

Seville Water Company And Yettem Combined CSD Water Rate Analysis February, 2018

State of California State Water Resources Control Board

Proposition 1 Water Bond

Comprehensive Assistance to Tribal and Small Systems Project Agreement Number:
D1612801

TA Workplan Number: 5008-C Task #3

Presented by: Rural Community
Assistance Corporation (RCAC)

Funded by: State Water
Resources Control Board





April 1, 2018

Elvira Reyes

State Water Resources Control City Council - Division of Financial Assistance

1001 I St. 16th Floor

PO Box 944212

Sacramento, CA 95814

Subject: Seville Water Company and Yettem Combined CSD, Water Rate Analysis
Prop 1 Agreement No. D1612801 / TA Work Plan No. 5008-C Task #3

Dear Elvira:

Enclosed please find the printed final report of the Seville Water Company and Yettem Combined CSD Water Rate Analysis.

The Local Agency Formation Commission hearing for the formation of the Yettem-Seville CSD is scheduled for May 2, 2018.

The report has been provided to Tulare County. The date for the Proposition 218 hearing has not yet been set. If you have any additional questions, feel free to contact me at 916/447-9832, Ext 1032 or Mary Fleming at 916/549-6338.

Sincerely,

Ari Neumann

Ari Neumann

RCAC, Assistant Director

Community & Environmental Services

Enclosure: Seville Water Company and Yettem Combined CSD Water Rate Analysis

CC: Maria Herrera, Self Help Enterprises, P.O. Box 6520 • Visalia, CA 93290

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Purpose and Objective

Seville is a community and census-designated place (CDP) in Tulare County, California. The population was 568 at the 2016 census. According to the United States Census Bureau, the CDP has a total area of .6 square miles, all of it land.

The Seville Water Company (SWC) has been under the receivership of Tulare County since June 11, 2009. The county manages SWC, which provides water to the community of Seville's 74 residential connections and one elementary school.

Yettem is a community and census-designated place (CDP) in Tulare County, California, located on California State Route 201, 11 miles north of Visalia. The population was estimated to be 353 at the 2016 census. According to the United States Census Bureau, the CDP has a total area of .2 square miles, all of it land.

The Tulare County Service Area #1 (Yettem) is the zone of benefit for the CDP. The county owns and manages the Yettem water system, which provides water to the community's 63 residential connections, the Cutler-Orosi Unified School District and the Yettem Learning Center.

In an effort to improve water quality and provide safe and reliable drinking water to the communities of Seville and Yettem, the SWC water system is under construction to replace its current infrastructure, drill a new well in the Yettem area to replace the existing Seville community well and connect the Yettem and Seville systems with an interconnection pipeline.

SWC and Yettem water system are also researching options for uniting Yettem and SWC to form a Community Services District (CSD) to treat and deliver water to the combined communities. The governance and construction of the CSD is yet to be determined. To have a reliable estimate of what the costs to the community (rates) would be for the proposed CSD, it was requested that Rural Community Assistance Corporation (RCAC) complete an evaluation of projected water user rates for the communities under the CSD, including Capital Improvement Planning (CIP) recommendations. The financial analysis was developed using projections from many sources, including historic information, engineers, and costs associated with nearby water systems of comparable size.

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 has the ability to 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.

DISCLAIMER

The recommendations contained in this financial analysis are based on historical financial information provided to RCAC by Tulare County and engineer projections. Although every effort was made to assure the reliability of this information, no warranty is expressed or implied as to the correctness, accuracy or completeness of the information contained herein.

Financial Planning

The objective of developing a financial plan for a water system is to determine cash needs, revenue requirements and anticipated timing of utility costs to ensure that adequate funds are available to meet operational and maintenance needs as they occur. Financial planning for a small water system normally includes an examination of:

- Operating revenues
- Operation and maintenance (O&M) expenses
- Debt service (principal and interest payments) on borrowed funds
- Reserve requirements

The financial plan calculates the minimum revenues necessary to maintain viable and self-sustaining enterprises.

Operating Revenues

Revenues are the main sources of income to a utility and are typically thought of as operating and non-operating. Operating revenue is the stable and reliable income that comes from customer rates or user charges. Non-operating revenue, such as interest on checking and reserve accounts, meter deposits, connection fees, late payments, penalties and reconnection fees, may also be considered operating revenue if they are stable and dependable revenue sources. For example, a water system with consistent growth that is expected to continue may consider connection fees as an operating revenue source.

Operating Expenses

This is the first cost category that is considered when developing a financial plan. Operating and maintenance (O&M) costs include the day-to-day expenses of providing drinking water to customers. Operating expenses include labor, insurance, materials, electricity and chemicals.

Water System Reserves

Reserves are an accepted way to stabilize and support a utility's financial management. Small systems usually fund the operating expenses but don't often 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. Secondly, 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 improvement, emergency and debt service reserve**. These balances are maintained in order 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 ten years. SWC and Yettem did not have debt requiring the establishment of reserves at the time of this analysis. If debt is incurred for future replacements or upgrades of the water system, a debt reserve should be established and the cost of the reserve funding should be passed along to the rate payers through a rate adjustment.

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. A 45-day operating reserve is a frequently used industry norm. Because of potential delays in collecting payment, many utilities attempt to keep an amount of cash equal to at least 45 days or one-eighth (1/8) of their annual cash O&M expenses in an operating reserve to mitigate potential cash flow problems. A five-year budget projection was completed assuming a three (3) percent annual inflation rate.

Emergency Reserve

In addition to operating reserves, emergency reserves are an important 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 greatly with the size of the utility, 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. This analysis was completed on the assumption that emergency reserves in the amount of \$25,000 will be funded over a ten year period at \$2,500 annually.

Capital Improvement Reserve

A capital improvement reserve (also called a repair and replacement reserve) is intended to be used for replacing system assets that have become worn out or obsolete. Annual depreciation is frequently used to estimate the minimum level of funding for capital reserves. 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 replacement cost of that asset. As an example, a brand new system with a construction cost of \$1 million and a service

life of 100 years should, in theory, be setting aside \$10,000 per year to fully capitalize the replacement cost of the infrastructure as it wears out. Many smaller systems find this to be impossible because of the effect on rates, which explains the large number of small systems that are falling into disrepair.

To initiate a capital improvement plan (CIP), 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 who are struggling to keep rates reasonable.

One alternative method is to set-aside an annual amount equal to one-to-two percent of the total original cost asset value of the utility's property. Larger systems often have sufficient non-operating revenue to fund these reserve levels without affecting rates, but smaller systems often do not, leaving them to fund their CIP reserves from rates alone. An alternative method is to set-aside sufficient reserve funds to cover 100 percent of the cost for replacing short-lived assets, such as well pumps, electronic controls, vehicles, etc.

The engineering firm, Provost & Pritchard, provided equipment lists for both the initial replacement of SWC equipment (Phase I) and the construction of the new well and connection for YetteM. (Phase II). See Attachments # 1 and #2.

TABLE 1: RECOMMENDED ANNUAL RESERVES

Water System Reserve Funding Recommendations			
Reserve Classification	Annual Amount	Annual Cost Per Connection 156 Connections	Monthly Cost Per Connection
Operating Reserves	\$ 2,637.35	\$ 16.91	\$ 1.41
Annual Emergency Reserve	\$ 2,500.00	\$ 16.03	\$ 1.34
Annual Replacement Reserve (20% of Phase 1 & Phase 2)	\$ 72,117.01	\$ 462.29	\$ 38.52
Total Annual Reserves	\$ 77,254.36	\$ 495.22	\$ 41.27

Affordability Index

The *affordability index* measures the burden of costs passed from the water utility to the users against the median household income (MHI) for the area, and is used by funding agencies to determine grant and low interest loan eligibility. Many funding organizations look for an affordability ratio of 1.5 percent before approving grant money to low-income communities. Rates approaching 2.5% of

MHI can be unaffordable. The 2016 American Community Survey (ACS) estimated Seville had an MHI of \$23,000. No MHI information was available for Yetteem. Assuming Yetteem’s MHI is comparable to Seville, the current rates of \$56 and \$60 are at 2.92% and 3.13% respectively.

Affordability Index = average annual residential bill for water / annual MHI.

In an effort to keep rates below 3% of MHI, the table below illustrates adjustments made to the ideal reserve fund contributions.

TABLE 2: REDUCED ANNUAL RESERVES

Reduced Water System Reserve Funding Recommendations			
Reserve Classification	156 Connections	Annual Cost Per Connection	Monthly Cost Per Connection
Operating Reserves	\$ 2,637	\$ 16.90	\$ 1.41
Annual Replacement Reserve	\$ 20,000	\$ 128.21	\$ 10.68
Annual Emergency Reserve	\$ 2,500	\$ 16.03	\$ 1.34
Total Reserves	\$ 25,137	\$ 144	\$ 12.02

Rate Basics

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. This is the current rate structure for SWC and Yetteem because individual connection meters have not yet been put into use. However, part of the new construction will include meters for each connection. The rate calculations in this document assume a base rate plus a usage rate.
- **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 for having service available. This rate tends to be more equitable to customers as the cost to customer is in direct proportion to the usage amount. Because the individual usage by connection is not yet known, this is the structure assumed in the rate calculations for this analysis.
- **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.
- **Decreasing Block Rate:** This rate is designed to encourage business development as the price of water decreases as the amount used increases.

TABLE 3: SEVILLE AND YETTEM CURRENT CONNECTIONS AND FEES:

Current Connections and Fees		
Type of Connection	No. Connections	Rate
<i>Seville:</i>		
Single Family Dwellings	86	\$ 60.00
Stone Corral Elementary School	1	\$ -
<i>Yettem:</i>		
Single Family Residence	63	\$ 56.00
Cutler-Orosi Unified School District	1	\$ 63.50
Yettem Learning Center	1	\$ 63.50
Vacancy	1	\$ 8.50
Standby	3	\$ 8.50
Total	156	

**Customer
Water
Demands**

When analyzing water rates, it is important to understand existing patterns of consumption among the system’s customers. A large portion of customers may use a small percentage of water, and a small portion of customers may use a large percentage. Because the connections were not yet metered at the time of this report, individual usage patterns were not available for analysis.

Understanding how customers use water is important when you are considering seasonal operational needs, infrastructure replacement and water use efficiency to name a few.

Yettem currently serves 69 connections and SWC serves 87 for a combined 156 connections. The monthly water use for July 1, 2015 through June 30, 2016 is shown in Table 4.

TABLE 4: SEVILLE AND YETTEM USAGE

Combined Usage July 1, 2015 - June 30, 2016 (Gallons)			
Month	Seville	Yettem	Total
July, 2015	4,248,700	1,669,800	5,918,500
August, 2015	1,339,000	1,569,700	2,908,700
September, 2015	2,295,000	1,608,900	3,903,900
October, 2015	1,856,800	1,297,800	3,154,600
November, 2015	1,163,300	935,800	2,099,100
December, 2015	1,264,300	916,200	2,180,500
January, 2016	930,600	892,500	1,823,100
February, 2016	1,084,300	956,000	2,040,300
March, 2016	1,192,730	1,049,500	2,242,230
April, 2016	1,447,950	1,190,000	2,637,950
May, 2016	2,152,450	1,866,900	4,019,350
June, 2016	2,600,500	2,131,100	4,731,600
Total	21,575,630	16,084,200	37,659,830

Budget Assumptions

Because both water systems have previously been managed under Tulare County, a number of assumptions have been made in regards to costs of operating as a CSD.

1. Contracted Work - \$36,480
It is assumed a contract operator will provide the services to operate and maintain the water systems at a rate of \$2,000 per month for a total of \$24,000 annually. It is further assumed a bookkeeper will be contracted to provide billing and bookkeeping services at a rate of \$15 per hour for an average of 16 hours per week for a total of \$12,480 annually.
2. It is assumed the CSD will have an annual audit conducted at \$3,000.
3. It is assumed the CSD will have an attorney to provide legal advice at an annual fee of \$2,000.
4. It is assumed there will be 5 board members who will receive a stipend of \$50 each per month for a total of \$3,000 annually.
5. Because the equipment is new it is assumed repairs and maintenance will be at a minimum. The labor costs are assumed to be covered under the operator contract. An allowance of \$5,000 is assumed for costs of parts and supplies.
6. Utility costs have been estimated by the engineers at \$41,337 annually for both systems.
7. Printing and copying is expected to be nominal and has been estimated at \$200 annually.
8. Postage has been estimated for 144 customer bills monthly @ \$0.49 per bill for a total of \$847 annually, plus an allowance of \$15 per month for miscellaneous mailings has been assumed.
9. Office supplies have been estimated at \$50 per month for paper, checks and printer cartridges. The first year may have some additional set up cost.
10. Telephone and internet costs have been estimated at \$1,250 annually.
11. Liability Insurance has been estimated at \$3,500 annually.
12. Public/Legal Notifications have been estimated at \$1,600 annually based on historic Tulare County records.
13. Mileage is estimated at \$500 annually, assuming contract bookkeeper receives reimbursement.
14. Permits and Licenses are estimated at \$1,500 annually.
15. Chemicals are estimated at \$2,000 annually by engineers.
16. Lab Testing is estimated at \$2,500 annually for lab fees.
17. Debt service in the amount of \$2,463 for 2018 has been assumed for Yettem for payment of a Certificate of Participation.
18. Emergency reserve funding has been assumed at \$2,500 annually for ten years to accumulate \$25,000 in emergency reserves.
19. Debt Service Reserves have been assumed not applicable.
20. Operating reserve funding has been assumed at \$2,637 annually to accumulate 12.5% of operating budget over 5 years.
21. Annual equipment replacement reserves have been assumed at \$20,000 annually. If operating costs run lower than budgeted, excess revenue over costs should be added to the equipment replacement reserves.

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 meter, regardless of whether any water is used. Fixed costs are those that must be recovered by the utility 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 (a minimum monthly bill). Fixed costs may cover 100 percent 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 wages and fringe benefits for time spent in reading each meter and preparing each customer's bill.

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 classification (residential, multi-residential, commercial, etc.) or by meter size (3/4-inch, 1-inch, etc.). For small systems with fewer customers, spreading these costs among its customers, the proportion of fixed costs will be higher than larger systems. Many small systems find it impossible to recover all fixed costs in a monthly minimum, so they tend to shift a certain percentage to the variable side. Fixed costs for small systems are usually in the range of one-third to two-thirds of the system's total operating costs and may run even higher for very small systems.

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.

TABLE 5: BUDGET - FIXED/VARIABLE COSTS

Seville & YetteM CSD	Budget FYE 6/30/2018	Estimated % Fixed Costs	Fixed costs	Variable costs
Cost of goods sold:				
Contracted Work	\$36,480.00	100%	\$36,480	\$0
Audit	\$3,000.00	100%	\$3,000	\$0
Legal	\$2,000.00	100%	\$2,000	\$0
Board Expenses	\$3,000.00	100%	\$3,000	\$0
Maint - Equip	\$5,000.00	65%	\$3,250	\$1,750
Utilities	\$41,337.00	5%	\$2,067	\$39,270
Expense - Printing	\$200.00	100%	\$200	\$0
Postage	\$1,027.00	100%	\$1,027	\$0
Office Supplies	\$600.00	100%	\$600	\$0
Telephone	\$1,250.00	100%	\$1,250	\$0
Liability Insurance	\$3,500.00	100%	\$3,500	\$0
Public/Legal No	\$1,600.00	100%	\$1,600	\$0
Mileage	\$500.00	100%	\$500	\$0
Permits/Licenses	\$1,500.00	100%	\$1,500	\$0
Chemicals	\$2,000.00	80%	\$1,600	\$400
Lab Testing	\$2,500.00	100%	\$2,500	\$0
Total Operating Costs	\$ 105,494		\$ 64,074	\$ 41,420
Total Debt Service YetteM	\$ 2,463			
Total Operating Costs and Debt Service	\$ 107,957			
Annual Emergency Reserve	\$ 2,500		(Assumes Reserves in the Amount of \$25k funded over 10 years)	
Debt Reserves				
Annual Operating Reserve	\$ 2,637		(\$13,187 Funded over 5 years)	
Annual Replacement CIP reserve	\$ 20,000		costs funded over life of equipment)	
Total Annual Reserves	\$ 25,137			
Total Annual Budget	\$ 130,631			
TOTAL ANNUAL OPERATING BUDGET	\$105,494			
TOTAL FIXED COST OF ANNUAL BUDGET	\$64,074			
% OF ANNUAL BUDGET THAT IS FIXED	61%			
TOTAL VARIABLE COST OF ANNUAL BUDGET	\$41,420			
% OF ANNUAL BUDGET THAT IS VARIABLE	39%			

Water Rate Analysis

Understanding how customers use water is important when considering seasonal operational needs, infrastructure replacement and water use efficiency, and other volume related costs. When developing a rate based on usage, it is important to consider the impact on the highest water users as those will incur larger monthly bills. Those customers may begin to use water more efficiently after a rate adjustment; and if not, the CSD may target the highest water users for water efficiency education. The impact the reduction of usage would have on the CSD's revenue should be carefully considered. The utility must continue to collect enough operating revenues to cover its operating expenses and put money aside in its required reserve accounts. Revenues were evaluated with the assumption that the CSD will not be gaining or losing customers over the next five years. For purposes of this analysis, a 15% overall water use reduction has been assumed.

Rate Adjustment Option #1

In the rate adjustment Option #1, it is assumed the meters will not all be operational at the time the two water systems combine. A flat rate with an increase of 22% for Seville and 31% for Yettem will bring the rates to an amount that will cover operating costs and the reduced reserve accounts. To maintain the coverage, an annual increase of 2.5% is assumed.

TABLE 6: RATE ADJUSTMENT OPTION #1 FLAT RATE

Seville/Yettem CSD Budget #2 Option #1 Flat Rate; Annual Increases of 2.5%	# of active accounts/units	Current Water Fees	Adjustment	Adjusted Rate	Average Monthly Revenue - Water	Average Annual Revenue - Water
Residential			22%			
Single Family Dwelling (Seville)	86	\$ 60.00	\$ 13.20	\$ 73.20	\$ 6,295.20	\$ 75,542.40
Single Family Dwelling (Yettem)	63	\$ 56.00	\$ 17.20	\$ 73.20	\$ 4,611.60	\$ 55,339.20
Stone Corral School	1	\$ -	\$ 77.47	\$ 77.47	\$ 77.47	\$ 929.64
Cutler-Orosi Unified School District	1	\$ 63.50	\$ 13.97	\$ 77.47	\$ 77.47	\$ 929.64
Yettem Learning Center	1	\$ 63.50	\$ 13.97	\$ 77.47	\$ 77.47	\$ 929.64
Vacancy	1	\$ 8.50	\$ 1.87	\$ 10.37	\$ 10.37	\$ 124.44
Standby	3	\$ 8.50	\$ 1.87	\$ 10.37	\$ 31.11	\$ 373.32
Total Base Fee Revenue	156				\$ 11,180.69	\$ 134,168.28
Budget Assuming 3% Inflation per year		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Total Monthly Required Reserves Fund		\$ 2,095	\$ 2,095	\$ 2,095	\$ 2,095	\$ 2,095
Total yearly required reserve fund		\$ 25,137	\$ 25,216	\$ 25,298	\$ 25,382	\$ 25,468
Debt Service		\$ 2,463	\$ 2,418	\$ 2,373	\$ 2,328	\$ 2,283
Total Fixed Budget		\$ 64,074	\$ 65,996	\$ 67,976	\$ 70,015	\$ 72,116
Total Variable Budget		\$ 41,420	\$ 42,663	\$ 43,943	\$ 45,261	\$ 46,619
Total Budget(Excluding Reserve and Debt Funding)		\$ 105,494	\$ 108,659	\$ 111,919	\$ 115,276	\$ 118,734
Total Budget (Including Reserve Funding and Debt Service)		\$ 133,094	\$ 136,293	\$ 139,589	\$ 142,986	\$ 146,485
		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Estimated Annual Revenue From Base Fee		\$ 134,168	\$ 137,522	\$ 140,961	\$ 144,485	\$ 148,097
Total Target Revenue		\$ 133,094	\$ 136,293	\$ 139,589	\$ 142,986	\$ 146,485
Net Revenue Over/(Under) Budgeted Costs		\$ 1,074	\$ 1,230	\$ 1,371	\$ 1,499	\$ 1,611

TABLE 7: RATE ADJUSTMENT OPTION #1 BASE RATES FOR FIVE YEARS

Initial Base Rate Increase and Annual 2.5% Increases in Future Years					
	FY 2018	FY 2019 2% Increase	FY 2020 2% Increase	FY 2021 2.5% Increase	FY 2022 2.5% Increase
Single Family Dwelling (Seville)	\$ 78.00	\$ 79.55	\$ 81.15	\$ 83.20	\$ 85.30
Single Family Dwelling (Yettem)	\$ 78.00	\$ 79.55	\$ 81.15	\$ 83.20	\$ 85.30
Stone Corral School	\$ 82.55	\$ 84.20	\$ 85.90	\$ 88.05	\$ 90.25
Cutler-Orosi Unified School District	\$ 82.55	\$ 84.20	\$ 85.90	\$ 88.05	\$ 90.25
Yettem Learning Center	\$ 82.55	\$ 84.20	\$ 85.90	\$ 88.05	\$ 90.25
Vacancy	\$ 11.05	\$ 11.30	\$ 11.55	\$ 11.85	\$ 12.15
Standby	\$ 11.05	\$ 11.30	\$ 11.55	\$ 11.85	\$ 12.15

TABLE 8: RATE ADJUSTMENT OPTION #1 AFFORDABILITY INDEX

Total Monthly Fees and Affordability Index Under Rate Adjustment Option #1			
FYE	Base Fee	MHI	Affordability Index
6/30/2018	\$ 78.00	\$23,000.00	4.07%
6/30/2019	\$ 79.55	\$23,000.00	4.15%
6/30/2020	\$ 81.15	\$23,000.00	4.23%
6/30/2021	\$ 83.20	\$23,000.00	4.34%
6/30/2022	\$ 85.30	\$23,000.00	4.45%

Rate Adjustment Option #2

In the rate adjustment Option #2, it is assumed the meters be operational and usage fees can be charged. A 15% water use decrease is assumed. The base rate will be lowered for all connections. If Option #1 has been implemented, the decrease in the base rate will be 36%. The Stone Corral School from Seville will be charged a fee equal to the fees being charged to the two schools in Yettem. It should be noted that Stone Corral School is larger than the other two and as usage and meter size have been determined, a larger base fee may be appropriate. A usage charge of \$1.50 per 1,000 gallons (\$0.0015 per gallon) will be charged for all usage. Because the connections have not been previously metered, it is not possible to know what the average residential usage is. For purposes of this analysis an average household usage of 362 gallons per day or 10,860 gallons per month has been assumed.

**TABLE 9: RATE ADJUSTMENT OPTION #2 – COMBINED
BASE RATE & USAGE FEES**

Seville/Yettem CSD Budget #2, Option #2 Base Plus Usage; Assumes funding CIP reserves \$20k annually; Subsequent Annually Increases of 3.5%	# of active accounts/units	Current Water Fees	Adjustment	Adjusted Rate	Average Monthly Revenue - Water	Average Annual Revenue - Water
Residential			-36%			
Single Family Dwelling (Seville)	86	\$ 73.20	\$ (26.35)	\$ 46.85	\$ 4,028.93	\$ 48,347.14
Single Family Dwelling (Yettem)	63	\$ 73.20	\$ (26.35)	\$ 46.85	\$ 2,951.42	\$ 35,417.09
Stone Corral School	1	\$ 77.47	\$ (27.89)	\$ 49.58	\$ 49.58	\$ 594.97
Cutler-Orosi Unified School District	1	\$ 77.47	\$ (27.89)	\$ 49.58	\$ 49.58	\$ 594.97
Yettem Learning Center	1	\$ 77.47	\$ (27.89)	\$ 49.58	\$ 49.58	\$ 594.97
Vacancy	1	\$ 10.37	\$ (3.73)	\$ 6.64	\$ 6.64	\$ 79.64
Standby	3	\$ 10.37	\$ (3.73)	\$ 6.64	\$ 19.91	\$ 238.92
Total Base Fee Revenue	156				\$ 7,155.64	\$ 85,867.70
Usage Fees	Per 1,000 Gallons	Gallons Used	Less 15%	Adjusted Usage	Billable Gallons	Usage Revenue
Usage Charges (\$0.0015 per gallon)	\$ 1.50	37,659,830	(5,648,975)	32,010,856	32,011	\$ 48,016.28
Total Revenue						\$ 133,883.98
Budget Assuming 3% Inflation per year		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Total Monthly Required Reserves Fund		\$ 2,095	\$ 2,095	\$ 2,095	\$ 2,095	\$ 2,095
Total yearly required reserve fund		\$ 25,137	\$ 25,216	\$ 25,298	\$ 25,382	\$ 25,468
Debt Service		\$ 2,463	\$ 2,418	\$ 2,373	\$ 2,328	\$ 2,283
Total Fixed Budget		\$ 64,074	\$ 65,996	\$ 67,976	\$ 70,015	\$ 72,116
Total Variable Budget		\$ 41,420	\$ 42,663	\$ 43,943	\$ 45,261	\$ 46,619
Total Budget(Excluding Reserve and Debt Funding)		\$ 105,494	\$ 108,659	\$ 111,919	\$ 115,276	\$ 118,734
Total Budget (Including Reserve Funding and Debt Service))		\$ 133,094	\$ 136,293	\$ 139,589	\$ 142,986	\$ 146,485
		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Estimated Annual Revenue From Base Fee		\$ 85,868	\$ 88,873	\$ 91,984	\$ 95,203	\$ 98,535
Estimated Revenue From Usage Charges		\$ 48,016	\$ 48,016	\$ 48,016	\$ 48,016	\$ 48,016
Total Revenue		\$ 133,884	\$ 136,889	\$ 140,000	\$ 143,219	\$ 146,551
Total Target Revenue		\$ 133,094	\$ 136,293	\$ 139,589	\$ 142,986	\$ 146,485
Net Revenue Over/(Under) Budgeted Costs		\$ 790	\$ 597	\$ 411	\$ 234	\$ 66

Assuming a 3% annual inflation rate, the above customer rates will not cover all costs in future years. To avoid revenues becoming less than expenses, incremental base rate adjustments are recommended in the table below.

TABLE 10: RATE ADJUSTMENT OPTION #2 BASE RATES FOR FIVE YEARS

First Year Base Rate and Incremental Base Fee Increase in Future Years					
	FY 2018	FY 2019 3.5% Increase	FY 2020 3.5% Increase	FY 2021 3.5% Increase	FY 2022 3.5% Increase
Single Family Dwelling (Seville)	\$ 46.85	\$ 48.50	\$ 50.20	\$ 51.95	\$ 53.80
Single Family Dwelling (Yettem)	\$ 46.85	\$ 48.50	\$ 50.20	\$ 51.95	\$ 53.80
Stone Corral School	\$ 49.60	\$ 51.35	\$ 53.15	\$ 55.00	\$ 56.95
Cutler-Orosi Unified School District	\$ 49.60	\$ 51.35	\$ 53.15	\$ 55.00	\$ 56.95
Yettem Learning Center	\$ 49.60	\$ 51.35	\$ 53.15	\$ 55.00	\$ 56.95
Vacancy	\$ 6.65	\$ 6.90	\$ 7.15	\$ 7.40	\$ 7.65
Standby	\$ 6.65	\$ 6.90	\$ 7.15	\$ 7.40	\$ 7.65

TABLE 11: RATE ADJUSTMENT OPTION #2 AFFORDABILITY INDEX

Total Monthly Fees and Affordability Index Under Rate Adjustment Option #2					
FYE	Base Fee	Assuming 10,860 Usage Fee	Total Bill	MHI	Affordability Index
6/30/2018	\$ 46.85	\$ 16.20	\$ 63.05	\$23,000.00	3.29%
6/30/2019	\$ 48.50	\$ 16.20	\$ 64.70	\$23,000.00	3.38%
6/30/2020	\$ 50.20	\$ 16.20	\$ 66.40	\$23,000.00	3.46%
6/30/2021	\$ 51.95	\$ 16.20	\$ 68.15	\$23,000.00	3.56%
6/30/2022	\$ 53.80	\$ 16.20	\$ 70.00	\$23,000.00	3.65%

**Rate
Adjustment
Option #3**

In the rate adjustment Option #3, the assumptions in Option #2 are carried forward with the exception that the CIP reserve funding has been reduced to \$10,000 annually. To promote equitability, the base rate is lowered more and the consumption fees per gallon are increased. If Option #1 has been implemented, the decrease in the base rate will be 60%. A usage charge of \$2.25 per 1,000 gallons (\$0.00225 per gallon) will be charged for all usage. Subsequent years will require additional base rate increases as outlined in Table 12. It should also be noted that twelve connections have been added since the water usage was measured. Because individual usage has not been previously measured, it is impossible to know what the impact of the additional connections will have on usage. It is assumed usage will increase, resulting in increased revenue. As a precautionary, conservative approach, and to avoid over estimating usage and revenue, the measured usage for the original 74 connections is used in these calculations.

**TABLE 12: RATE ADJUSTMENT OPTION #3 DECREASED
BASE RATE & INCREASED USAGE FEES**

Seville/Yettem CSD Budget #3, CIP Reserve funding is reduced to \$10k annually. Base rates are decreased by 60% and usage charges are increased to \$2.25 per 1,000 gallons.						
	# of active accounts/units	Current Water Fees	Adjustment	Adjusted Rate	Average Monthly Revenue - Water	Average Annual Revenue - Water
Residential			-60%			
Single Family Dwelling (Seville)	86	\$ 73.20	\$ (43.92)	\$ 29.28	\$ 2,518.08	\$ 30,216.96
Single Family Dwelling (Yettem)	63	\$ 73.20	\$ (43.92)	\$ 29.28	\$ 1,844.64	\$ 22,135.68
Stone Corral School	1	\$ 77.47	\$ (46.48)	\$ 30.99	\$ 30.99	\$ 371.86
Cutler-Orosi Unified School District	1	\$ 77.47	\$ (46.48)	\$ 30.99	\$ 30.99	\$ 371.86
Yettem Learning Center	1	\$ 77.47	\$ (46.48)	\$ 30.99	\$ 30.99	\$ 371.86
Vacancy	1	\$ 10.37	\$ (6.22)	\$ 4.15	\$ 4.15	\$ 49.78
Standby	3	\$ 10.37	\$ (6.22)	\$ 4.15	\$ 12.44	\$ 149.33
Total Base Fee Revenue	156				\$ 4,472.28	\$ 53,667.31
Usage Fees	Per 1,000 Gallons	Gallons Used	Less 15%	Adjusted Usage	Billable Gallons	Usage Revenue
Usage Charges (\$0.00225 per gallon)	\$ 2.25	37,659,830	(5,648,975)	32,010,856	32,011	\$ 72,024.42
Total Revenue						\$ 125,691.74
Budget Assuming 3% Inflation per year		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Total Monthly Required Reserves Fund		\$ 1,261	\$ 1,261	\$ 1,261	\$ 1,261	\$ 1,261
Total yearly required reserve fund		\$ 15,137	\$ 15,216	\$ 15,298	\$ 15,382	\$ 15,468
Debt Service		\$ 2,463	\$ 2,418	\$ 2,373	\$ 2,328	\$ 2,283
Total Fixed Budget		\$ 64,074	\$ 65,996	\$ 67,976	\$ 70,015	\$ 72,116
Total Variable Budget		\$ 41,420	\$ 42,663	\$ 43,943	\$ 45,261	\$ 46,619
Total Budget(Excluding Reserve and Debt Funding)		\$ 105,494	\$ 108,659	\$ 111,919	\$ 115,276	\$ 118,734
Total Budget (Including Reserve Funding and Debt Service))		\$ 123,094	\$ 126,293	\$ 129,590	\$ 132,986	\$ 136,486
		6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Estimated Annual Revenue From Base Fee		\$ 53,667	\$ 55,814	\$ 58,047	\$ 61,239	\$ 64,607
Estimated Revenue From Usage Charges		\$ 72,024	\$ 72,024	\$ 72,024	\$ 72,024	\$ 72,024
Total Revenue		\$ 125,692	\$ 127,838	\$ 130,071	\$ 133,264	\$ 136,632
Total Target Revenue		\$ 123,094	\$ 126,293	\$ 129,590	\$ 132,986	\$ 136,486
Net Revenue Over/(Under) Budgeted Costs		\$ 2,598	\$ 1,545	\$ 481	\$ 278	\$ 146

TABLE 13: OPTION #3 BASE RATE FOR FIVE YEARS

Option #3 First Year Base Rate and Subsequent Base Fee Increase in Future Years					
	FY 2018	FY 2019 4% Increase	FY 2020 4% Increase	FY 2021 5.5% Increase	FY 2022 5.5% Increase
Single Family Dwelling (Seville)	\$ 29.28	\$ 30.45	\$ 31.67	\$ 33.41	\$ 35.25
Single Family Dwelling (Yettem)	\$ 29.28	\$ 30.45	\$ 31.67	\$ 33.41	\$ 35.25
Stone Corral School	\$ 30.99	\$ 32.23	\$ 33.52	\$ 35.36	\$ 37.30
Cutler-Orosi Unified School District	\$ 30.99	\$ 32.23	\$ 33.52	\$ 35.36	\$ 37.30
Yettem Learning Center	\$ 30.99	\$ 32.23	\$ 33.52	\$ 35.36	\$ 37.30
Vacancy	\$ 4.15	\$ 4.31	\$ 4.49	\$ 4.73	\$ 4.99
Standby	\$ 4.15	\$ 4.31	\$ 4.49	\$ 4.73	\$ 4.99

TABLE 13: OPTION #3 AFFORDABILITY INDEX

Total Monthly Fees and Affordability Index Under Rate Adjustment Option #3					
FYE	Base Fee	Assuming 10,860 Gallons Per Month	Total Bill	MHI	Affordability Index
6/30/2018	\$ 29.28	\$ 24.30	\$ 53.58	\$ 23,000.00	2.80%
6/30/2019	\$ 30.45	\$ 24.30	\$ 54.75	\$ 23,000.00	2.86%
6/30/2020	\$ 31.67	\$ 24.30	\$ 55.97	\$ 23,000.00	2.92%
6/30/2021	\$ 33.41	\$ 24.30	\$ 57.71	\$ 23,000.00	3.01%
6/30/2022	\$ 35.25	\$ 24.30	\$ 59.55	\$ 23,000.00	3.11%

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 substantially 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.

California's Proposition 218 provides that a customer of the CSD or owner of record of a parcel or parcels subject to the proposed rate increases, may submit a protest against any or all of the proposed rate increases by filing a written protest with the CSD 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.

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, the CSD 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 current rate structure 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, a water system 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 operation's needs, budget forecasts and rate adjustments.
- When meters have been installed and individual connection usage has been documented for twelve to eighteen months, the CSD should consider implementing a rate structure with tiered usage charges to encourage conservation

- The CSD should designate reserve funding in its accounting records according to what purposes the board designates.