Cedarpines Park Mutual Water Company

2019 Water Rate Study Report



Bartle Wells Associates
in partnership with
California Rural Water Association
September 3, 2019





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1 BACKGROUND & OBJECTIVES

1.1 Background

Cedarpines Park Mutual Water Company (MWC) was founded in 1923 and provides water service to 822 service and non-service accounts. The MWC is located in Cedarpines Park, CA, an unincorporated community in San Bernardino County 10 miles north-northwest of San Bernardino, CA.

The MWC is entirely funded by fees for the services it provides. Currently, customers are charged an annual membership fee for all service and non-service accounts. Service accounts are charged bimonthly fixed rates and volumetric rates according to a three-tiered volumetric rate structure.



1.2 Rate Study Objectives

California Rural Water Association has retained Bartle Wells Associates (BWA) on behalf of the MWC to provide financial plans and rate studies for the water enterprise. Key goals and objectives of the studies include developing rates that:

- Recover the costs of providing service including operating costs, capital costs, and building prudent reserves;
- Are fair and equitable to all customers;
- Are easy to understand and implement;
- Comply with the substantive cost-of-service requirements of the California Constitution, Article 13D, Section 6 (established by Proposition 218) and the general mandate of Article 10, Section 2 that prohibits the wasteful use of water;
- Support the MWC's long-term operational and financial stability.

This report summarizes key findings and recommendations for rates over the next five years. The full set of rate study tables are included in the appendix to this report.

2 GUIDING PRINCIPLES & RATE METHODOLOGY

2.1 Guiding Principles

While mutual water companies are not regulated by California legislation that governs most other water utilities, rate studies should follow several guiding principles to ensure revenue stability, ease of rate implementation, and equitability between customer classes:

Rates Should Generate Adequate Revenues to Fund The MWC's Costs, Maintain Prudent Reserve Fund Levels, and Comply with Debt Covenants: Rates should be set to fully fund costs to operate and maintain the water system, fund needed capital improvements, maintain prudent cash reserves, and comply with outstanding debt covenants. Conversely, the MWC should not generate more revenue than the overall cost to provide water.

Rates Should be Simple, Fair, Justifiable, and Cost-Based: The MWC should establish simple, fair, and cost-based rates to the extent possible. No customer or customer class should be burdened with more than their fair share of costs. Rate revenue requirements and calculation methodologies should be documented.

Rates Should Consider Conservation Requirements: Water is a scarce commodity in California and wasteful use should be discouraged. However, rates need to be cognitive of possible revenue loss and potential inequitable distributions of the true cost of service.

2.2 Rate-Setting Methodology

The rates developed in this report use a straightforward methodology to ensure or establish charges that fairly apportion the costs and equitably recover the cost of providing service. The general methodology used to establish these charges is summarized in Figure 2 below. BWA developed rates and charges for the MWC that comply with relevant state law and recover revenues in proportion to the cost of providing water service.

Figure 2: Cost of Service Allocation Methodology

Revenue Requirements

Determine future funding requirements from rates

Cost Allocation
Equitably apportion costs
to rate components

Rate Design

Develop rates that recover revenues in proportion to the cost of providing service

3 WATER FINANCES & CASH FLOW PROJECTIONS

3.1 Financial Overview

Bartle Wells Associates conducted an independent evaluation of the water enterprise's finances. Key observations include:

- Projected operating and capital expenses will exceed revenues without regular rate increases
- The capital expenses for the water enterprise are conservatively estimated to be \$75,000 per year for the next 5 years (2019 through 2024). The MWC has the ability to cash fund all capital expenses, which will allow rates to be lower in the long term.
- The high fire protection risk faced by the MWC necessitates robust protection against
 emergency capital needs and significant revenue loss. BWA recommends that the MWC
 accumulate cash reserves to equal to at least \$500,000 in the next 5 years (or 9 months
 annual O&M expenses).

3.2 Factors Driving Rate Increases

The primary factors impacting the water rates are the ongoing capital improvement needs of the water system which have been conservatively estimated at \$75,000 per year in lieu of a detailed capital improvement program. The ongoing annual expenses of the water enterprise are projected to rise with inflation at about 3% per year and are also impacting the need for water rate increases. In general, MWC's revenues are not sufficient to cover current and projected costs without drawing cash reserves far below the MWC's minimum threshold of 6 months operating expenses.

3.3 Key Assumptions

BWA developed long-term cash flow projections to determine the water enterprise's annual revenue requirements and project required water rate revenue increases. The financial projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions. Key information and assumptions include:

Revenue Assumptions

• Miscellaneous fees and interest income are based on the FY 2019 budget. Future projections are estimated based on conservative inflation & interest earning rate of 1.5%. Actual amounts will vary based on actual miscellaneous fees and future interest earning rates.

• Growth in the MWC's customer base and water consumption was conservatively assumed to be 0% per year over the next 5 years. The MWC is relatively small, slow-growth community and should not rely on growth for additional rate revenue.

Expense Assumptions

• Operating and maintenance costs are based on the FY 2019 budget and escalated at the annual rate of 3.0% to account for future cost inflation. This assumption as based on the 1990 through 2018 Engineering News-Record's average annual cost increase.

Reserve Targets

• The MWC's current cash fund balance is approximately \$332,000 as of the beginning of FY 2019. The MWC will need to use all but approximately \$65,000 of its reserves to fund the water enterprise over the next five years. However, if the proposed rate increases are adopted the water enterprise will have at least \$502,000 in reserves at the end of FY 2024. Reserves are projected to slowly increase as rate revenue slightly exceeds expenses. This will ensure that the proposed rates establish sufficient reserves.

3.4 Current Rates

The MWC's current water rates are listed in Table 1 below.

Table 1. Current Rates

Service Accounts & Non-Service Accounts		
Membership Fee, all accounts	\$273.48	per account annually
Service Accounts Only		
Fixed Rate	\$49.48	per meter bimonthly
Volumetric Rates		
Tier 1 - usage up to 600 cf	\$0.087	per cf bimonthly
Tier 2 - usage above 600 up to 1400 cf	\$0.103	per cf bimonthly
Tier 3 - usage above 1400 cf	\$0.129	per cf bimonthly

Water rates are charged according to several components, including customer category, bill frequency, and rate type (fixed vs. variable) as described below:

1) Annual rates, all accounts:

• **Membership Fee:** All water accounts, including service and non-service (vacant or stand-by) accounts, are charged an annual membership fee per account.

2) Bimonthly rates, service accounts only:

- **Fixed Rate:** Customers receiving water service pay a fixed fee (calculated bi-monthly) per meter, including both ¾" and 1" meters.
- Variable Rate: In addition to the fixed rate, service accounts are charged volumetric rates
 according to a 3-tier inclining rate structure. Water use is first billed in tier 1 up to 600 cf
 bimonthly. This amount of water usage is subsequently billed in higher, more expensive tiers
 as water use increases in each bi-monthly billing period. Quantity Charges are billed per cubic
 feet (CF), with 1 CF equal to approximately 7.48 gallons of water.

3.5 Water Supply

The MWC both produces water from local wells and purchases water from Crestline-Lake Arrowhead Water Agency (CLAWA). Purchased water serves demand in excess of well production as illustrated in Figure 3. The MWC spends an average of \$52,000 per year on purchased water costs. Purchased water peaks during the summer months relative to produced water.

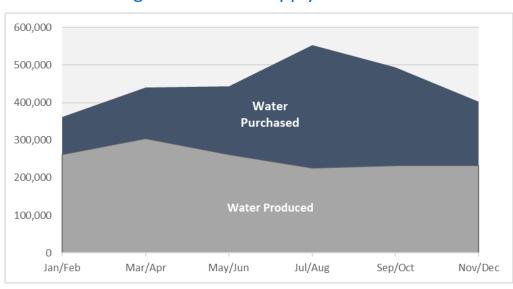


Figure 3: Water Supply CY 2018

3.6 Customer Information

The MWC serves approximately 822 accounts as of 2018, 74 of which are non-service which includes both vacant and non-vacant accounts. Fixed revenue from membership fees and bimonthly fixed rates accounted for approximately 33% and 32% of total rate revenue, respectively. Water usage has steadily increased over the last three years and volumetric revenue accounted for approximately 35% of water rate revenue in 2018. A breakdown of current rates and rate revenue is provided in the appendix tables.

Total water usage over the last three years is illustrated in Figure 4 below.

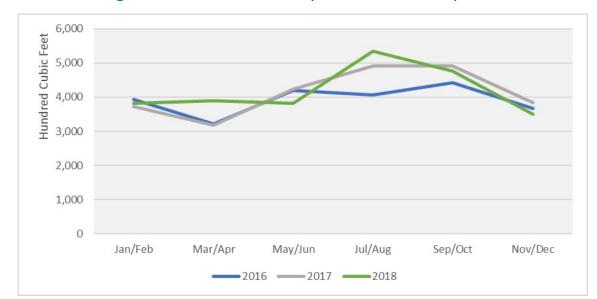


Figure 4: Total Bimonthly Water Consumption

3.7 Operations & Maintenance Expenses

The MWC water operations budget totals approximately \$577,000 for FY 2018/19. The largest annual costs include purchased water, power, treatment and supplies. All operations expenses are projected to increase 3% per year. In five years, FY 2023/24 budget revenue is projected to be approximately \$688,000. A detailed projection of operations & maintenance expenses is provided in the appendix tables.

3.8 Debt Obligations

In addition to operating costs, the MWC pays annual debt service payments on one RUS/USDA loan shown on Table 2.

Table 2. Debt Service Schedule

	2018/19	2019/20	2020/21	2021/22	2021/23	2021/24
RUS/USDA Loan	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644
Total Debt Service	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644

3.9 Capital Improvement Plan

The MWC's capital improvement plan is shown on Table 3 and consists of a total annual capital expenditure of \$75,000 provided by the MWC in lieu of a detailed capital improvement plan. The annual estimation was established at a level that sufficiently addresses aging infrastructure and other necessary capital improvements at a conservative and steady pace.

Table 3. Capital Improvement Plan

	2018/19	2019/20	2020/21	2021/22	2021/23	2021/24
Annual Capital Expenditure - Placeholder ¹	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Total Capital Improvement Plan	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000

¹⁻ Estimation from Cedarpines MWC General Manager, 4/5/2019

3.10 Projected Rate Increases

Table 4 below shows the projected overall recommended rate increases needed to fund current operating, capital and debt service obligations as well as achieve cash reserve balance and debt service coverage targets over the next 5 years. If there are any updates to these items, Cedarpines MWC should re-evaluate its future rate and revenue requirements based on the latest information available. The MWC always has the flexibility to implement rates that are lower than those adopted.

Table 4. Projected Rate Increases

	2019/20	2020/21	2021/22	2022/23	2023/24
% Rate Increase	5.5%	5.5%	5.5%	5.5%	5.5%

3.11 Projected Cashflow with Rate Increases

Figure 5 shows a chart representation of the 5-year cash flow projection. The cash flow projection incorporates all assumptions and data described in the above sections. Revenue is increasing according to the rate projections shown on Table 4 and is shown to be sufficient to fund the MWC's cost of providing service while maintaining a balanced annual budget and a cash fund balance that meets the minimum target of approximately \$500,000 in 2023/24.



Figure 5: Projected Revenues & Expenses

4 WATER COST OF SERVICE & RATE CALCULATIONS

4.1 Water Rate Structure Recommendations

In addition to the proposed rate revenue increases, Bartle Wells Associates also recommends a rate structure change to align with the current cost of water service.

4.2 Cost Allocation

BWA conducted a cost of service analysis which confirms that the current cost allocation to annual membership fees, fixed charges and variable charges are appropriate. BWA recommends rates that continue to collect 33% of revenue from annual membership fees, 32% from fixed charges, and 35% from variable charges.

4.3 Fixed Service Charge Recommendations

The proposed fixed charges include an annual membership fee applying to standby and active accounts and a bimonthly fixed charge applying to all active accounts, either ¾" or 1" meter size. Per the cost of service allocation, 33% of revenue will come from annual membership fees and 32% of rate revenue will come from fixed charges. This represents no change from the current rate structure. Proposed fixed charges are shown in Table 5 below.

Table 5. Proposed Fixed Charges

		Current		P	roposed		
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue Ir	ncrease	0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Service Accounts & Non-Service Accounts Membership Fee, all accounts per account annually		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Service Accounts Only Fixed Rate	per meter bimonthly	\$49.48	\$52.20	\$55.07	\$58.10	\$61.30	\$64.67

4.4 Water Variable Charge Recommendations

The proposed variable charge aims to recover 35% of rate revenue through a two-tiered structure of fees based on water use.

BWA also examined the current volumetric rate structure. The MWC currently incurs water supply costs associated with water demand in excess of well production, which can be tied to excess or peak water use. BWA proposes that the MWC adopt a two-tiered rate system in which tier two usage occurs during peak summer usage for the average customer and the tier 2 rate recovers the cost of purchased water. This revised rate structure aligns with the current cost of providing water service.

Figure 6 illustrates the proposed tier breakpoint.

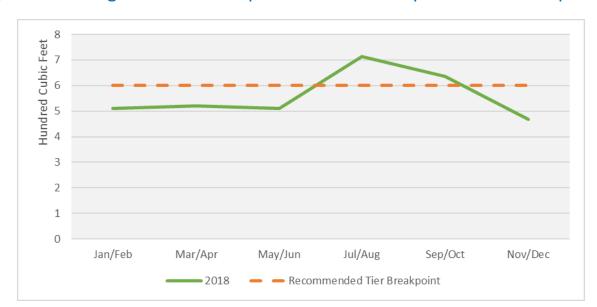


Figure 6: Average User Consumption FY 2018 - Proposed Tier Breakpoint

The proposed volumetric rates are shown in Table 6 below. BWA recommends that the MWC replace the current three-tiered water rate structure and adopt a two-tiered rate structure that aligns with the current cost of providing water service.

Table 6. Proposed Volumetric Charges

		Current		P	roposed		
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue Increase		0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Volumetric Rates Tier 1 - usage up to 600 cf Tier 2 - usage above 600 cf Tier 3 - usage above 1400 cf	per cf bimonthly per cf bimonthly per cf bimonthly	\$0.087 \$0.103 \$0.129	\$0.092 \$0.133 N/A	\$0.097 \$0.140 N/A	\$0.102 \$0.148 N/A	\$0.108 \$0.156 N/A	\$0.114 \$0.165 N/A

4.5 Proposed Rates

Table 7 below shows a 5-year schedule of proposed rates incorporating the overall level of required rate increases to fund the MWC's costs of providing service. In the years following the rate restructure in 2019/20, the proposed rates will increase according to the proposed annual rate revenue increase of 5.5% per year.

Table 7. Proposed Rates

		Current		P	roposed		
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue Increa	ase	0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Service Accounts & Non-Service							
Membership Fee, all accounts	per account annually	\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Service Accounts Only Fixed Rate	per meter bimonthly	\$49.48	\$52.20	\$55.07	\$58.10	\$61.30	\$64.67
Volumetric Rates							
Tier 1 - usage up to 600 cf	per cf bimonthly	\$0.087	\$0.092	\$0.097	\$0.102	\$0.108	\$0.114
Tier 2 - usage above 600 cf	per cf bimonthly	\$0.103	\$0.133	\$0.140	\$0.148	\$0.156	\$0.165
Tier 3 - usage above 1400 cf	per cf bimonthly	\$0.129	N/A	N/A	N/A	N/A	N/A

4.6 Estimated Bill Impact

Estimated bill impacts are shown on Table 8 for customers with low, average and high annual water usage. Annual bills are projected to increase at the same rate as the annual proposed rate revenue for low and average user bills since both categories use water below the Tier 1 breakpoint of 600 cf in an average bimonthly bill period. High water users may see a bill increase larger than the rate revenue increase in the first year due to the revised volumetric rate structure.

Table 8. Bill Projection

		Current			Proposed		
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue		5.5%	5.5%	5.5%	5.5%	5.5%	
User Type	cf usage			Estimat	ted Bill		
Low User	200						
Bimonthly Bill		\$66.88	\$70.56	\$74.44	\$78.53	\$82.85	\$87.41
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$674.76	\$711.87	\$751.02	\$792.33	\$835.91	\$881.88
% annual increase			5%	5%	5%	5%	5%
Average User	560						
Bimonthly Bill		\$98.20	\$103.60	\$109.30	\$115.31	\$121.65	\$128.34
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$862.68	\$910.13	\$960.18	\$1,012.99	\$1,068.71	\$1,127.49
% annual increase			5%	6%	5%	6%	5%
High User	800						
Bimonthly Bill		\$122.28	\$133.88	\$141.24	\$149.01	\$157.20	\$165.85
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$1,007.16	\$1,091.78	\$1,151.82	\$1,215.18	\$1,282.01	\$1,352.52
% annual increase			8%	5%	5%	5%	6%
cf usage estimated base	d on 2018 co	nsumption					

5 CONCLUSION & RECOMMENDATIONS

This water rate study report presents a comprehensive review of the Cedarpines Mutual Water Company's water revenue requirements, cost of service allocation, and rate structure. Projected operations & capital expenses are expected to exceed rate revenues in the next few years. The MWC also faces a significant fire protection risk which necessitates cash reserves sufficient to cover lost revenue and capital expenses in an emergency. These factors were considered in the rate study to fairly develop rates for customers.

5.1 Conclusion

The MWC practices sound financial planning that has provided for the financial health of the water enterprise. Unfortunately, the MWC is facing a small revenue deficit while operations and capital costs continue to increase. These recent developments have been factored into a comprehensive water rate study and are reflected in the above proposed rates. Adoption of these rates reflect the MWC's commitment to stewarding financially sound utilities and providing reliable, high quality water service that will benefit the community many years into the future.

5.2 Recommendations

BWA recommends that the MWC adopt the rates contained in this report. At minimum, the MWC should review and update its water rate study every five years and/or concurrent with Master Plan Updates. Rates are typically adopted according to a five-year planning period. Any further rate increases should be supported by a comprehensive rate study.

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APPENDIX

Water Rate Study Draft Tables

Cedarpines Park MWC Rate Study 2019



Appendix Tables 9/3/2019





Table 1 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

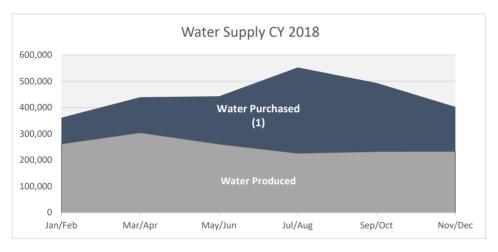
Current Rates

Service Accounts & Non-Service Accounts						
Membership Fee, all accounts	\$273.48 per account annually					
Service Accounts Only						
Fixed Rate	\$49.48 per meter bimonthly					
Volumetric Rates						
Tier 1 - usage up to 600 cf	\$0.087 per cf bimonthly					
Tier 2 - usage above 600 up to 1400 cf	\$0.103 per cf bimonthly					
Tier 3 - usage above 1400 cf	\$0.129 per cf bimonthly					
Source: California Rural Water Association, A. Amirteymoori 2/24/2019 via email						

Table 3 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Water Supply CY 2018

Billing Period	Water Produced	Water Purchased (1)	Total Water Supply
Jan/Feb	261,922	99,746	361,668
Mar/Apr	304,377	135,227	439,604
May/Jun	261,123	181,952	443,075
Jul/Aug	226,147	326,457	552,604
Sep/Oct	232,635	260,709	493,344
Nov/Dec	233,314	169,345	402,659
Total cf	1,519,518	1,173,436	2,692,954
Total gallons	11,365,994	8,777,300	20,143,294
Purchased Water Rate (\$/cf)		\$0.0264	
Purchased Water Cost CY 20)18	\$30,979	
Average Water Cost FY 2016	- FY 2019	\$52,150	

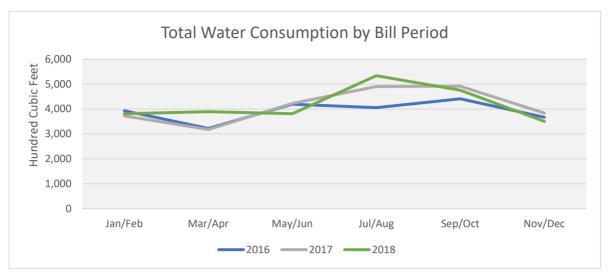


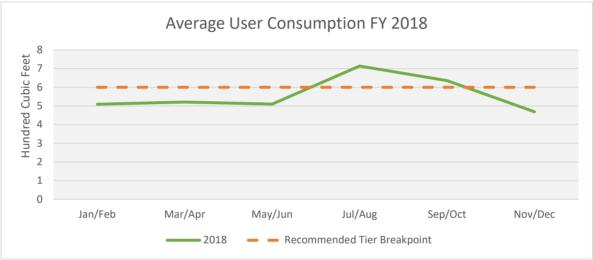
1 - Water Purchased from Crestline-Lake Arrowhead Water Agency (CLAWA) for \$2.64/HCF, serves demand in excess of well production

Table 2 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Customer Information

Number of Accounts		% total revenue	
Service	748		
Non-Service	74		
Total	822		
Total Est. Fee Revenue	\$224,801	33%	
Number of Meters			
3/4"	673		
1"	75		
Total	748		
Total Est. Fixed Charge Revenue	\$222,066	32%	
Water Consumption by Tiers - Current Rates	CY 2016	CY 2017	CY 2018
Tier 1 - usage up to 600 cf	1,468,369	1,513,138	1,503,086
Tier 2 - usage above 600 up to 1400 cf	634,344	698,359	694,038
Tier 3 - usage above 1400 cf	245,174	267,876	314,630
Total Water Consumption	2,347,887	2,479,373	2,511,754
Total Est. Variable Charge Revenue	\$224,713	\$238,130	\$242,842
			35%
Average Bimonthly Usage	523	552	560
Total Est. Rate Revenue	\$671,580	\$684,997	\$689,708





Source: California Rural Water Association: Customer Usage_01-2016_12-2018.xlsx

Table 4 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Revenue Projection

	Budget				Projected		
	2018/19	Escalation	2019/20	2020/21	2021/22	2021/23	2021/24
Rate Revenue							
100.401 Residential Consumption	\$242,816	0%	\$242,816	\$242,816	\$242,816	\$242,816	\$242,816
100.402 Commercial Consumption	\$67	0%	\$67	\$67	\$67	\$67	\$67
100.403 Construction Consumption	\$0	0%	\$0	\$0	\$0	\$0	\$0
100.411 Residential Meter Charge	\$219,097	0%	\$219,097	\$219,097	\$219,097	\$219,097	\$219,097
100.412 Commercial Meter Charge	\$594	0%	\$594	\$594	\$594	\$594	\$594
100.414 Membership Fees	\$225,348	0%	\$225,348	\$225,348	\$225,348	\$225,348	\$225,348
Total Rate Revenue	\$687,922		\$687,922	\$687,922	\$687,922	\$687,922	\$687,922
Other Revenue			i .				
100.415 Residential Meter Install.	\$10,000		\$10,150	\$10,302	\$10,457	\$10,614	\$10,773
100.417 Construction Meter Install.	\$0		\$0	\$0	\$0	\$0	\$0
100.421 Fire Meter Install.	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.422 Fire Meter Charge	\$6,234	1.5%	\$6,328	\$6,422	\$6,519	\$6,617	\$6,716
100.424 Fire Consumption	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.43 Other Water Revenue	\$2,619	1.5%	\$2,658	\$2,698	\$2,739	\$2,780	\$2,821
100.431 NSF Check Fee	\$180	1.5%	\$183	\$185	\$188	\$191	\$194
100.432 Late Pay Penalty	\$10,747	1.5%	\$10,908	\$11,072	\$11,238	\$11,406	\$11,578
100.434 Posting Fees	\$4,014	1.5%	\$4,074	\$4,135	\$4,197	\$4,260	\$4,324
100.435 Reconnection Fee	\$330	1.5%	\$335	\$340	\$345	\$350	\$356
100.436 Theft of Water Charge	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.437 Pulled Meter Fee	\$1,000	1.5%	\$1,015	\$1,030	\$1,046	\$1,061	\$1,077
100.438 Re-Read Meter Fee	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.439 Disconnection Fee	\$1,200	1.5%	\$1,218	\$1,236	\$1,255	\$1,274	\$1,293
100.44 Inaccessible Water Meter Fee	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.441 Will Serve Letter Fee	\$100	1.5%	\$102	\$103	\$105	\$106	\$108
100.442 Fire Flow Letter	\$500	1.5%	\$508	\$515	\$523	\$531	\$539
100.443 Customer Call-Out Fee	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.444 Material Fees	\$435	1.5%	\$442	\$448	\$455	\$462	\$469
100.445 Sample Fees	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.45 Purchased Water Shares	\$7,000	1.5%	\$7,105	\$7,212	\$7,320	\$7,430	\$7,541
100.451 Water Shares Transferred	\$940	1.5%	\$954	\$968	\$983	\$998	\$1,013
100.452 Escrow Research Fee	\$7,200	1.5%	\$7,308	\$7,418	\$7,529	\$7,642	\$7,756
100.47 Non-Utility Income	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
100.471 Interest Income	\$150	1.5%	\$152	\$155	\$157	\$159	\$162
100.5 Misc Receivable	\$0	1.5%	\$0	\$0	\$0	\$0	\$0
Total Other Revenue	\$52,649		\$53,439	\$54,240	\$55,054	\$55,880	\$56,718
Total Revenue	\$740,571		\$741,361	\$742,162	\$742,976	\$743,802	\$744,640

Source: California Rural Water Association: Budget_FY2018-19_APPROVED.pdf

O&M Projection

Post Operation & Mointenance 2011/19 Solution 2011/16 2021/12 2021/12 2021/13 2021/12 2021/13 20			Budget		,	Projected		
1900.1779 Synthesis Membersance & Regain 50.000 100.000 100.00000 100.00000 100.00000 100.00000 100.00000 100.00000 100.000000 100			-	2019/20		•	2022/23	2023/24
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1,00,017.0 Contract Work Genvices 51,000			· '					
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100.01.07.00 Claws Connection Salve Sa		•						
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	100.02.710	contract work (Services)	\$475 <u>3.07</u> 6	3403	9 504	\$313	\$333	\$331
100.10.70 Pumping Equip. Maint. & Repair 500 30% 530 50 50 50 50 50 50 5	100.10.700	Clawa Connection	\$310 3.0%	\$319	\$329	\$339	\$349	\$359
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100.11.701 Contract Work			· · · · · · · · · · · · · · · · · · ·		•		•	-
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100.11.709 1400 Treatment Equipment			•				•	
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1001.17710 Contract Work							·	
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1001.27/02 Structure Maintenance & Repair S0 3.0% S0 S0 S0 S0 S0 S0 S0	100.11.710	Contract Work	\$3,000 <u>3.07</u> 6	<i>\$3,210</i>	\$3,340	75,055	\$10,130	J10, 4 33
1001.12/704 Pumping Fajuju, Malint. & Repair SQ 3.0% SQ SQ SQ SQ SQ SQ SQ S	100.12.700	Ferncrest	\$500 3.0%	\$515	\$530	\$546	\$563	\$580
1001.12/705 Reservoirs, Tanks, & Standpipes \$2,400 3.0% \$5.472 \$2,546 \$2,623 \$2,701 \$2,782		•						
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100.15.703 Well Maintenance & Repair \$0 3.0% \$0	100.15.700	Lower Burnt Mill		. ,	\$1,061	\$1,093	\$1,126	\$1,159
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100.17.703	Well Maintenance & Repair	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Pumping Equip. Maint. & Repair	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Reservoirs, Tanks, & Standpipes	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
100.17.706	Meter Maintenance & Repairs	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.17.707	H2O Treatment Equipment	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	H20 Treatment Chemicals	\$426	3.0%	\$439	\$452	\$466	\$479	\$494
100.17.709		\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.17.710	Contract Work	\$9,000	3.0%	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433
	Upper Burnt Mill	\$1	3.0%	\$1	\$1	\$1	\$1	\$1
	Land Maintenance	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Structure Maintenance & Repair Well Maintenance & Repair	\$0 \$0	3.0%	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
	Pumping Equip. Maint. & Repair	\$0 \$0	3.0%	\$0 \$0	\$0 \$0	\$0	\$0	\$0 \$0
	Reservoirs, Tanks, & Standpipes	\$0	3.0%	\$0	\$0	\$0	\$0	\$0 \$0
	Meter Maintenance & Repairs	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Contract Work	\$9,800	3.0%	\$10,094	\$10,397	\$10,709	\$11,030	\$11,361
100.19.706	Prv Stations	\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
Total Plant	Operation & Maintenance Expense	\$79,243		\$81,620	\$84,069	\$86,591	\$89,189	\$91,864
General Ope	eration Expense							
100.50.440	Taxes Other Than Income Taxes	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.50.441	Sb County Property Tax	\$4,196	3.0%	\$4,322	\$4,452	\$4,585	\$4,723	\$4,864
	Ca Franchise Tax	\$5,200	3.0%	\$5,356	\$5,517	\$5,682	\$5,853	\$6,028
	Corporate Tax	\$800	3.0%	\$824	\$849	\$874	\$900	\$927
	Sales Tax Paid	\$2,300	3.0%	\$2,369	\$2,440	\$2,513	\$2,589	\$2,666
	Interest Expense	\$50,132	3.0%	\$51,636	\$53,185	\$54,781	\$56,424	\$58,117
	Street Maint. & Paving	\$1,500	3.0%	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
	Purchased Water	\$52,150 \$26,000	3.0%	\$53,715 \$26,780	\$55,326 \$27,583	\$56,986	\$58,695 \$29,263	\$60,456 \$30,141
100.50.501	Materials & Supplies	\$8,000	3.0%	\$8,240	\$27,363 \$8,487	\$28,411 \$8,742	\$9,004	\$9,274
	Employment Screenings	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
100.50.524		\$200	3.0%	\$206	\$212	\$219	\$225	\$232
	Contract Labor	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.50.540	Contract Services - System	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.50.541	Water Quality Monitoring	\$6,255	3.0%	\$6,443	\$6,636	\$6,835	\$7,040	\$7,251
100.50.549	Nissan , Maint.	\$2,000	3.0%	\$2,060	\$2,122	\$2,185	\$2,251	\$2,319
100.50.552	Toyota Maintenance	\$1,500	3.0%	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
	Cat Backhoe Expense	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
	Vehicle Registration Fees	\$1,600	3.0%	\$1,648	\$1,697	\$1,748	\$1,801	\$1,855
100.50.555		\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
100.50.556		\$500	3.0%	\$515	\$530	\$546	\$563	\$580
	Sm. Equip Maint/Repair Hand Tools Purchase	\$500 \$1,500	3.0%	\$515 \$1,545	\$530 \$1,591	\$546 \$1,639	\$563 \$1,688	\$580 \$1,739
100.50.558	Distribution System Maint.	\$12,000	3.0%	\$12,360	\$12,731	\$13,113	\$13,506	\$1,739
100.50.560	•	\$1,200	3.0%	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391
	Education & Training	\$800	3.0%	\$824	\$849	\$874	\$900	\$927
100.50.623	_	\$2,500	3.0%	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
100.50.624	Uniforms	\$1,000	3.0%	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159
100.50.625	Bad Debt Expense	\$4,526	3.0%	\$4,662	\$4,802	\$4,946	\$5,094	\$5,247
100.50.630	Office Services & Rentals	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Equipment Rentals	\$300	3.0%	\$309	\$318	\$328	\$338	\$348
	Postage Meter Rental	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Computer Support	\$500	3.0%	\$515	\$530	\$546	\$563	\$580
	Answering Service	\$900	3.0%	\$927	\$955	\$983	\$1,013	\$1,043
	Fire Extinguisher Maintenance Usa Alert Service	\$150 \$180	3.0%	\$155 \$185	\$159 \$191	\$164 \$197	\$169 \$203	\$174 \$209
	Janitorial Supplies	\$200	3.0%	\$206	\$212	\$219	\$205	\$232
	Office Supplies	\$2,400	3.0%	\$2,472	\$2,546	\$2,623	\$2,701	\$2,782
100.50.644	• • •	\$3,000	3.0%	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
100.50.645		\$800	3.0%	\$824	\$849	\$874	\$900	\$927
	Gas - Office	\$300	3.0%	\$309	\$318	\$328	\$338	\$348
100.50.650	Gas-Shop	\$340	3.0%	\$350	\$361	\$372	\$383	\$394
100.50.651	Telephone - Office	\$2,219	3.0%	\$2,286	\$2,354	\$2,425	\$2,498	\$2,572
	Telephone - Shop	\$1,380	3.0%	\$1,421	\$1,464	\$1,508	\$1,553	\$1,600
	Cell Phones	\$2,400	3.0%	\$2,472	\$2,546	\$2,623	\$2,701	\$2,782
	2-Way Radio	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Security - Office	\$439	3.0%	\$452	\$466	\$480	\$494	\$509
	Security - Shop	\$419	3.0%	\$432	\$445	\$458	\$472	\$486 \$1.643
	Refuse Disposal	\$1,416 \$700	3.0%	\$1,458	\$1,502	\$1,547	\$1,594	\$1,642
	Computer Purchase Computer Software Purchase	\$700	3.0%	\$721 \$3,629	\$743 \$3,738	\$765 \$3,850	\$788 \$3,965	\$811 \$4,084
	Office Equipment Purchase	\$5,525	3.0%	\$5,629 \$515	\$530	\$5,630 \$546	\$5,963	\$4,084 \$580
	Professional Services	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
	Audit & Accounting	\$11,500	3.0%	\$11,845	\$12,200	\$12,566	\$12,943	\$13,332
100.50.673		\$5,000	3.0%	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
100.50.674	·	\$0	3.0%	\$0	\$0	\$0	\$0	\$0
100.50.676	Director Compensation	\$3,250	3.0%	\$3,348	\$3,448	\$3,551	\$3,658	\$3,768
100.50.680		\$12,000	3.0%	\$12,360	\$12,731	\$13,113	\$13,506	\$13,911
100.50.681	Workers Compensation Ins.	\$7,335	3.0%	\$7,555	\$7,782	\$8,015	\$8,256	\$8,503

400 F0 C04 Advantage	¢350 3.00/	6264	6274	ć202	ć204	ć 40c
100.50.691 Advertising	\$350 3.0%	\$361	\$371	\$382	\$394	\$406
100.50.692 Subscriptions	\$0 3.0%	\$0	\$0	\$0	\$0	\$0
100.50.694 Water Association Dues	\$50 3.0%	\$52	\$53	\$55	\$56	\$58
100.50.695 Credit Card Fees	\$0 3.0%	\$0	\$0	\$0	\$0	\$0
100.50.696 Bank Charges	\$3,000 3.0%	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
100.50.697 Permit Expense	\$7,300 3.0%	\$7,519	\$7,745	\$7,977	\$8,216	\$8,463
100.00.206 Vehicle Loans	\$14,416 3.0%	\$14,848	\$15,294	\$15,753	\$16,225	\$16,712
Total General Operation Expense	\$278,626	\$286,985	\$295,594	\$304,462	\$313,596	\$323,004
Labor Expense						
200.50.513 Wages And Salaries	\$196,011 3.0%	\$201,891	\$207,948	\$214,187	\$220,612	\$227,230
200.50.523 Employer Payroll Taxes	\$17,053 3.0%	\$17,565	\$18,092	\$18,634	\$19,193	\$19,769
200.50.622 Medical Insurance	\$27,000 3.0%	\$27,810	\$28,644	\$29,504	\$30,389	\$31,300
200.50.696 Bank Charges - Payroll	\$1,284 3.0%	\$1,323	\$1,362	\$1,403	\$1,445	\$1,489
Total Labor Expense	\$241,348	\$248,588	\$256,046	\$263,727	\$271,639	\$279,788
Total Operations & Maintenance Expenses	\$599,217	\$617,194	\$635,709	\$654,781	\$674,424	\$694,657
Total Fixed - Service & Non-Service Accounts	33%					
Total Service & Non-Service Accounts	33%					
Total Fixed - Service Accounts	32%					
Total Variable	35%					
Total Service Accounts	68%					
Expenses do not include depreciation, long term debt	expenses					
Source: California Rural Water Association: Budget FY	2018-19 APPROVED.pdf					

Table 6
Cedarpines Park MWC Rate Study 2019
Appendix Tables 9/03/2019

Debt Service Schedule

	2018/19	2019/20	2020/21	2021/22	2021/23	2021/24
RUS/USDA Loan	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644
Total Debt Service	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644

Source: California Rural Water Association: RUS AMMORTIZATION SCHEDULE.xlsx

Table 7 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Capital Improvement Plan

	2018/19	2019/20	2020/21	2021/22	2021/23	2021/24
Annual Capital Expenditure - Placeholder ¹	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Total Capital Improvement Plan	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000

¹⁻ Estimation from Cedarpines MWC General Manager, 4/5/2019

Table 8
Cedarpines Park MWC Rate Study 2019
Appendix Tables 9/03/2019

Fund Balance

Cash Fund Reserve Balanceas of 7/1/2018
All Unrestricted Accounts \$332,006

Fund Reserve Balance Goal: 6 mo. O&M Costs

\$500,000 by 2023/24

Source: California Rural Water Association, A. Amirteymoori 2/24/2019 via email

Table 9 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Cash Flow

		Current	Projected/Proposed				
	Reference	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
% Growth			0.0%	0.0%	0.0%	0.0%	0.0%
% Rate Increase			5.5%	5.5%	5.5%	5.5%	5.5%
Designing Fund Delegge	Table 8	¢222.000	¢200 F02	¢205.746	¢225 200	¢200 000	¢420.040
Beginning Fund Balance	rable 8	\$332,006	\$308,502	\$305,746	\$325,296	\$368,809	\$438,049
Revenue							
Rate Revenue (2018 calculated)	Table 2	\$689,708	\$727,642	\$767,663	\$809,884	\$854,428	\$901,421
Other Revenue	Table 4	\$52,649	\$53,439	\$54,240	\$55,054	\$55,880	\$56,718
Total Revenue		\$742,357	\$781,081	\$821,903	\$864,938	\$910,308	\$958,139
Expenses							
Operations & Maintenance	Table 5	\$599,217	\$617,194	\$635,709	\$654,781	\$674,424	\$694,657
Debt Service	Table 6	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644	\$91,644
Capital Improvement Plan	Table 7	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Total Expenses		\$765,861	\$783,838	\$802,353	\$821,425	\$841,068	\$861,301
		422.504	40 750	440.550	440.544	450.040	405.000
Net Revenue		-\$23,504	-\$2,756	\$19,550	\$43,514	\$69,240	\$96,839
	Target	4000 -00	400	400= 000	40.00.000	4.00.040	4=04.000
Ending Fund Balance		\$308,502	\$305,746	\$325,296	\$368,809	\$438,049	\$534,888
Months O&M Funded	6 months O&M	6 months	6 months	6 months	7 months	8 months	9 months
Target Met?		yes	yes	yes	yes	yes	yes
Debt Service Coverage		1.56	1.79	2.03	2.29	2.57	2.88
Target Met?	1.25	yes	yes	yes	yes	yes	yes

Table 10 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Cost of Service Allocation Summary

	Basis		2019/20
Current Rate Revenue	Table 2		\$689,708
Add'l Revenue From Rate Increase	Table 9	6%	\$37,934
Total Rate Revenue Requirement			\$727,642
Revenue to be Recovered by Annual Membership Fee	Table 5	33%	\$238,796
Revenue to be Recovered by Fixed Charge	Table 5	32%	\$235,891
Revenue to be Recovered by Variable Charge		35%	\$257,960
Tier 1 - All Other Variable Costs	Table 5		\$204,246
Tier 2 - Water Purchase Cost FY 2020	Table 5		\$53,715

Table 11 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Fixed Charges

	Source	2019/20
Annual Service Charge Calculation		
Annual Service Charge	Table 10	\$238,796
Revenue Requirement	Table 10	3230,730
Number of Accounts	Table 2	822
(Service & Non-Service)	Table 2	822
Recommended Annual Service Charge		\$290.51
Bimonthly Meter Charge Calculation		
Bimonthly Meter Charge	Table 10	\$235,891
Revenue Requirement	Tubic 10	7233,031
Number of Meters	Table 2	748
(3/4" or 1")	Table 2	740
Recommended Bimonthly Meter Charge		\$52.56
Proposed Fixed Charges		
Annual Service Charge		\$290.51
Bimonthly Meter Charge		\$52.56

Table 12 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Variable Charges

	Source	2019/20
Variable Charge Calculation		
Variable Charge - Tier 1 Rev. Requirement	Table 10	\$204,246
Total Water Consumption (cf)	Table 2	2,511,754
Tier 1 Variable Rate		\$0.081
Variable Charge - Tier 2 Rev. Requirement	Table 10	\$52,150
Proposed Tier Breakpoint (cf)	Table 2	600
Water Consumption above Breakpoint 2018	Table 2	1,008,668
Tier 2 Variable Surcharge		\$0.052
Tier 2 Variable Rate	Tier 1 Rate + Surcharge	\$0.133
Recommended Variable Rates		
Tier 1 - usage up to 600 cf		\$0.081
Tier 2 - usage above 600 up to 1400 cf		\$0.133

Table 13 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Summary of Proposed Rates

		Current		Р	roposed		
<u> </u>		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue Increase		0.0%	5.5%	5.5%	5.5%	5.5%	5.5%
Service Accounts & Non-Service Membership Fee, all accounts	Accounts per account annually	\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Service Accounts Only Fixed Rate	per meter bimonthly	\$49.48	\$52.20	\$55.07	\$58.10	\$61.30	\$64.67
Volumetric Rates Tier 1 - usage up to 600 cf Tier 2 - usage above 600 cf Tier 3 - usage above 1400 cf	per cf bimonthly per cf bimonthly per cf bimonthly	\$0.087 \$0.103 \$0.129	\$0.092 \$0.133 N/A	\$0.097 \$0.140 N/A	\$0.102 \$0.148 N/A	\$0.108 \$0.156 N/A	\$0.114 \$0.165 N/A

Table 14 Cedarpines Park MWC Rate Study 2019 Appendix Tables 9/03/2019

Bill Projection

		Current			Proposed		
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Proposed Rate Revenue Increase			5.5%	5.5%	5.5%	5.5%	5.5%
User Type	cf usage	Estimated Bill					
Low User	200						
Bimonthly Bill		\$66.88	\$70.56	\$74.44	\$78.53	\$82.85	\$87.41
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$674.76	\$711.87	\$751.02	\$792.33	\$835.91	\$881.88
% annual increase			5%	5%	5%	5%	5%
Average User	560						
Bimonthly Bill		\$98.20	\$103.60	\$109.30	\$115.31	\$121.65	\$128.34
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$862.68	\$910.13	\$960.18	\$1,012.99	\$1,068.71	\$1,127.49
% annual increase			5%	6%	5%	6%	5%
High User	800						
Bimonthly Bill		\$122.28	\$133.88	\$141.24	\$149.01	\$157.20	\$165.85
Annual Account Fee		\$273.48	\$288.52	\$304.39	\$321.13	\$338.79	\$357.43
Total Annual Cost		\$1,007.16	\$1,091.78	\$1,151.82	\$1,215.18	\$1,282.01	\$1,352.52
% annual increase			8%	5%	5%	5%	6%