%	0%	0%	4,862	6,171
Pipeline - Hillgate	1979	2,898	45	5	10,711	100%	0%	0%	1,444	1,832
Shop	1982	9,402	42	15	47,766	100%	0%	0%	4,349	2,785
Equipment	1983	618	41	5	2,069	100%	0%	0%	279	Not Cap.
Equipment	1984	1,931	40	5	6,308	100%	0%	0%	850	1,079
Shop	1984	402	40	20	2,365	100%	0%	0%	177	Not Cap.
Pipe and Cable L	1986	262	38	5	815	100%	0%	0%	110	Not Cap.
Equipment	1989	324	35	5	936	100%	0%	0%	126	Not Cap.
Valve	1989	658	35	5	1,900	100%	0%	0%	256	Not Cap.
Well #1 Bowls	1990	13,807	34	5	38,894	100%	0%	0%	5,242	6,653
Well #3 Motor	1990	2,684	34	5	7,561	100%	0%	0%	1,019	1,293
Chlorinator Pump	1993	913	31	1	2,041	100%	0%	0%	322	Not Cap.
Well #1 Recon	1992	10,351	32	5	27,753	100%	0%	0%	3,740	4,747
Sand Separator	1992	430	32	7	1,247	100%	0%	0%	155	Not Cap.
Well #2 Reducer Valve	1993	1,351	31	5	3,534	100%	0%	0%	476	605
Used Non Rev Ratchet Assm	1994	778	30	5	1,985	100%	0%	0%	268	Not Cap.
Chlorinator Pump	1994	2,029	30	5	5,178	100%	0%	0%	698	886
Pump for Well #3	1996	16,377	28	5	39,780	100%	0%	0%	5,361	6,805
2" Honda Pump 1/2	1996	241	28	1	500	100%	0%	0%	79	Not Cap.
Regulator Valves	1997	872	27	5	2,066	100%	0%	0%	279	Not Cap.
Well #3 A Aux Motor	1996	35915	28	5	87,239	100%	0%	0%	11,758	14,923
Labor Repair Pump Motor	1999	3372	25	5	7,606	100%	0%	0%	1,025	1,301
Utility Shed	1999	3165	25	5	7,139	100%	0%	0%	962	1,221
Box Locator	1999	504	25	5	1,137	100%	0%	0%	153	Not Cap.
Tractor 4 WD 1/2	2001	8457	23	5	18,156	100%	0%	0%	2,447	3,106
2000 Ford F250 1/2	2000	11708	24	5	25,765	100%	0%	0%	3,472	4,407
Vortex Finder	2001	1,026	23	5	2,203	100%	0%	0%	297	Not Cap.
Inlet Head	2001	6,020	23	5	12,924	100%	0%	0%	1,742	2,211
Generator	2003	376	21	5	768	100%	0%	0%	104	Not Cap.
Backhoe Attachment	2002	4,088	22	5	8,563	100%	0%	0%	1,154	1,465
Fence	2004	1,210	20	31	6,688	100%	0%	0%	325	190
Building	2004	139,521	20	31	771,170	20%	0%	80%	7,498	4,370
Tank	2004	11,879	20	31	65,658	100%	0%	0%	3,192	1,860
Well Pump Repair	2005	27,183	19	5	52,871	100%	0%	0%	7,126	9,044
Refrigerator	2006	312	18	5	592	100%	0%	0%	80	Not Cap.
Well #1 Repair	2006	7,576	18	5	14,376	100%	0%	0%	1,937	2,459
Fence Addition - Office	2007	1,652	17	5	3,058	100%	0%	0%	412	523
Fence at Well #4	2007	2,062	17	5	3,817	100%	0%	0%	514	653
Well #4 - Reddington Ranch	2007	302,724	17	5	560,427	20%	0%	80%	15,106	19,173
Well #4 - Reddington Ranch	2008	22,161	16	5	40,026	100%	0%	0%	5,394	6,847
6 X 19 Trailer	2008	2,320	16	5	4,190	100%	0%	0%	565	717
Motoer for Well #2	2010	6,424	14	7	11,945	100%	0%	0%	1,488	1,468
Well #4 Electrical Work	2011	9,440	13	8	17,809	100%	0%	0%	2,134	1,921
2016 Ford F250 Crew Cab 1/2	2016	18,330	8	5	27,172	100%	0%	0%	3,662	4,648
Kyocera Copies	2017	2,786	7	5	4,029	100%	0%	0%	543	689
Well #1 Recondition	2011	25,201	13	5	42,266	100%	0%	0%	5,696	7,230
		1,144,282			**4,414,829**	**40%**	**0%**	**60%**	**200,000**	**207,226**

5. Proposed rate adjustment options

APUD water enterprise suffered operating losses in FYE 6/30/2023 and FYE 6/30/2024 in the amounts of $93,689 and $97,838, respectively. To fully recover operating costs and fund operating, emergency and replacement reserves at an average of approximately $229,713 annually, a rate adjustment is necessary. In reviewing APUD's current rate structure and, because only a small portion (3.78%) of the connections are metered, RCAC recommends a flat rate according to connection size until such time as meters have been installed for all connections. RCAC offered three rate adjustment options. In the proposed rate adjustment options, all connections are charged a flat rate determined by connection size with no consideration to type or class of connection. The difference between each option is the amount that will be funded annually for Capital Replacement Reserves.

APUD current water rates against projected water costs	
Water Service Revenue	355,387
Opeerating Costs	531,890
Debt Service	0.00
Operating Reserves	17,487
Emergency Reserves	5,000
CRP Reserves	207,226
Total Costs	761,603
Net Operating Revenue Over/(Under) Operating Costs	(406,216)
Non-Operating Revenue (Property Taxes)	49,000
Net Income/*Losss)	(357,216)

Rate adjustment Option #1

In the rate adjustment Option #1 the flat rate is set to recover the full calculated CRP reserves of $207,226 annually.

Rate Adjustment Option #1 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	45.85	47.21	48.64	50.12	51.65
1"	76.42	78.69	81.06	83.53	86.08
1.5"	152.84	157.38	162.13	167.06	172.15
2"	244.54	251.80	259.41	267.29	275.45

Rate Adjustment Option #1 Affordability Index						
	3/4" Connection		1" Connection		1.5" Connection	
Year	Annual Bill	Affordability	Annual Bill	Affordability	Annual Bill	Affordability
Year 1	550.22	1.41%	917.03	2.35%	1,834.05	4.70%
Year 2	566.56	1.45%	944.26	2.42%	1,888.52	4.84%
Year 3	583.67	1.50%	972.78	2.49%	1,945.56	4.99%
Year 4	601.41	1.54%	1,002.35	2.57%	2,004.70	5.14%
Year 5	619.75	1.59%	1,032.92	2.65%	2,065.85	5.30%

Rate Adjustment Option #1 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	714,180	735,391	757,600	780,631	804,440	3,792,243
Bad Debts	(1,428)	(1,471)	(1,515)	(1,561)	(1,609)	(7,584)
Total Revenue	712,752	733,920	756,085	779,070	802,831	3,784,658
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	207,375	207,375	207,375	207,375	207,375	1,036,336
Total Costs	761,752	782,920	805,085	828,070	851,831	4,029,658
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0.00	0.00	0.00	0.00	0.00	0.00

Rate adjustment Option #2

Rate adjustment Option #2 is a flat rate based on connection size. The Capital Replacement Reserve annual contribution is funded at an average of $150,000 annually.

Rate Adjustment Option #2 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	42.16	43.53	44.96	46.44	47.97
1"	70.27	72.55	74.93	77.39	79.95
1.5"	140.54	145.10	149.86	154.79	159.89
2"	224.87	232.15	239.77	247.66	255.83

Rate Adjustment Option #2 Affordability Index						
Year	3/4" Connection		1" Connections		1.5" Connection	
	Annual Bill	Affordability	Annual Bill	Affordability	Annual Bill	Affordability
Year 1	505.95	1.30%	843.26	2.16%	1,686.51	4.32%
Year 2	522.35	1.34%	870.58	2.23%	1,741.16	4.46%
Year 3	539.48	1.38%	899.13	2.31%	1,945.56	4.61%
Year 4	557.23	1.43%	928.71	2.38%	1,857.43	4.76%
Year 5	575.62	1.48%	959.36	2.46%	1,918.72	4.92%

Rate Adjustment Option# 2 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	656,728	678,006	700,245	723,283	747,151	3,505,414
Bad Debts	(1,313)	(1,356))	(1,400)	(1,447)	(1,494)	(7,011)
Total Revenue	655,415	676,650	698,845	779,070	802,831	3,498,403
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435

Rate Adjustment Option# 2 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	207,375	149,998	150,065	150,046	149,934	750,082
Total Costs	761,752	725,650	747,845	770,837	794,657	3,743,403
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0..00	0.00	0.00	0.00	0.00	0.00

Rate adjustment Option #3

Rate adjustment Option #3 is a flat rate based on connection size. The Capital Replacement Reserve annual contribution is funded at an average of $100,053 annually.

Rate Adjustment Option #3 Five-Year Rate Schedule					
Connection Size	Year 1	Year 2	Year 3	Year 4	Year 5
3/4"	38.95	40.32	41.74	43.22	44.75
1"	64.92	67.19	69.56	72.03	74.59
1.5"	129.84	134.39	139.13	144.07	149.18
2"	207.75	215.02	222.61	230.51	238.69

Rate Adjustment Option#3 Affordability Index						
Year	3/4" Connection		1" Connections		1.5” Connection	
	Annual Bill	Affordability	Annual Bill	Affordability	Annual Bill	Affordability
Year 1	467.43	1.20%	779.04	2.00%	1,558.09	4.00%
Year 2	483.79	1.24%	806.31	2.07%	1,612.62	4.13%
Year 3	500.86	1.28%	834.77	2.14%	1,669.55	4.28%
Year 4	518.65	1.33%	864.41	2.22%	1,728.82	4.43%
Year 5	537.06	1.38%	895.10	2.30%	1,790.19	4.59%

Rate Adjustment Option #3 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Rates Revenue	606,720	627,955	650,122	673,202	697,100	3,255,099
Bad Debts	(1,213)	(1,256)	(1,300)	(1,346)	(1,394)	(6,510)
Total Revenue	**605,507**	**626,699**	**648,822**	**671,855**	**695,706**	3,498,403
Operating Costs	531,890	553,165	575,292	598,304	622,236	2,880,887
Operating Reserves	17,487	17,487	17,487	17,487	17,487	87,435
Emergency Reserves	5,000	5,000	5,000	5,000	5,000	25,000
CRP Reserves	100,130	100,047	100,043	100,064	99,983	500,267
Total Costs	654,507	675,699	697,822	720,855	744,706	3,493,589

Rate Adjustment Option #3 Estimated Recovery of Projected Costs						
	Year #1	Year #2	Year #3	Year #4	Year #5	5 Year Total
Operating Revenue Over/(Under) Operating Costs	(49,000)	(49,000)	(49,000)	(49,000)	(49,000)	(245,000)
Non-Operating Revenue	49,000	49,000	49,000	49,000	49,000	245,000
Net Income/(Loss)	0..00	0.00	0.00	0.00	0.00	0.00

6. Conclusions and recommendations

Key points to remember with any rate adjustment:

- Successful utilities are those that strive to be transparent. In day-to-day operations, APUD should strive to promote its services (highlights and the low points), and continuously educate residents on why it is necessary to raise and adjust rates.
- The ability of the recommended rate structures to generate adequate revenue will depend on maintaining a vigorous collection and shut-off policy to keep delinquent accounts at a minimum.
- In order to achieve and maintain long-term viability, APUD should review its rates annually, or no less than a minimum of every two years. Keeping track of customer seasonal and annual water demands will help determine operations needs, budget forecasts and rate adjustments.
- APUD should raise rates as soon as possible to provide sufficient revenues for funding future operations and to adequately fund reserves.
- APUD should establish policies for reserve accounts as recommended above.
- APUD should designate reserves on its financial statements.
- CRP reserves should be moved to and maintained in the highest interest bearing accounts available to offset inflation.
- APUD should record all transactions, including balance sheet accounts, according the individiual utility enterprises.
- APUD is encouraged to install meters for every connection as soon as possible. A revised rate structure charging base rates and usage to each conneciton will promote a more eqitabie fee for customers. In addition, adding meters will help identifty possibly losses due to leakage.

7. Proposition 218

California approved Proposition 218 in 1996 requiring agencies to adopt property fees and charges in accordance with a defined public process found in article XIII D or by associated court decision. Water and wastewater rates are user fees under the definition and must meet the following requirements:

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

Written notice should be given to both the record owners and customers within the area subject to the fee or charge. The notice shall include the following:

- The formula or schedule of charges by which the property owner or customer can easily calculate their own potential charge.
- The basis upon which the amount of the proposed fee or charge is to be imposed on each parcel. An explanation of the costs which the proposed fee will cover and how the costs are allocated among property owners.
- Date, time, and location of a public hearing on the rate adjustment. The public hearing must occur 45 or more days after the mailing of the notice.
- A statement that there is a 120-day statute of limitations for challenging any new, increased, or extended fee or charge.

California's Proposition 218 provides that a customer of APUD or owner of record of a parcel or parcels subject to the proposed rate increases may submit a protest any or all the proposed rate increases by filing a written protest with APUD at or before the time the public hearing has concluded. Only one protest per parcel is counted. If written protests are filed by a majority of the affected parcels, the proposed rate increases will not be imposed.