Stallion Springs Community Services District

Water Rate Study

April 2017

Prepared for: Stallion Springs Community Services District Tehachapi, California

Prepared by:

Provost & Pritchard Consulting Group Bakersfield, California



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ABBREVIATIONS

A CW/ A	
AWWA	
AF	acre-feet
AFY	acre-feet/year
BWRA	Banked Water Reserve Account
ccf	100 cubic feet
CF or cf	cubic foot
CIP	
DDW	State Water Resources Control Board - Division of Drinking Water
gpd	gallons per day
EMU	Equivalent meter unit
FY	Fiscal Year
HCF	
M&I	
MG	million gallons
O&M	Operations and Maintenance
SSCSD	Stallion Springs Community Services District
SWP	State Water Project
TCCWD	Tehachapi-Cummings County Water District
UWMP	
WCP	

1

1 Introduction

Stallion Springs Community Services District (SSCSD or District) authorized Provost & Pritchard Consulting Group (P&P) to conduct a review of water rates and make recommendations for rate adjustments to meet the current cost of service. The District supplies potable water to approximately 1,300 accounts consisting of residential and commercial customers. This rate study is intended to serve as the Engineer's Report in support of Proposition 218 majority protest proceedings for water rate adjustments.

This rate study has been prepared in accordance with guidance provided under AWWA Manual M54, Developing Rates for Small Systems, 2nd Edition, 2016. The rate study considers the sufficiency of the current rates to meet the financial requirements of operating a water utility with the need for renewal and replacement of existing depreciated assets and with sufficient revenues and reserves to make emergency repairs and provide stable revenue. The rate study has been prepared using guidance documents published by ACWA and from League of California Cities for compliance with Proposition 218.

1.1 Methodology

The methods used to establish utility rates are based on principles that are commonly used in the water utility industry. These principles are designed to produce rates that equitably recover costs from each class of customer by setting the appropriate level of revenue to be collected. The primary tasks of this rate study are as follows:

- Revenue Requirements Analysis This analysis identifies the total revenue requirement to be recovered from utility rates, taking into account: operating and maintenance expenses, a capital improvement program, satisfying bond covenants, and meeting the Board of Director's policy objectives.
- Cost of Service Analysis and Rate Design The purpose of this task is to develop an allocation of the revenue requirements and distribute those costs to customers based on their proportionate demand and use of the system.
- Rate Design This task involves the development of a rate structure that produces the revenue for sound District fiscal operations, while achieving rate equity.

1.2 Legislative Setting

In the State of California, utility rates charged by municipal agencies and public districts are governed by rules and procedures adopted and made part of the California State Constitution by the passage of Proposition 218, the "Right to Vote on Taxes Act" in November 1996. Proposition 218 is codified as Articles XIIIC and XIIID of the California Constitution. After over 20 years of practical experience and judicial decisions clarifying the meaning of its words, the steps that each agency must follow have become legally clear. In 2007, the California Supreme Court clarified that Proposition 218 applies to all revenue-producing utilities, including water and sewer utilities. This report has been prepared in accordance with the rules and principles set forth in Proposition 218.

1.3 Procedural Requirements of Proposition 218

The Stallion Springs CSD (SSCSD or the District) has authority to establish water rates sufficient to recover the costs of operating the utility enterprises, subject to a majority protest from the rate-payers. The procedure to set new or adjusted rates is as follows:

- Adoption of this Engineer's Report, which sets forth the reasons for proposed rate increases, anticipated costs, expected revenues and a schedule of proposed rates.
- Mailed Notices must be sent out to the recorded owner(s) of each parcel upon which the rates will be imposed and shall be determined from the last equalization property tax roll. There are particular requirements for the notices, which must include the reasons for the proposed increased rates, and the expected rates for the subject property. The notice must also state the date of the public hearing at which time the proposed rates will be considered and potentially adopted.
- The **Public Hearing** will include a public presentation of the material in the Engineer's Report and will again cover the reasons rate adjustments are needed. The public hearing must be at least 45 calendar days after the mailing of the public notices; in practice this usually means two months after the Board meeting when mailing of the notices is approved.
- Consideration of Protest. Protest of the new rates by a majority of the property owners, in any combination of written responses and verbal protest at the public hearing, is sufficient to stop the proposed rate increases. A "majority" means 50% plus one of the affected property owners. So long as there is not a majority protest, the Board has legal authority to proceed with the proposed rate increases at its discretion. The District staff will compile the written and verbal protest and present a percentage of protesting owners to the Board at the conclusion of the Public Hearing.
- Approval of the Proposed Rates is by simple majority vote of the District Board, following the close of the public hearing. The vote may be at the same meeting as the hearing.
- Election Requirements Do Not Apply. Proposition 218 requires an actual vote of the property owners to approve certain rates and assessments. However, the courts have clarified that ratesetting for water, sewer and refuse collection is exempt from the election requirements so long as the rate-setting principles described in Section 1.4 are followed.

1.4 Principles for Establishing Rates Under Proposition 218

In addition to governing the procedures to actually adopt rates, Proposition 218 includes a number of well-defined principles that constrain what can and cannot be included in the rates. These rules are intended to assure that "utility revenue" is actually needed and used for provision of utility services. Proposition 218 made it clear that utility revenues from user rates are strictly limited to paying the costs of providing utility services, and that those rates must be charged in a way that is proportional to the cost of providing the services. The rules can be summarized as follows:

• Rate Revenue Must Not Exceed Cost Of Service. Utilities are required to calculate all the costs involved in providing service, including labor, benefits, materials, equipment, power, testing, outside services, debt repayment, and so forth. This can be a budget projection, but costs must be

based on the record. For example, expected electric power cost must be the same as was spent last year, adjusted by expected changes like increased or decreased number of users and changes in electric rates. Cost of services can include reasonable budgets for unexpected repairs and replacement of capital equipment. Such items are prudent management intended to assure there is money available for items which can be expected to be needed but for which the timing is unknown or difficult to specify, like replacement of broken or worn-out equipment.

- Revenues Must Be Expended for the Specified Purpose. Simply, money collected from water rates must be expended to provide water service. It cannot be transferred to the sewer department, or to any other department, except as those departments may assist in work needed to provide water service.
- Revenue Collected Must Be Proportional to Cost of Service. This principle was originally intended to prohibit shifting utility costs from one class of user to another. For example, commercial water rates cannot be excessively increased in order to decrease residential rates, or vice-versa. A 2015 court decision added to this principle by effectively barring rising-tier rate structures, where a base amount of water is available at a lower cost with higher water use being charged at increasingly-high rates. These have commonly been used to discourage excessive water use. However, the court said such rate structures are permissible if the utility can demonstrate that there are higher costs associated with the higher usage rates per user.

The rates proposed in this Study are intended to conform with these mandatory principles, leading to full cost recovery for utility services while charging for these services in a fair and proportional manner.

2 Background

2.1 Water Supply

The District serves water to its customers, all located within the Stallion Springs community of Kern County, from five groundwater wells. The water is chlorinated and delivered directly to its customers through the District's water distribution system. The distribution system includes water mains, service laterals, meters, tanks, booster pumps and pressure reducing stations. All water accounts are metered with meters read every two months.

Of the five wells, two are located in the Cummings Valley outside the District boundary (CV-1, CV-2), two are located within the District boundary on land that overlies the Cummings Valley Groundwater Basin (GW Basin) and one is located in the District outside the Cummings Valley GW Basin. The District must purchase water from Tehachapi-Cummings County Water District (TCCWD) for water that is pumped from CV-1 and CV-2 because the District does not have overlying rights. TCCWD uses State Water Project (SWP) water to recharge and replace the pumped groundwater. The current rate for purchased water is \$400/AF. Water pumped using overlying groundwater rights is obtained for the cost of pumping only. Over the past five years, the District has obtained about 61 percent of its water supply with SWP water from TCCWD. Water purchases for TCCWD are expected to stay about the same or slightly increase over the next five years.

Water purchases from TCCWD are made subject to the terms and conditions of the Term M&I Agreement, effective January 1, 2017, between the District and TCCWD.

Well production and water usage varies from year to year and month to month. As expected, the highest water usage occurs in the summer months. The 10 year average annual water well production is 476 AF. Metered water usage is somewhat less due to unaccounted water losses. Annual water production is shown in Figure 2-1 with monthly water production shown in Figure 2-2. Water production and sales dropped considerably in 2015 and 2016 due to mandatory drought water use restrictions.

Figure 2-1: Annual Water Production

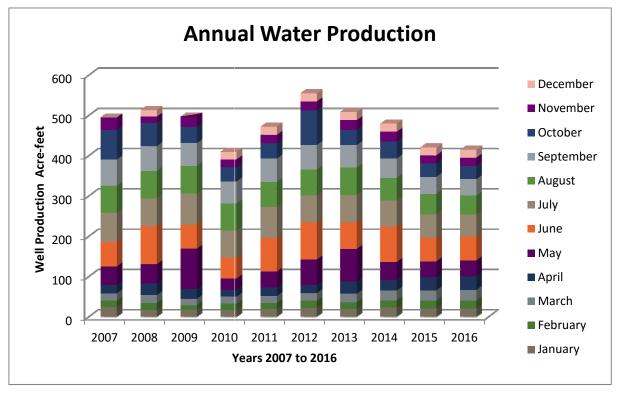
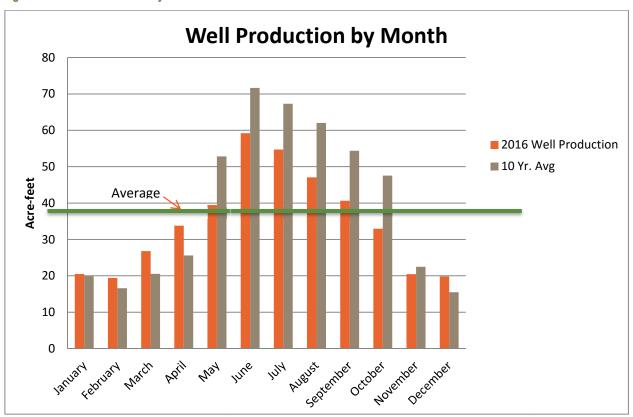


Figure 2-2: Well Production by Month



2.2 Water Accounts and Usage

The District water customer accounts for the past three fiscal years (FY) are shown in Table 2-1 with average water usage shown in Table 2-2. Commercial accounts are about 2 percent of the total active accounts. There are no industrial uses in SSCSD.

The Districts bills its customers bimonthly. Table 2-3 shows billing records for FY 2015/16 residential and commercial accounts by water billing cycle. Because of the uneven water use, the water revenue is also uneven, with more revenue generated in the summer than in the winter. Figure 2-3 illustrates commercial and residential water use by billing period.

Under the current rate structure, most revenue is derived from metered water usage. Consequently, the District had significant revenue loss during the past two years with drought water use restrictions. Water usage dropped about 20 percent from the 2013/14 base year to 2015/16. The loss of revenue is not sustainable if the District financial reserves fall below a level where responses to emergencies and normal maintenance becomes impossible

Table 2-1: Accounts by Year

	Number of Accounts by Year										
Year	Residential Accounts	Commercial Accounts	Total Active Accounts	Total Inactive Accounts	Total Accounts						
FY 13-14	1,193	28	1,221	55	1,287						
FY 14-15	1,226	28	1,254	56	1,310						
FY 15-16	1,237	29	1,266	56	1,322						

Table 2-2: Average Water Usage

Average Water Usage							
(HCF) per billing period							
	FY	13/14	14/15	15/16	Average		
Commercial (EMU)		32.9	25.9	14.9	24.5		
Residential		22.2	18.9	17.7	19.6		

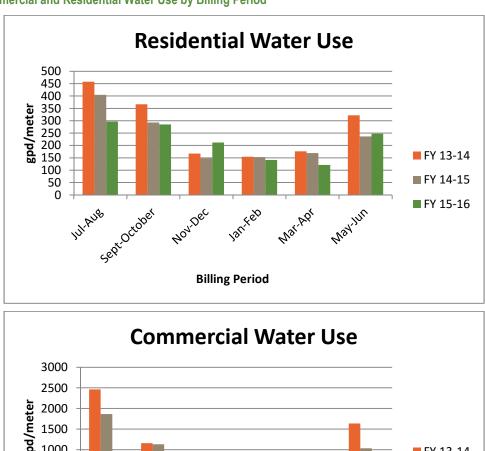
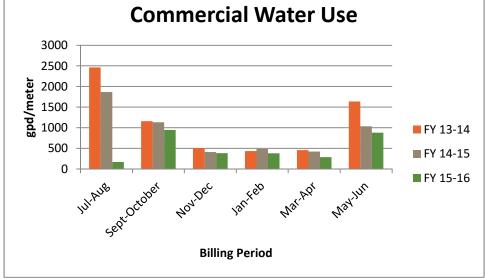


Figure 2-3: Commercial and Residential Water Use by Billing Period



2.3 Banked Water Reserve Account

The Term M&I Agreement between the District and TCCWD requires that the District maintain a Banked Water Reserve Account (BWRA), at a minimum five times the average annual State Water Project (SWP) water demand over the previous five calendar years. According to the agreement, the District must purchase 137 AFY for the next five years at a current cost of \$400/AF. The BWRA was established to provide reserve water for pumping during periods of drought. SSCSD can pump and draw from the BWRA whenever TCCWD is unable to supply the normal imported water supply on account of a drought. Beginning in 2017, this is a new expense for the District.

2.4 Water Master Plan

The District prepared a Water Master Plan in 2004. The Master Plan identified a capital improvement program with a total cost of \$6,425,000 (2004 dollars). All of the priority 1 improvements have been completed (Tank 6B, CV-1 well, CV-2 well, 12-inch Cummings Valley Transmission pipelines). About \$4 million (2004 dollars) in improvements remains to be constructed. The items remaining to be constructed include new storage tanks, booster pump station improvements, water pipeline improvements and reconstruction of pressure reducing valve stations. To this date, these projects are currently unfunded.

The Water Master Plan also identified the need for an annual Maintenance Sinking Fund. The fund is intended for the renewal and replacement of existing tanks, pumps, water mains, service, meters, and water wells. These renewals and replacements are best funded on a pay as you go basis. The District has not funded a renewal and replacement fund within their current budget. The recommended annual maintenance sinking fund as estimated in 2004 was \$185,000, which is approximately equal to a minimum of \$250,000 in current dollars.

2.5 Water Capacity Fees

The District adopted new water capacity fees in July 2016. The Technical Memorandum (Provost & Pritchard, July 2016), determined that the cost allocation for the Master Plan Capital Improvement program should be assigned 82 percent to existing connections and 18 percent to future connections. The Technical Memorandum estimated that the current cost of the remaining Master Plan improvements is about \$7 million.

Table 2-3: Average Water Usage

		2015/	16 Metered Acco	ounts and Usage				
Water Billing Cycle		Residential Active Meters	Commercial Active Meters	Total Active Meters	Total Inactive Commercial & Residential	Total of Both	Residential Avg Use (gpd/meter)	Commercial Avg Use (gpd/meter)
July - August 2015	Total Meters	1,234	28	1,262	51	1,313		171
	Usage (CF)	3,033,500	39,600	3,073,100			297	
September - October 2015	Total Meters	1,231	28	1,259	55	1,314		947
·	Usage (CF)	2,864,100	219,800	3,083,900			285	
November - December 2015	Total Meters	1,230	28	1,258	56	1,314		381
	Usage (CF)	2,123,700	88,500	2,212,200			212	
January - February 2016	Total Meters	1,229	28	1,257	59	1,316		380
	Usage (CF)	1,367,900	88,200	1,456,100			141	
March - April 2016	Total Meters	1,230	28	1,258	59	1,317		284
March - April 2016	Usage (CF)	1,217,300	66,000	1,283,300			121	
May - June 2016	Total Meters	1,237	29	1,266	56	1,322		879
	Usage (CF)	2,494,600	211,300	2,705,900			247	
Annual Metered Water Use (H	Annual Metered Water Use (HCF)		7,134	138,145			217	507
Average Metered Water/Bill Period	(Usage HCF)	17.65	41.00	18.19				

3 Existing Rates and Revenue

3.1 Existing Rate Structure

The existing SSCSD water rate schedule, subject to Proposition 218, is provided in Table 3-1. Other water charges, not directly related to water usage are shown in Appendix A. The rate system consists of two major components: a fixed bimonthly service charge, based on meter size, and a usage or commodity rate based on metered water use. The usage charge has three tiers for metered residential use and two tiers for metered commercial use. The commercial metered rates are higher than residential but the service charges are equivalent. In addition, both commercial and residential accounts are charged a meter maintenance fee of \$1.00 per inch meter size bimonthly. The water recharge rate is charged only to those customers that have not signed a covenant that in essence assigns their overlying groundwater rights to the District. This charge is removed once a covenant is signed.

Table 3-1: Current Water Rates

Current Wate	er Rates			
		Meter S	Size	
	"3/4 to 1"	"1-1/2"	"2"	">2"
Fixed Charges				
Residential/Commercial				
Customer Service Charge (bimonthly)	\$17.55	\$24.51	\$31.58	\$31.58
Meter Maintenance	\$	1.00/in me	eter size	
<u>Usage Charge - Residential</u>				
	Up			mit
Tier 1- 0 to 20 HCF	\$2.75	per HCF	20	
Tier 2 -20.1 to 40 HCF cf	\$3.15	per HCF	40	
Tier 3 - > 40.1 HCF	\$3.40	per HCF		
Usage Charge-Commercial				
Tier 1 - 0 to 40 HCF	\$3.15	per HCF		
Tier 2 - > 40.1 HCF	\$3.40	per HCF		
<u>Usage Temporary</u>				
0 to 4000 cf	\$4.59	per HCF		
> 4000 cf	\$4.93	per HCF		
Water Recharge Rate	\$1.14	per HCF		

3.2 Current Revenue from Existing Rates

Revenue and expenses for the past three complete fiscal years (FY 13/14, 14/15, 15/16) are summarized in Table 3-2. FY 13/14 is considered a "normal", pre-drought year. FY 14/15 and 15/15 are drought years. By FY 2015/16 the water fund balance went from a surplus to a near break even. It is important to note that Table 3-2 does not include principal payments on an existing Note that funded the Master Plan Phase 1 improvements of about \$75,000. The prior year's budget was also short one position in the water department. Prior budgets do not include a renewal and replacement budget (hereinafter called and O&M Reserve fund). The District has not developed an adequate plan to fund renewal and replacement of its aging infrastructure.

When considering the under or unfunded expenses in the prior years and considering the new cost of the BWRA, the current water budget is estimated to be underfunded in FY 2017/18 by approximately \$225,000, not including an O&M reserve.

Table 3-2: Water Income Expense Summary

Water Income Ex	Water Income Expense Summary							
	Water	Water	Water					
	FY 13-14	FY 14-15	FY 15-16					
Ordinary Income/Expense FY 15/16								
Income								
4300 · Water Revenues								
4315 · Water Avail. Current	82,155.83	82,600.10	82,902.15					
4319 · Water Avail. Prior	3,892.72	5,573.33	2,669.49					
4320 · Wtr-Fines Forfeits & Penalties	1,699.64	2,703.89	1,311.82					
4323 · Water Avail. Interest	212.90	254.82	225.39					
4327 · Water Sales Domestic	527,752.51	454,746.80	397,215.47					
4329 · Water Recharge	9,360.54	7,968.59	6,488.88					
4335 · Water Meter Revenues	8,925.00	12,075.00	9,450.00					
4339 · Water Connections	3,493.20	4,979.20	4,513.20					
4343 · Meter Maintenance	5,761.38	5,889.94	5,980.01					
4347 · Water Capacity Fees	93,075.00	125,925.00	65,700.00					
4349 · Water Service Charge	130,697.34	134,002.14	135,997.44					
4351 · Backflow Service Charge & Repair	1,275.20	1,980.00	1,320.00					
Total 4300 · Water Revenues	868,301.26	838,698.81	713,773.85					
4500 · Miscellaneous Revenue								
4515 · Interest From Taxes & Bank	0.00	0.00	0.00					
4517 · Interest From Capital Imp	2,996.03	3,545.10	6,040.30					
4535 · Penalties	13,841.40	13,973.67	14,724.38					
4539 · Misc Revenue	767.59	265.93	869.89					
Total 4500 · Miscellaneous Revenue	17,605.02	17,784.70	21,634.57					
4800 · Tax Lien DLQ Revenue								
4815 · SSDLQ-Current	0.00	0.00	0.00					
4819 · SSDLQ-Prior	-313.11	-163.50	-1,434.91					
4820 · SSDLQ-Fines, Forfeits & Pen	0.00	0.00	0.00					
4823 · SSDLQ-Interest	0.00	0.00	0.00					
Total 4800 · Tax Lien DLQ Revenue	-313.11	-163.50	-1,434.91					
5000 · Inactive Flat Charges								
5015 · Inactive Wtr Flat-Current	3,048.35	2,842.33	2,930.98					
5019 · Inactive Wtr Flat-Prior	7.94	222.63	796.00					
5020 · Inactive Wtr Flat-Fines, Forfeit		54.52	234.80					
5023 · Inactive Wtr Flat-Interest		8.62	11.28					
Total 5000 · Inactive Flat Charges	3,056.29	3,128.10	3,973.06					
Total Income	888,649.46	859,448.11	737,946.57					

	Water	Water	Water
	FY 13-14	FY 14-15	FY 15-16
xpense	111514	111413	11 13 10
5100 · Personnel Expenses			
5115 · Regular Salaries	152,020.09	212,854.89	213,016.49
5116 · Vacation, Sick, Holiday & Comp.	-4,438.73	13,258.39	-2,167.49
5119 · Non Payroll Employee	1,134.04	0.00	0.00
5127 · FICA	10,584.49	16,130.68	16,317.6
5131 · Worker's Compensation Ins	2,261.58	5,804.07	6,314.1
5135 · Medical Insurance	28,865.12	40,730.64	50,111.5
5139 · Dental Insurance	2,381.12	3,499.31	1,780.2
5143 · Vision Insurance	385.12	600.02	310.98
5149 · CalPers Retirement (CSD)	6,396.66	9,800.42	14,965.0
5150 · CalPers Retirement (Employees)	0.00	0.00	0.0
5151 · CalPers 457		0.00	0.0
5155 · Disability Insurance	1,703.21	736.43	1,769.1
5159 · Unemployment	_,,	0.00	0.00
Total 5100 · Personnel Expenses	201,292.70	303,414.85	302,417.69
5200 · General & Administrative	201,232.70	303,414.03	302,41710
5215 · Insurance	11,230.24	11,227.96	11,296.9
5219 · Publications & Legals	181.50	178.00	169.0
5223 · Postage & UPS	1,685.10	3,287.16	2,804.09
5227 · Office Supplies	604.67	487.26	654.50
5231 · Training/Travel & Cert's	1,303.26	2,218.21	2,128.73
5235 · Dues & Subscriptions	1,411.94	152.94	820.6
5239 · Director's Fees	0.00	0.00	0.0
5243 · M & R Structures	262.54	130.00	0.0
5247 · Maintenance & Repair	13,063.98	1,280.64	1,534.2
5253 · Expense Account	0.00	0.00	0.00
5257 · Permits/Fees/Inspection	1,447.91	5,501.44	16,636.9
5261 · Clothing/Safety Equip./Uniform	854.52	941.81	5,027.3
5265 · Printing Cost	528.30	1,862.42	134.3
5272 · Weed Abatement Cost	0.00	0.00	0.0
5279 · Internet	0.00	0.00	0.0
Total 5200 · General & Administrative	32,573.96	27,267.84	41,206.8
5300 · Utilities			
5305 · Bad Debt Expense			0.0
5315 · Electric	87,278.38	84,929.14	70,947.4
5319 · Telephone	0.00	0.00	0.0
Total 5300 · Utilities	87,278.38	84,929.14	70,947.42

Water Income Ex	pense Summary		
	Water	Water	Water
	FY 13-14	FY 14-15	FY 15-16
5400 – Rolling Stock & Equipment			
5415 · R & S Vehicles	1,397.55	1,698.43	3,326.03
5419 · R & S Equipment	11.58	92.75	409.52
5423 · Fuel	7,946.94	8,315.73	9,729.51
Total 5400 · Rolling Stock & Equipment	9,356.07	10,106.91	13,465.06
5500 · Supplies			
5515 · Janitorial	0.00	0.00	0.00
5519 · Water Meters	4,922.46	9,570.32	2,880.25
	681.39		
5523 · Chemicals	1,386.69	1,868.52	1,270.21
5527 · Road Patch	325.00	0.00	0.00
5531 · Supplies & Materials	781.21	9,830.42	9,834.42
5533 · Tools & Equipment	3,469.48	10,059.08	3,288.58
5543 · Water Purchase Domestic	118,014.12	118,348.49	88,390.29
Total 5500 · Supplies	129,580.35	149,676.83	105,663.75
5600 · Outside Services			
5615 · Legal	0.00	5,318.00	11,430.00
5619 · Engineering	99.09	0.00	10,072.51
5623 · Audit	0.00	0.00	0.00
		440.00	
5631 · Lab Analysis	4,713.75	13,350.50	6,616.50
5635 · Elections	0.00	0.00	0.00
5639 · Radio/Repeater/Cellphone	654.29	962.70	1,486.83
5655 · Rent & Lease Equipment	0.00	143.73	0.00
5663 · Uniform Rental & Cleaning	1,269.61	1,018.92	1,896.43
5667 · Employee Physicals	1,742.88	0.00	300.00
5673 · Misc. Contract Services	17,669.70	19,269.10	20,627.86
5675 · PD Parking Citation Contract	0.00	0.00	0.00
5681 · KC Collection Of Taxes	492.60	490.00	491.20
	11,415.30		
Total 5600 · Outside Services	38,057.22	40,992.95	52,921.33
5800 · Grants			
5805 · PD Grant AB109-Non Serv Expense	0.00	0.00	0.00
5806 · PD GrantAB109-Service Expense	0.00		0.00
Total 5800 · Grants	0.00	0.00	0.00
6015 · Depreciation Expense	31,638.00	33,838.00	36,070.00
Total Expense	529,776.68	650,226.52	622,692.13

Water Income Expense Summary						
	Water	Water	Water			
	FY 13-14	FY 14-15	FY 15-16			
Net Ordinary Income	358,872.78	209,221.59	115,254.44			
Other Income/Expense						
Other Expense						
7100 · Administration Allocation	134,926.93	107,469.37	97,290.65			
8000 · Capital Expenses						
	0.00	0.00				
8023 · Capital Contracts	0.00	0.00	0.00			
8029 · Interest Expense	22,880.08	19,954.56	17,199.80			
Total 8000 · Capital Expenses	22,880.08	19,954.56	17,199.80			
Total Other Expense	157,807.01	127,423.93	114,490.45			
Net Other Income	-157,807.01	-127,423.93	-114,490.45			
	201,065.77	81,797.66	763.99			

4 Revenue Requirements

The total water revenue generated each year from the customer rates should be approximately equal to the total water operation expenditures planned for that year. The revenue requirements are to include long term financial objectives such as capital improvement and renewal/replacement projects in addition to regular operations and maintenance. With these basic principles, the required revenue can be projected and then rates can be designed to meet the revenues needed. The following sections describe the assumptions that have been made for determining the required revenue for SSCSD.

4.1 Water Expenditures

The baseline operating expenses were based on the actual expenditures that occurred in FY 15/16 as shown in Table 3-1.

Using the historical expenses, a projection of the expenses for FY 17/18 through FY 21/22 was prepared as shown in Table 4-1. The major differences from the base year are:

- 1. Assignment of a new position to the water department.
- 2. Inclusion of the Principal Note payment on the prior Master Plan Priority 1 Improvements
- 3. Inclusion of payments to TCCWD for the BWRA of approximately \$54,600.
- 4. Inclusion of an O&M reserve of \$150,000 to fund renewals and replacements on an ongoing basis. This is about 60 percent of the estimated cost (adjusted to 2017) as recommended in the 2004 Water Master Plan. The typical minimum industry recommendation for an O&M reserve is 15% of a district's annual O&M expenses, which is recommended in this study (25% is the upper end of the industry recommended reserve).
- 5. Inflationary expenses.
- 6. The addition of a net five new residential services per year.

The total water expenditures for FY17/18 are estimated to be approximately \$1,126,155. Upon a review of the expenditures, approximately 27 percent of the costs are variable while the remainders are fixed costs.

The projection of expenses to subsequent years includes an annual inflation factor of 3 percent for most line items. Personnel costs were escalated by 5 percent because of higher anticipated costs for health care and pensions. Electric utility costs were also escalated by 5 percent. The overall annual escalation is approximately 3.5% when considering all factors.

Table 4-1: Projected Water Expenses

Projected Water Expenses							
Water Expenses O&M	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	Escalation Factor	
Personnel	394,000	413,700	434,385	456,104	478,909	5%	
General & Administrative	44,000	45,320	46,680	48,080	49,522	3%	
Utilities	77,000	80,850	84,893	89,137	93,594	5%	
Rolling Stock	22,000	22,660	23,340	24,040	24,761	3%	
Supplies/Chemicals	17,273	17,792	18,325	18,875	19,441	3%	
Water Purchase TCCWD	109,200	112,476	115,850	119,326	122,906	3%	
Banked Water Reserve Acct	54,600	56,238	57,925	59,663	61,453	3%	
Outside Services/Lab Costs	45,300	46,659	48,059	49,501	50,986	3%	
O&M Reserve Account	150,000	154,500	159,135	163,909	168,826	3%	
Administrative Allocation	122,000	125,660	129,430	133,313	137,312	3%	
Interest Expense	15,037	12,092	9,034	5,856	2,555	3%	
Water Expense -Capital		-	-	-	-		
Note Principal	75,745	81,748	84,926	88,227	-		
Future Capital Expense					90,000		
Total Expense	\$1,126,155	\$1,169,695	\$1,211,981	\$1,256,030	\$1,300,266		

4.2 Capital Improvement Program

A Capital Improvement Program (CIP) was proposed in the 2004 Water Master Plan. As noted previously, the cost of the remaining improvements is estimated to be approximately \$7 million (current dollars). Generally capital improvements are constructed using Water Capacity fees where high growth occurs. The Technical Memorandum allocated about 82 percent of the CIP costs to existing customers and the remainder to future customers. This rate study assumes that approximately five new connections will be made each year, generating about \$40,000 annually, which can be allocated to capital expenditures.

The proposed FY 17-18 thru 20/21 expenditure includes payment on the existing capital improvement note. The note, however, is paid off in the last year, making approximately \$90,000 available thereafter to fund new capital improvements. The \$90,000 could fund approximately \$1.2 million (4%, 20 yrs) in future improvements, starting in FY 21/22.

It is recommended that the proposed expenditure plan not include new capital improvement expenditure until FY 21/22. The current plan should focus on renewal and replacement through the O&M reserve. If, however, growth accelerates and additional capacity fees are collected, the capital expenditure plan can be accelerated without raising rates.

5 Rate Design

5.1 Proposed Changes

It is recommended that the current rate structure be revised to better conform to the latest guidelines and court interpretations on Proposition 218 and its implementation. We are therefore recommending the following changes in the rate structure. The rationale and basis for the charge is explained below.

- 1. Increase the bimonthly fixed rate service charge to provide greater revenue stability during droughts. It is estimated that only 27 percent of the expenses are variable. Variable costs include utilities, water purchase and chemicals. Costs that are mostly independent of water usage include personnel cost, general and administrative cost, meter reading and billing, renewal and replacement costs, lab costs and BWRA cost. In order to maintain an incentive for water conservation, there should be a reasonable balance between cost recovered under the bimonthly service charge and usage charges and therefore not all fixed costs will be recovered in the service charge.
- 2. Make the bimonthly customer service charge proportional to meter size and flow capability. The amount of the fixed rate will be based on meter size and application of standard AWWA equivalent meter factors (EMU) based on the flow that can be delivered through a standard ³/₄ inch residential meter (Table 5-1). Thus, for example, a 2-inch meter can deliver 5.33 times as much water as a standard ³/₄ inch meter. Thus a customer with a 2-inch meter will be charged a bimonthly service charge of 5.33 times that of the base charge for a ³/₄-inch meter.
- 3. The additional cost of providing fire water service to commercial customers should be recovered in the rate structure. Because fire flow is not metered, there is no way to recover the cost of fire demand capability except by a fixed charge. For commercial areas, the water system must be designed with larger water mains, closer fire hydrant spacing and larger storage and pump capacity to meet fire flow requirements. This warrants a higher fixed service charge because these costs on not related to the volume of water delivered. The District incurs higher renewal and replacement costs to continue to provide a higher fire flow for a longer duration. Under Kern County Development Standards, residential areas of the district are required to have a minimum fire flow capacity of 500 gpm for a duration of 1 hour. Commercial areas are required to have a minimum fire flow of 1,500 gpm for a duration of 2 hours. Additionally, more fire hydrants are required to serve commercial areas as the minimum hydrant spacing is 330 feet versus 660 feet in residential areas. Because of these differences, the District must construct, operate and maintain sufficient facilities to meet these fire service needs in commercial areas. In particular, water mains must deliver higher flow rates and additional water storage is needed to meet the required fire flow volumes. The bimonthly expense for commercial accounts is estimated to be 1.5 times that of a residential account with the same size meter.

- 4. The meter replacement fee is proposed to be eliminated. The cost for meter replacement will be included in the general rate.
- 5. Commercial and residential will pay the same usage or commodity rate.
- 6. The three tier usage system will be changed to a two tier system with the same rates and tiers applied to residential and commercial users. The first tier provides the average volume of water used by customers over the past three years. The cost of the first tier of water consists primarily of pumped groundwater with overlying rights. As water usage increases, the cost of water goes up because the incremental water must be purchased from TCCWD in accordance with the Term M&I Agreement. The highest increment of water is estimated to cost \$400/AF or \$0.92/HCF. When adjusted from pumped water to metered water (15% unaccounted water), the incremental cost is about \$1.06/HCF. The second tier usage rate is designed to recover the highest incremental cost of water.

Table 5-1: AWWA Equivalent Meter Factors

AWWA Equivalent Meter Factors				
Meter Size (inch)	Equivalent Meter Factor (EMU)			
5/8 & 3/4	1.00			
1	1.67			
1.5	3.33			
2	5.33			
3	10			
4	16.67			
6	33.33			

5.2 Water Revenue Model

The proposed water rates have been developed and tested using a financial spreadsheet model based on estimated expense and revenues developed from a proposed rate schedule that uses the premises as outlined in Section 5.1. The objective of the model is to test rates to determine if they will provide sufficient revenue to meet all expenses and provide a small reserve (profit) for unforeseen conditions. The financial model considers the average water use over the past three years and the number of customers of each type. Some revenues, such as the property tax assessment and miscellaneous revenues do not change significantly. The rate model assumes five new water services each year. Actual revenues will depend on factors outside the control of the District. Water usage will vary according to weather, precipitation, wind, evapo-transpiration and other factors. The revenue model is an estimate only.

5.3 Proposed Water Rates

The proposed water rates are shown in Table 5-2. Rates are shown beginning in FY 17/18 and continue for four more years. The rates proposed for FY 17/18 will be implemented beginning in July 2017. Rate increases for future years will be imposed at the discretion of the District Board of Directors and will be no more than what is stated. The Board will have the option of skipping a year's rate increase or adjusting the rates to any level at or below the recommended rate. The future year's rate will be based on the financial performance of the water system enterprise.

Table 5-2: Proposed Water Rates

Proposed Water Rates							
	Meter Size (in)						
	5/8 or 3/4	1	1-1/2	2	3	4	6
	9	Service Cha	ges (bimonth	ıly)			
FY 17-18							
Residential/Cust. Svc charge	\$40.00	\$66.80	\$133.20	\$213.20	\$400.00	\$666.80	\$1,333.20
Commercial Cust. Svc. Charge	\$60.00	\$100.20	\$199.80	\$319.80	\$600.00	\$1,000.20	\$1,999.80
FY 18-19							
Residential/Cust. Svc charge	\$41.46	\$69.23	\$138.05	\$220.96	\$414.56	\$691.07	\$1,381.73
Commercial Cust. Svc. Charge	\$62.18	\$103.85	\$207.07	\$331.44	\$621.84	\$1,036.61	\$2,072.59
FY19-20							
Residential/Cust. Svc charge	\$42.97	\$71.76	\$143.09	\$229.03	\$429.69	\$716.30	\$1,432.16
Commercial Cust. Svc. Charge	\$64.45	\$107.64	\$214.63	\$343.54	\$644.54	\$1,074.44	\$2,148.24
FY 20-21							
Residential/Cust. Svc charge	\$44.55	\$74.39	\$148.34	\$237.43	\$445.46	\$742.58	\$1,484.72
Commercial Cust. Svc. Charge	\$66.82	\$111.59	\$222.51	\$356.15	\$668.19	\$1,113.88	\$2,227.08
FY 21-22							
Residential/Cust. Svc charge	\$46.19	\$77.14	\$153.81	\$246.19	\$461.90	\$769.99	\$1,539.51
Commercial Cust. Svc. Charge	\$69.28	\$115.71	\$230.72	\$369.29	\$692.85	\$1,154.98	\$2,309.26
Usage Charge							
	FY 17-18	FY 18-19	FY19-20	FY 20-21	FY 21-22		
Bimonthly Usage							
Tier 1- 0 to 20 HCF	\$3.25	\$3.37	\$3.49	\$3.62	\$3.75	per HCF	
Tier 2 - > 20.1 HCF	\$4.50	\$4.66	\$4.83	\$5.01	\$5.20	per HCF	
Usage Temporary							
0 to 20 HCF	\$5.25		per HCF				
> 20 HCF	\$6.50		per HCF				
Water Recharge Rate	\$1.14	\$1.14	\$1.14	\$1.14	\$1.14		per HCF

5.4 Summary Financial Plan After Rate Adjustments

After applying the proposed rates in the financial model, a summary of revenues, expenses and reserves is shown in Table 5-2. The new rates will produce a small annual reserve in the water fund of less than 2 percent. Over a period of five years, the small surplus will build to about \$67,000, which can be added to the O&M reserve to fund renewals and replacements. The water service charge will produce about 35 percent of the O&M revenues. The metered usage charge will produce about 55 percent of the revenues.

Table 5-3: Summary Financial Plan after Rate Adjustments

Summary Financial Plan After Rate Adjustments						
Water Revenues O&M	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	
Water Availability -tax assessment	\$84,200	\$84,200	\$84,200	\$84,200	\$84,200	
Water Service charges	377,146	392,117	407,719	424,018	441,050	
Water Sales - metered usage	597,180	620,938	645,697	671,566	698,599	
Water recharge fee	8,208	8,208	8,208	8,208	8,208	
Miscellaneous revenue	14,000	14,000	14,000	14,000	14,000	
Inactive Acct Service Charge Water connection/re-connect	6,700	6,700	6,700	6,700	6,700	
charges	4,000	4,000	4,000	4,000	4,000	
Water Revenues- Capital						
Water capacity fees	40,000	40,000	40,000	40,000	40,000	
Meter connection fees	8,000	8,000	8,000	8,000	8,000	
Interest - capital acct	6,000	6,000	6,000	6,000	6,000	
	1,145,434	1,184,164	1,224,524	1,266,692	1,310,757	
Water Expenses O&M	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	
Personnel	394,000	413,700	434,385	456,104	478,909	
General & Administrative	44,000	45,320	46,680	48,080	49,522	
Utilities	77,000	80,850	84,893	89,137	93,594	
Rolling stock	22,000	22,660	23,340	24,040	24,761	
Supplies/chemicals Water Purchase TCCWD	17,273	17,792	18,325	18,875	19,441	

Summary Financial Plan After Rate Adjustments						
Water Revenues O&M	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	
	109,200	112,476	115,850	119,326	122,906	
Banked Water Reserve Acct	54,600	56,238	57,925	59,663	61,453	
Outside Services/Lab Costs	45,300	46,659	48,059	49,501	50,986	
O&M Reserve Account	150,000	154,500	159,135	163,909	168,826	
Administrative allocation	122,000	125,660	129,430	133,313	137,312	
Interest expense	15,037	12,092	9,034	5,856	2,555	
		-	-	-	-	
Water Expense -capital		-	-	-	-	
Note Principal	75,745	81,748	84,926	88,227	-	
Future Capital Expense					90,000	
Total Expense	1,126,155	1,169,695	1,211,981	1,256,030	1,300,266	
Profit/Loss	19,278.14	14,469.05	12,542.76	10,661.95	10,491.21	
Cumulative Reserve	19,278.14	33,747.19	46,289.95	56,951.90	67,443.11	

6 Recommendations

6.1 Adjustments to Rate Schedule

It is recommended that the District adjust rates for FY 17/18 as presented in Table 5-2. If adopted following Proposition 218 procedures, the total bimonthly water bill for a typical single family residential using 20 HCF with a ³/₄ inch meter will be \$105.00 (\$52.50/month). The bimonthly water bill under current rates would be \$72.55.

It is further recommended that the Board of Directors review the financial performance of the water enterprise fund each year and, at their discretion, adjust rates as needed to meet increased expenses. The rates may not exceed those presented in Table 5-2 for each fiscal year. The Board may recapture rate increases in a subsequent year if the increase was not accounted for in the prior year.

Other miscellaneous water fees, not subject to Proposition 218 majority protest proceedings, should be reviewed and adjusted annually based on a cost of service study. These miscellaneous fees include connection of water service, agent turn on fee, reconnection for non-payment, encroachment permits and similar fees.

6.2 Implementation Plan

The proposed rate increase is a property related fee and thus must be implemented in accordance with the requirements of Proposition 218. The District's attorney should be consulted on the proper procedures, notices, ordinances and resolutions necessary to adopt and implement the proposed rate increases. The general implementation plan is as follows:

- 1. District Board of Directors (and District attorney) reviews and accepts the report and recommendations.
- 2. The Board sets a date for a public protest hearing not less than 45 days after notices to customers have been mailed.
- 3. Mail customer notices with the proposed rate increase and time and date of the public protest hearing as well as any other required notice information as specified in Government Code Section 53753.
- 4. Hold public majority protest hearing.
- 5. Determine if there is majority protest, and if not,
- 6. Adopt revised rate structure. Rates will go into effect beginning July 2017 if adoption occurs at the June meeting.
- 7. Review revenue versus expenditures annually to verify assumptions and projections in Water Rate Study. Consider decreasing water rates if appropriate based on this review.
- 8. Conduct Water Rate Study update in FY21/22.

Appendix A

Current Water Rate Sheet



STALLION SPRINGS COMMUNITY SERVICES DISTRICT

WATER RATE SHEET

NAME OF ITEM	PRICE LIST	NAME OF ITEM	PRICE LIST			
CONNECTION OF WATER SERVICE	\$ 20.80	1" METER WATER CAPACITY FEE	\$ 12,785.00			
AGENT TURN ON FEE	\$ 50.00	1 1/2" METER WATER CAPACITY FEE	\$ 25,570.00			
MAILBOX MAINTENANCE FEE	\$ 25.00	2" METER WATER CAPACITY FEE	\$ 40,911.00			
ENCROACHMENT PERMIT	\$ 50.00	3" METER WATER CAPACITY FEE	\$ 76,709.00			
3/4" WATER METER INSTALLATION	\$975.00	4" METER WATER CAPACITY FEE	\$ 127,848.00			
1" WATER METER INSTALLATION	\$1,000.00	6" METER WATER CAPACITY FEE	\$ 255,696.00			
11/2" WATER METER INSTALLATION	\$ 1,275.00	SEWER CONNECTION FEE	\$ 1,875.00			
2" WATER METER INSTALLATION	\$ 1,425.00	SEWER CAPACITY FEE (RESIDENTIAL)	\$ 6,170.00			
RE-CONNECTION CHARGE FOR NON-PAYMENT	\$ 50.00	SEWER CAPACITY FEE (COMMERCIAL)	SEE TITLE 9			
TEMPORARY WATER SERVICE - FIRE HYDRANT	\$ 50.00	PENALTY NSF CHECK	\$ 25.00			
3/4" METER WATER CAPACITY FEE	\$ 7,671.00					
	BI-MONTHLY E	BILLING CHARGES				
WATER RESIDENTIAL UP TO & INCLUDING 2000	CF\$ 2.75 PE	R 100 CF				
WATER RESIDENTIAL FROM 2001-4000 CF	\$ 3.15 PE	R 100 CF				
WATER RESIDENTIAL FROM 4001 AND ABOVE	\$ 3.40 PE	R 100 CF	2			
WATER COMMERCIAL USAGE UP TO 4000\$ 3.15 PER 100 CF						
WATER COMMERCIAL USAGE FROM 4001 AND UP\$ 3.40 PER 100 CF						
SERVICE CHARGE						
FOR RESIDENTIAL & COMMERCIAL\$24.51 FOR 1 ½ " METERS						
\$31	1.58 FOR 2" AND OVER	METERS				
WATER TEMPORARY USAGE UP TO 4000		\$ 4.59				
WATER TEMPORARY USAGE FROM 4001 AND UF	·	\$4.93				
REFUSE RESIDENTIAL		\$21.96 (COMMERCIAL HAS OWN BINS)				
REFUSE NON-RESIDENTIAL		\$ 26.96				
METER MAINTENANCE RESIDENTIAL\$	1.00 PER INCH SIZE OF	METER				
METER MAINTENANCE COMMERCIAL\$	1.00 PER INCH SIZE OF	METER				
PENALTIES	10 PERCENT (SEE	TITLES)				
SEWER RESIDENTIAL		. \$ 85.48				
COMMEDIAL OFMED ONLY DAGES ON ENT		==				

COMMERCIAL SEWER ONLY: BASED ON FIXTURE \$36.98 FIRST TOILET, \$24.19 FOR EVERY ADDITIONAL TOILET, \$36.98 FOR EVERY WASHING MACHINE, DISHWASHER AND \$36.98 PER HORSE-POWER FOR GARBAGE DISPOSAL. IF WATER USAGE IS OVER 4,000 C.F. AN ADDITIONAL CHARGE WILL BE ADDED. SEE TITLE 9 FOR APPLICATION.

FILE: WATER RATE SHEET 2016 (Effective July 20, 2016)