

Santa Ynez River Water Conservation District Improvement District No. 1







Water Financial Plan & Rate Study

October 26, 2016



BARTLE WELLS ASSOCIATES INDEPENDENT PUBLIC FINANCE ADVISORS

	Current		on or After	er de la companya de					
	Water	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1			
	Rates	2017	2018	2019	2020	2021			
MONTHLY METER CHARGES									
Domestic & Rural Residentia	I/Limited Agricu	lture							
Meter Size									
5/8-inch	\$38.78	\$38.78	\$39.86	\$41.40	\$42.98	\$44.19			
3/4-inch	46.42	46.42	47.83	49.68	51.57	53.03			
1-inch	76.98	76.98	79.72	82.80	85.96	88.38			
1-1/2-inch	153.62	153.62	159.44	165.60	171.91	176.76			
2-inch	243.80	243.80	255.10	264.97	275.06	282.82			
3-inch	490.60	490.60	478.31	496.81	515.73	530.29			
4-inch	691.91	691.91	797.18	828.02	859.56	883.81			
6-inch	1,543.43	1,543.43	1,594.36	1,656.04	1,719.12	1,767.62			
8-inch	2,455.55	2,455.55	2,550.98	2,649.66	2,750.59	2,828.19			
Agricultural									
Meter Size									
1-1/2-inch	\$62.40	\$62.40	\$66.16	\$68.72	\$71.34	\$73.35			
2-inch	103.14	103.14	105.86	109.96	114.15	117.37			
3-inch	207.56	207.56	209.71	211.87	214.02	220.06			
4-inch	289.06	289.06	330.82	343.62	356.71	366.77			
6-inch	645.61	645.61	661.64	687.24	713.41	733.54			
Private Fire Protection									
Service Connection or Meter S	lize								
Up to 1-inch	\$19.40	\$7.70	\$8.00	\$8.30	\$8.60	\$8.80			
1-1/2-inch	19.40	15.40	15.90	16.60	17.20	17.70			
2-inch	19.40	24.40	25.50	26.50	27.50	28.30			
3-inch	29.10	49.10	47.80	49.70	51.60	53.00			
4-inch	38.80	69.20	79.70	82.80	86.00	88.40			
6-inch	97.00	154.30	159.40	165.60	171.90	176.80			
8-inch	194.00	245.60	255.10	265.00	275.10	282.80			
CONSUMPTION CHARGES									
Charge per hundred cubic fee	t (hcf) of metere	d water consur	nption.						
Domestic (Residential & Comm'l)	\$3.81	\$4.30	\$4.80	\$4.95	\$5.05	\$5.15			
Rural Residential/Limited Agric	culture								
First 125 units	3.81	4.30	4.80	4.95	5.05	5.15			
Over 125 units	1.31	1.65	1.98	2.22	2.46	2.69			
Agriculture (No Domestic Use)	0.50	0.77	1.04	1.31	1.59	1.87			
On-Demand	6.08	8 60	9.60	9.90	10.10	10.20			
	0.00	12.00	14.40	14.05	15.15	15.40			
remporary	6.25	12.90	14.40	14.85	15.15	15.46			
Cachuma Park	1.38	1.48	1.55	1.63	1.71	1.80			

Note: One hundred cubic feet (hcf) = 748 gallons

TABLE OF CONTENTS

1	Bac	kground & Objectives	1
	1.1	Background	1
	1.2	Rate Study Objectives	2
2	Wat	ter Rates	3
	2.1	Current & Historical Water Rates	3
3	Wat	ter Accounts, Supply & Demand	9
	3.1	Water Accounts	9
	3.2	Water Consumption	10
4	Lega	al requirements & Rate Methodology	15
	4.1	Constitutional Rate Requirements	15
		4.1.1 Article 10, Section 2	15
		4.1.2 Article 13D, Section 6	15
	4.2	Rate-Setting Methodology	16
5	Dist	rict Finances & Cash Flow Projections	18
	5.1	Financial Overview	18
	5.2	Historical Finances	19
	5.3	Reserves	20
	5.4	Financial Challenges	21
		5.4.1 Eliminate Annual Budget Deficit	21
		5.4.2 Chromium 6 Treatment Project	21
		5.4.3 Infrastructure Repairs & Replacements	22
		5.4.4 Decline in Water Sales	23
		5.4.5 CCWA Wholesale Water Rate Increases	23
		5.4.6 Compliance with Bond Covenants	25
		5.4.7 Replenish Reserves	26
		5.4.8 Ongoing Cost Inflation	27
	5.5	Water Enterprise Financial Projections	27
	5.6	Projected Rate Revenue Increases	31
6	Rate	Analysis	32
	6.1	Rate Derivation	32
		6.1.1 Fixed vs. Variable Revenue Recovery	34
		6.1.2 Fixed Rate Recovery	36
		6.1.3 Water Consumption Charge Derivation	40
7	Prop	oosed Rates & Impacts	43
	7.1	Proposed Water Rates	43
	7.2	Rate Structure Modifications	45
		7.2.1 Charge 50% of the Fixed Meter Charges when Ag Customers are Offline	45
		7.2.2 Set Limited Ag Rate Based on 25% of the Domestic Ag Rate & 75% of the Ag Rate	45
		7.2.3 Set On-Demand Consumption Rate to 2x the District's Domestic Rates	45
		7.2.4 Private Fire Protection Charges	46
	7.3	Water Rate Impacts	47
	7.4	Water Consumption Charge Revenue Projections	

LIST OF TABLES & FIGURES

TABLES

Table 1. Current Water Rates	
Table 2. Regional Ag Water Rates	
Table 3. Accounts by Customer Class & Meter Size	
Table 4. Historical Water Consumption	10
Table 5. Historical Water Consumption by Fiscal Year	11
Table 6. Historical Water Consumption by Month	11
Table 7. Historical Financial Results	19
Table 8. Reserves	20
Table 9. Projected Chromium 6 Project Expenditures	21
Table 10. Estimated Debt Service	22
Table 11. CCWA Cost Projections for the District	24
Table 12. CCWA Cost Projections for Solvang	25
Table 13. Cash Flow Projections	30
Table 14. Projected Overall Rate Revenue Increases	
Table 15. Fixed vs. Variable Revenue Recovery	35
Table 16. Fixed Rate Revenue Allocation	37
Table 17. Meter Equivalents	38
Table 18. Fixed Meter Rate Calculation	39
Table 19. Variable Cost per Unit	41
Table 20. Water Quantity Charges per Customer Class	42
Table 21. Proposed Water Rates	44
Table 22. Projected Monthly Bills	47
Table 23. Water Consumption Charge Revenue Projections	49

FIGURES

Figure 1: Historical Monthly Residential Bills without Conservation	. 4
Figure 2: Historical Monthly Residential Bills with Conservation	. 5
Figure 3: Survey of Monthly Residential Water Bills at 10 hcf	. 6
Figure 4: Survey of Monthly Residential Water Bills at 20 hcf	. 7
Figure 5: Historical Water Consumption by Fiscal Year1	12
Figure 6: Historical Water Consumption by Month	13
Figure 7: Historical Water Consumption Compared by Month	14
Figure 8: Historical & Projected Residential Bills4	48



1 BACKGROUND & OBJECTIVES

1.1 Background

The Santa Ynez River Water Conservation District, Improvement District No. 1 (District) provides water service to a roughly 17-square-mile service area that includes the towns of Santa Ynez, Los Olivos, Ballard, City of Solvang and the unincorporated areas in between. The District provides water service to approximately 2,511 domestic, commercial, and on-demand accounts including the City of Solvang and two mutual water companies together representing 2,623accounts. The District also serves 112 agricultural customers.

The District is located in Santa Barbara County, approximately 30 miles northwest of the City of Santa Barbara. The District was formed in 1959 and is governed by a five-member Board of Trustees, with four members elected from different divisions and one member elected at large.

The District owns and operates a water system that includes three pressure zones, 17 active wells, approximately 87 miles of water transmission and distribution pipelines, four booster pump stations, one State Water Project turnout, and two reservoirs and two water tanks with a combined capacity of 16.75 million gallons. The District has four sources of water supply including groundwater, Santa Ynez River underflow, State Water Project entitlements, and water supply from the USBR Cachuma Project which is subject to an Exchange Agreement with a number of water agencies in southern Santa Barbara County. The District's State Water Project supplies are imported and treated by the Central Coast Water Authority, a joint powers authority which includes the District as one of eight member agencies.

Financially, the District relies primarily on revenues from water rates to fund the costs of providing service. As such, rates must be set at levels adequate to fund the costs of operating and maintaining the water distribution and storage system, pay for the purchase of wholesale water and production of water supply, and fund necessary capital improvements including compliance with State regulatory requirements for Chromium-6. In order to comply with stringent new Chromium-6 concentration limits, the District must construct and begin operating a new Chromium-6 water treatment facility by 2020 pursuant to a State-approved Compliance Plan.

The District last conducted a water rate study in 2013. Since the prior rate study was conducted, the District has been faced with substantial new financial challenges.



Like many other agencies in California, the District is currently facing substantial financial challenges due to drought. California is currently in the fifth year of a severe drought and has been under a "drought State of Emergency" since January 2014. The State's mandatory water conservation regulations and restrictions have caused a substantial reduction in District revenues of up to 39 percent.

In response to the State's mandated water conservation measures imposed on the District, its customers have substantially reduced water consumption, resulting in a significant decrease in water sales revenues. Together, the impacts of the State's regulations for water conservation and Chromium-6 have significantly impacted the District's financial health and are driving the need to increase rates and revenues in order to fund the District's cost of providing service and maintaining financial solvency.

1.2 Rate Study Objectives

The District retained Bartle Wells Associates (BWA) to develop a long-term financial plan and water rate study. Key goals and objectives of the study include developing water rates that:

- Restore lost revenues from State-imposed water conservation regulations and drought measures;
- Recapture funding to meet the costs of providing water service, including operating, capital, and water supply funding needs;
- Are fair and equitable to all customers;
- Comply with the substantive cost-of-service requirements of the California Constitution, Article 13D, Section 6 (established by Proposition 218);
- Fund capital and operating costs including required for compliance with the State's Chromium-6 regulations;
- Support the District's operational and financial stability.

This report summarizes key findings and recommendations for water rates over the next five years. Final recommendations can be refined with additional input from District staff and the District's Board of Trustees.



2 WATER RATES

2.1 Current & Historical Water Rates

Table 1 shows the District's current water rates, which were approved as part of a multi-year rate increase adopted in May 2013.

MONTHLY N	NETER CHARGES		
Meter Size	Domestic, RR/Ltd Ag	Agricultural	Private Fire
5/8"	\$38.78		-
3/4"	46.42		-
1"	76.98	÷	19.40
1-1/2"	153.62	62.40	19.40
2"	243.80	103.14	19.40
3"	490.60	207.56	29.10
4"	691.91	289.06	38.80
6"	1,543.43	645.61	97.00
8"	2,455.55	-	194.00
CONSUMPTI	ON CHARGES		
Charge per h	undred cubic feet of mete	red water use	CO 01
Domestic Dural Davida			Ş5.01
Kural Keside	intial/Limited Agriculture		2.01
First 125 un	iits 		3.81
Over 125 ul		1.31	
Agriculture	(No Dwellings)		0.50
On-Demand			6.08
Temporary			6.25

Table 1.	Current	Water	Rates
I UNIC II	Current	WW CALCE	nucco

The District's water rates include two components:

Fixed Monthly Meter Charges are based on customer class and meter size – These charges recover a portion of the District's fixed costs for providing service and are levied independent of the District's volumetric consumption charges. The District incurs a substantial amount of costs ensuring that water is available and deliverable at all times to meet customer needs upon demand. The Monthly Meter Charge varies by meter size, with larger meters paying higher charges based on the increased capacity needs and demand placed on the water system. The District's fixed Monthly Meter Charges previously generated about 35% of total

rate revenues. However, due to a reduction in water sales in response to the current multiyear drought, fixed charges currently generate a little over 45% of total rate revenues.

- Volumetric Water Consumption Charges billed are based on metered water use Water Consumption Charges differ by customer class and are billed per hundred cubic feet (hcf), with 1 hcf equal to approximately 748 gallons of water. The District's Domestic charge, which is charged to residential and commercial customers, is currently \$3.81 per hcf which equates roughly half a cent per gallon, or about 50 cents per 100 gallons. The District's Limited Agricultural Rate of \$1.31 per hcf equates to roughly 17.5 cents per 100 gallons. The District's Agricultural rate of \$0.50 per hcf equates to less than 7 cents per 100 gallons.
- **Private Fire Service** A limited number of accounts also pay fixed monthly charges for private fire service connections.

Figure 1 shows a history of monthly water bills for a single family residential customer with a 5/8" meters with 10 hcf, 20 hcf, and 30 hcf monthly water consumption. Since 2000, the bill for a single family home with no change in water consumption has increased at the average rate of roughly 5.7% per year.



Figure 1: Historical Monthly Residential Bills without Conservation

However, many customers have substantially cut back on water consumption over the past few years in response to California's drought and the State's mandated restrictions. The reduction in water sales has offset much if not all of the rate increases implemented over the past 5 years. Adjusted for inflation, many customers are paying roughly the same monthly bills as they did 5 years ago, despite the District's rate increases in 3 of the past 5 years.

Figure 2 below shows a history of monthly water bills for domestic customers at various level of water consumption that have reduced water use by 20% to 33% over the past few years. This table more accurately reflects the historical bills of typical residential customers in recent years.



Figure 2: Historical Monthly Residential Bills with Conservation





The District's rates are in the middle range compared to other water agencies in Santa Barbara County. Tables 3 and 4 show surveys of monthly regional water bills for domestic customers with 10 hcf and 20 hcf of monthly water use. Surveys at other levels of water use are included in the appendix to this report.



Figure 3: Survey of Monthly Residential Water Bills at 10 hcf



Figure 4: Survey of Monthly Residential Water Bills at 20 hcf

The following table shows a comparison of regional agricultural water rates. The District's ag rates are substantially lower than those of other regional agencies.

Agency	Fixed Meter Charges		Consumption Charges (\$/hcf)			
SYRWCD ID#1	2"	\$103.14	Ag	\$0.50		
(Ag Rates)	4"	289.06	Limited Ag	1.31		
	6"	645.61		_		
Carpenteria VWD	2"	228.40	Irrigation	1.1.1		
	4"	713.75	Tier 1	1.91		
	6"	1,427.50	Tier 2 (temporary)	2.50		
1	Surcharge	345.00				
Montecito WD	2"	237.84	Ag <870 hcf/acre/year	3.00		
	4"	891.90	Ag >870 hcf/acre/year	5.40		
	6"	1,468.51				
Santa Barbara	2"	164.03	Ag	3.42		
	4"	409.28				
	6"	819.79				
Nipomo CSD	2"	128.42	Ag	3.41		
	4"	385.16	Supplemental Chg	1.00		
	6"	762.43	Total	4.41		
Goleta WD	2"	204.82	Ag	1.86		
	4"	779.95	Drought Surcharge	2.68		
All Annual A	6"	1,722.21	Total	4.54		

Table 2. Regional Ag Water Rates



3 WATER ACCOUNTS, SUPPLY & DEMAND

3.1 Water Accounts

The District provides water service to over 2,600 separate accounts including 2,511 domestic, commercial and on-demand accounts, which include the City of Solvang and two mutual water companies that together serve approximately 2,623 local connections. The District also serves 112 agricultural customers. A small number of water accounts also have private fire service connections.

Pursuant to long-standing District policy, the meter size for each property is based on the size of each parcel served, with larger meters required for larger properties. Almost 98% of domestic, including commercial accounts are served by meters up to 1". Rural Residential/Limited Ag accounts have substantially larger parcels and are served by 1-1/2", 2", or 3" meters; this customer classification applies to larger lots with a residential dwelling unit. The Agricultural customer class is designated for larger commercial agricultural enterprises without residential dwelling units or domestic water use.

Meter Size	Domestic	RR/Ltd Ag	Ag	Solvang	Cachuma Pk	On-Demand	Temp	Subtotal	Fire Svc	Total
5/8"	780	-	-	÷.	-		-	780	5 A.	780
3/4"	616	-	-	¥		-	-	616	1	617
1"	592	-	-		-	-	÷	592	17	609
1-1/2"	13	181	3		-	-	-	197	8	205
2"	27	202	29	÷	-	1	-	259	5	264
3"	5	2	5	-	1	-	1 (Ag)	14	-	14
4"	1	-	47	-	-	1	-	49	29	78
6"	-	-	27	1	-	-	-	28	17	45
8"	-	-	-	1	-	-	÷	1	9	10
Total	2,034	385	111	2	1	2	1	2,536	86	2,622

Table 3. Accounts b	Customer Class	& Meter Size
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Master Meter/On Demand Accounts City of Solvang Rancho Marcelino Water & Service Company Skyline Park & Water Service Company

Local Accounts/Parcels Served 2,178

80

98

RTLE W



3.2 Water Consumption

District water consumption has declined substantially in recent years. Table 3 shows historical water consumption by customer class from 2005 through 2015.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Annual Water Sale	s (hcf)										
Domestic	738,692	777,600	914,557	879,549	842,390	726,724	728,493	760,365	782,136	657,365	549,873
Rural Resid/Ltd Ag	554,615	575,288	677,437	676,130	623,829	533,741	526,498	601,188	619,651	501,110	406,178
Agriculture	771,636	759,465	950,270	968,150	882,572	757,549	689,370	820,127	916,447	808,831	779,394
Solvang	14,162	13,634	13,595	22,040	36,396	40,373	22,708	24,202	46,527	23,030	12,264
Cachuma Park	28,035	28,468	36,050	37,048	33,965	34,311	33,536	43,387	31,745	12,265	11,417
Temporary	1,449	2,525	5,760	3,419	3,116	1,798	1,484	1,756	648	1,417	1,464
On Demand	0	0	0	0	0	0	0	0	5,832	1,237	329
Annual Total	2,108,589	2,156,980	2,597,669	2,586,336	2,422,268	2,094,496	2,002,089	2,251,025	2,402,986	2,005,255	1,760,919
% Annual Change	-15.9%	2.3%	20.4%	-0.4%	-6.3%	-13.5%	-4.4%	12.4%	6.8%	-16.6%	-12.2%
% Change from 201	3									-16.6%	-26.7%
% Change Excluding	Commercial	Ag								-19.5%	-34.0%

Table 4. Historical Water Consumption

California is experiencing one of the most serious droughts on record. On April 1, 2015 the Governor issued an Executive Order directing the State Water Resources Control Board (SWRCB) to implement water conservation regulations to reduce water usage by 25% statewide. The District has implemented a number of measures to comply with the SWRCB's regulations.

The District's domestic, commercial, and rural residential/limited agriculture customers reduced water consumption by 32.5% from 2013 to July 2016, with calendar year-to-date conservation savings of 40% for domestic and commercial customers and 49% for rural residential accounts.

Tables 4 and 5 show historical and projected water consumption by fiscal year. Table 4 shows water consumption by customer class and Table 5 shows consumption by month. Water consumption in 2015/16 was approximately 14.5% lower than the prior fiscal year 2014/15, and 32.7% below water use in calendar year 2013, the State's benchmark year for measuring water conservation.



2	2013 Benchmark	2012/13	2013/14	2014/15	2015/16	% Change	
Water Sales (hcf)							
Domestic	782,136	773,495	763,214	601,225	507,987	-15.5%	
Rural Residential ≤125 (es	st 304,651	309,171	279,916	197,202	134,772	-31.7%	
Limited Ag >125 (est)	315,000	315,000	320,000	248,000	225,000	-9.3%	
Agriculture	916,447	895,973	887,305	807,138	729,505	-9.6%	
Solvang	46,527	24,365	49,888	23,717	8,275		
Cachuma	31,745	33,726	23,361	12,018	10,286		
Temporary	648	651	1,481	1,218	766		
On Demand	5,832	0	6,877	520	264	_	
Total	2,402,986	2,352,381	2,332,042	1,891,038	1,616,855	-14.5%	
Annual Change %			-0.9%	-18.9%	-14.5%		
Change since 2013 Bench	nmark			-21.3%	-32.7%		

Table 5.	Historical	Water	Consumption	by	Fiscal	Year

Table 6. Historical Water Consumption by Month

	2011/12	2012/13	2013/14	2014/15	2015/16
JUL	300,530	299,551	375,609	272,387	217,395
AUG	313,053	353,567	283,142	232,234	204,564
SEP	241,866	251,931	264,655	220,775	149,958
OCT	195,224	232,037	219,404	189,974	166,991
NOV	126,066	158,421	136,852	93,928	104,971
DEC	77,075	45,287	111,722	55,314	90,612
JAN	93,082	40,958	156,427	65,810	35,318
FEB	79,842	56,585	87,831	60,217	60,252
MAR	123,484	127,585	76,904	153,175	52,645
APR	107,892	226,545	148,158	194,902	135,924
MAY	208,325	280,781	227,558	149,304	188,056
JUN	297,606	279,133	242,762	203,018	210,167
TOTAL (HCF	2,164,045	2,352,381	2,331,024	1,891,038	1,616,853
Total AF	4,968	5,400	5,351	4,341	3,712
% Change		8.7%	-0.9%	-18.9%	-14.5%



Figure 5 shows a breakdown of historical water consumption by customer class by calendar year.



Figure 5: Historical Water Consumption by Fiscal Year



Figure 6 shows a history of monthly water consumption by fiscal year.



Figure 6: Historical Water Consumption by Month



Figure 7 shows the same data as Figure 6 with all years compared on a month-to-month basis.



Figure 7: Historical Water Consumption Compared by Month

4 LEGAL REQUIREMENTS & RATE METHODOLOGY

4.1 Constitutional Rate Requirements

The California Constitution includes two key articles that directly govern or impact the District's water rates: Article 10 and Article 13D. The water rates developed in this study were designed to comply with both of these constitutional mandates as well as various provisions of the California Water Code and Government Code that support and add further guidance for implementing these constitutional requirements. In accordance with the constitutional provisions, the proposed rates are designed to a) recover the District's cost of providing service, b) recover revenues in proportion to the cost for serving each customer, and c) promote conservation and discourage waste.

4.1.1 Article 10, Section 2

Article 10, Section 2 of the California Constitution was established by voter-approval in 1976 and requires public agencies to maximize the beneficial use of water, prevent waste, and encourage conservation. Section 2 states that:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

4.1.2 Article 13D, Section 6

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility System Charges such as water, sewer, and garbage rates. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts rates for water, sewer, and garbage service from this voting requirement if the appropriate procedure is followed.

The substantive requirements of Article 13D, Section 6 require the District's water rates to meet the following conditions:

1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.

- 2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.
- 3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- 4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
- 5) No fee or charge may be imposed for general governmental services, such as police or fire services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The water rates derived in this report are based on a cost-of-service methodology that reasonably and equitably apportions costs to each of the District's water rate components.

4.2 Rate-Setting Methodology

The rates developed in this report use a straightforward methodology to establish an equitable system of fixed and variable charges that recover the cost of providing service and fairly apportion costs to each rate component. The general methodology used in this study is summarized on the diagram on the following page.

Cost of Service Rate-Setting Methodology



5.1 Financial Overview

The District is a financially self-supporting agency that relies primarily on revenues from water sales to fund the costs of providing service. The District historically adjusted water rates in accordance with a pre-Proposition 218 adopted 15-year water rate schedule sufficient to maintain the District's financial stability as well as set aside a prudent level of fund reserves for future water supplies, capital projects, and unforeseen events. The District also historically recovered \$750,000 per year in property tax assessments on the value of land within the District. Together, the gradual annual rate increases and tax assessments helped maintain the District's financial health for many years.

In 2011, the District ended its long-standing practice of implementing gradual annual rate adjustments and also suspended its tax assessments as a means to reduce customer costs. The combination of these actions contributed to a substantial decline in financial health, annual budget deficits, and depletion of fund reserves.

In 2013, the District completed a Water Rate Study which was intended to serve as financial recovery plan. Subsequently, although the District approved a series of rate increases, the adopted rate increases were lower than recommended in the rate study to provide financial stability. This action resulted in the continued erosion of the District's financial health.

Additionally, since the governor's declaration of a drought emergency in 2014, water sales revenues have plummeted due to a substantial decrease in water sales as customers have cut back on water consumption in response to the drought. Other water agencies in California have experienced similar reduction in revenue.

The District's financial health has deteriorated over the past four fiscal years leading to substantial annual budget deficits. The District has been able to continue funding operations by reducing expenditures, deferring maintenance projects and programs, and implementing other cost-cutting measures while also drawing down fund reserves.

To restore financial stability, water rates must be set at levels adequate to fund the costs of operating and maintaining the water system, pay for fixed and variable costs related to the District's purchase and production of water supply, meet debt service requirements, and fund capital improvement projects.



5.2 Historical Finances

The following table shows a summary of historical financial results since 2010/11 and includes unaudited estimates for fiscal year 2015/16.

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
REVENUES						
Water Services & Sales	5,011,032	5,372,439	5,531,585	6,889,555	6,215,872	5,922,875
Special Assessments	748,892	5,219	274	626	17	C
Solvang SWP Payment	2,656,830	2,630,941	2,510,824	3,245,931	3,095,118	2,870,556
Other	304,228	205,544	195,732	421,465	225,026	861,700
Total Revenues	8,720,982	8,214,143	8,238,415	10,557,577	9,536,033	9,655,131
EXPENSES						
Operating & Maintenance Exp	penses					
Operations & Maintenance	1,246,682	1,355,774	1,499,356	2,131,642	1,921,347	1,696,597
District SWP Expense	1,296,561	1,592,377	1,456,306	1,553,532	1,732,709	1,476,124
Solvang SWP Expense	2,656,830	2,630,941	2,510,824	3,245,931	3,095,118	2,870,556
General & Administrative	1,741,065	1,643,461	1,834,418	1,770,153	1,905,864	2,163,882
Subtotal	6,941,138	7,222,553	7,300,904	8,701,258	8,655,039	8,207,159
Debt Service						
USBR SOD Repayment	16,998	16,998	16,998	16,998	16,998	16,998
Series 2004A Bonds	305,199	312,049	308,666	316,225	310,733	312,925
Subtotal	322,197	329,047	325,664	333,223	327,731	329,923
Non-Operating Expenses						
Special Studies	63,886	178,291	191,551	647,996	468,551	48,755
Special Legal & Eng Svcs	191,513	287,456	133,969	249,411	416,604	189,035
Non-Recurring/Other	<u>0</u>	<u>0</u>	<u>0</u>	Q	1,806	149,908
Subtotal	255,399	465,747	325,520	897,407	886,962	387,698
Capital Improvements						
CIP Expenditures	290,528	197,835	517,831	568,587	598,703	1,207,699
Chrome 6 Planning & CIP	<u>0</u>	<u>0</u>	<u>0</u>	Q	<u>0</u>	291,099
Subtotal	290,528	197,835	517,831	568,587	598,703	1,498,797
Total Expenses	7,809,262	8,215,182	8,469,919	10,500,475	10,468,434	10,423,577
Revenues Less Expenses	911,720	(1,039)	(231,504)	57,102	(932,401)	(768,446)
Coverage on District Bonds	5.52	3.01	2.88	5.57	2.69	4.39
CCWA Covg, w/o Bond Rsrvs	1.45	1.23	1.24	1.39	1.18	1.33
CCWA Covg, with Bond Rsrvs	1.71	1.48	1.49	1.60	1.39	1.57

Table 7. Historical Financial Results



5.3 Reserves

Maintaining a prudent minimal level of reserve funds provides a financial cushion for dealing with unanticipated and emergency expenses, revenue shortfalls, and mismatches in the timing of revenues and expenditures. The District has historically maintained a prudent level of reserve funds which has enabled the District to continue operating in recent years despite substantial annual budget deficits.

The following table shows reserves as of June 30, 2015 and 2016. As of June 30, 2016, the District had about \$1.7 million remaining in operating and capital reserves (excluding the \$3 million in designated State Water Project Reserves). This amount is expected to be further depleted in the current fiscal year as a substantial budget deficit is projected for 2016/17.

June 30	June 30
2015	2016
\$1,403,594	\$622,735
207,584	-
1,477,016	1,087,774
3,088,194	1,710,509
3,000,000	3,000,000
6,088,194	4,710,509
	June 30 2015 \$1,403,594 207,584 <u>1,477,016</u> 3,088,194 3,000,000 6,088,194

Table 8. Reserves

Source: Balance Sheet by Net Position Category (Detailed)



5.4 Financial Challenges

The District is facing a number of financial challenges that will require an increase in District revenues in upcoming years. Key drivers of future revenue increases are summarized as below.

5.4.1 Eliminate Annual Budget Deficit

Revenue increases are needed to eliminate the annual budget deficits and restore financial stability. As noted, the District experienced over \$1.7 million of budget deficits in the past two fiscal years and is projecting an additional substantial deficit in the current fiscal year.

5.4.2 Chromium 6 Treatment Project

Chromium 6 (hexavalent chromium) is a naturally occurring compound that is common in groundwater. While the District's water supply has historically met all regulatory requirements, some of the District's groundwater supply has been found to have levels of Chromium 6 that exceed strict, new statewide regulatory limits. The District needs to comply with the new regulations by January 1, 2020 or face the potential for permit violations and substantial penalties. In order to meet the new regulations, the District evaluated a number of project alternatives and is moving forward with a new Chromium 6 treatment facility and subsequent water blending project. Total project costs are estimated at \$12.7 million including a) an initial treatment facility, b) a Phase 2 treatment plant expansion including construction of a new groundwater well, and c) a future blending facility as shown on the following table.

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Chome 6 Treatment	\$1,800,000	\$2,850,000	\$2,850,000					\$7,500,000
Phase 2 TP Expn/Well				1,000,000	1,200,000			2,200,000
Blending						1,500,000	1,500,000	3,000,000
Total	1,800,000	2,850,000	2,850,000	1,000,000	1,200,000	1,500,000	1,500,000	12,700,000
Cumulative	1,800,000	4,650,000	7,500,000	8,500,000	9,700,000	11,200,000	12,700,000	

Table 9. Projected Chromium 6 Project Expenditures

The following table shows debt service estimates for a proposed issuance of long-term debt to a) finance \$8.5 million of initial costs for the Chromium-6 Treatment facility, and b) refinance the District's outstanding Series 2004A Bonds for savings.



	Refinancing of	\$8.5M Chrome-6	
Tota	Series 2004 Bonds	Project Funding	
\$110,00	\$15,000	\$95,000	2016/17
668,00	299,000	369,000	2017/18
665,00	296,000	369,000	2018/19
660,00	291,000	369,000	2019/20
645,00	276,000	369,000	2020/21
585,00	216,000	369,000	2021/22
585,00	216,000	369,000	2022/23
530,000		530,000	2023/24
530,000		530,000	2024/25
530,000		530,000	2025/26
530,000		530,000	2026/27
530,000		530,000	2027/28
530,000		530,000	2028/29
530,000		530,000	2029/30
530,000		530,000	2030/31
530,000		530,000	2031/32
530,000		530,000	2032/33
530,000		530,000	2033/34
530,000		530,000	2034/35
530,000		530,000	2035/36
530,000		530,000	2036/37
530,000		530,000	2037/38
530,000		530,000	2038/39
530,000		530,000	2039/40
530,000		530,000	2040/41
530,000		530,000	2041/42
530,000		530,000	2042/43
530,000		530,000	2043/44
530,000		530,000	2044/45
530,000		530,000	2045/46
530,000		530,000	2046/47

Table 10. Estimated Debt Service

5.4.3 Infrastructure Repairs & Replacements

In addition to the initial Chromium 6 Project, the District also needs ongoing funding for repair, rehabilitation, and replacement of aging pipelines and other essential infrastructure. The

financial projections including \$915,000 of funding for infrastructure improvements in 2016/17 including \$800,000 for the Zone 1 reservoir relining project. Going forward, the projections include \$500,000 per year for future infrastructure repairs and replacements with future costs escalating at the annual rate of 3% to account for construction cost inflation.

5.4.4 Decline in Water Sales

In recent years, water sales revenues have plummeted due to a substantial decrease in water sales as customers have cut back on water use in response to the drought. Water sales are currently over 30% lower than pre-drought norms. Reduced water sales put upward pressure on rates as the District relies on usage-based water consumption charges to fund a significant portion of its fixed annual expenses.

5.4.5 CCWA Wholesale Water Rate Increases

The District relies on imported State Water Project water for a portion of its supply portfolio. CCWA projects its wholesale water charges will increase in upcoming years, partially in response to increases in the cost of water supply from the Department of Water Resources (DWR). The following table shows a 10-year projection of water sales and projected expenses from CCWA's 2016/17 Budget. Roughly 80% of annual charges are fixed costs that must be paid regardless of the volume of water deliveries. The CCWA table conservatively estimates a lower level of water deliveries than the District's anticipated full allotment of 500 AF of Table A and 200 AF of Drought Buffer deliveries. The table also accounts for savings attained by CCWA's issuance of 2016 Refunding Revenue Bonds, which occurred after CCWA developed its financial projections.



	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
SYRWCD ID1										
Water Deliveries										
Table A Deliveries (AF)	250	250	250	250	250	250	250	250	250	250
Exchange Deliveries (AF)	2,614	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
Total	2,864	2,830	2,830	2,830	2,830	2,830	2,830	2,830	2,830	2,830
CCWA Charges										
CCWA Fixed Charges	639,000	731,000	753,000	776,000	799,000	823,000	586,000	611,000	638,000	665,000
CCWA Variable Charges	279,000	274,000	282,000	291,000	299,000	308,000	317,000	327,000	337,000	347,000
CCWA Bond Payments & O&M Credits	89,000	335,000	333,000	333,000	333,000	332,000	0	0	0	0
CCWA 2016 Refi Bond Savings (est)	(16,000)	(32,000)	(32,000)	(32,000)	(32,000)	(32,000)				
Subtotal	991,000	1,308,000	1,336,000	1,368,000	1,399,000	1,431,000	903,000	938,000	975,000	1,012,000
DWR Charges										
DWR Fixed Charges	425,000	432,000	421,000	418,000	431,000	434,000	444,000	429,000	429,000	420,000
DWR Variable Charges	49,000	92,000	96,000	101,000	106,000	112,000	118,000	124,000	130,000	136,000
Future Bay-Delta Conservation Plan		2		-	tbd	tbd	tbd	tbd	tbd	tbd
Subtotal	474,000	524,000	517,000	519,000	537,000	546,000	562,000	553,000	559,000	556,000
Total Charges	1,465,000	1,832,000	1,853,000	1,887,000	1,936,000	1,977,000	1,465,000	1,491,000	1,534,000	1,568,000
Blended Cost per AF	512	647	655	667	684	699	518	527	542	554

Table 11. CCWA Cost Projections for the District

Source: Central Coast Water Authority, Financial Projections in 2016/17 Budget (page 249 & 250) and estimated CCWA bond refinancing numbers.

The District's payment obligations for its share of CCWA Bond Payments will end after final maturity of the bonds in 2021/22. While this will reduce the District's future funding obligations, these reduced costs may be more than offset by new funding requirements related to the potential Bay-Delta Conservation Plan.

Contracts with State Water Project contractors will likely need to be renewed and renegotiated in order to facilitate financing for the Bay-Delta Conservation Plan. This would likely result in a large increase in contractually required costs for water supply from the State Water Project.

As a CCWA contractor, the District contracts a portion of its State Water Project allocation to the City of Solvang pursuant to a Water Supply Agreement. The following table shows a projection of CCWA costs for the City of Solvang. These costs are passed through to Solvang.



	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
SOLVANG										
Water Deliveries (AF)	1,251	1,251	1,251	1,251	1,251	1,251	1,251	1,251	1,251	1,251
CCWA Charges										
CCWA Fixed Charges	347,000	390,000	401,000	413,000	426,000	438,000	420,000	433,000	447,000	462,000
CCWA Variable Charges	122,000	121,000	125,000	128,000	132,000	136,000	140,000	145,000	149,000	153,000
CCWA Bond Payments & O&M Credits	871,000	892,000	888,000	887,000	886,000	885,000	0	0	0	0
CCWA 2016 Refi Bond Savings (est)	(83,000)	(85,000)	(84,000)	(84,000)	(84,000)	(84,000)				
Subtotal	1,257,000	1,318,000	1,330,000	1,344,000	1,360,000	1,375,000	560,000	578,000	596,000	615,000
DWR Charges										
DWR Fixed Charges	1,090,000	1,226,000	1,191,000	1,179,000	1,221,000	1,230,000	1,260,000	1,211,000	1,214,000	1,185,000
DWR Variable Charges	198,000	309,000	325,000	341,000	358,000	377,000	396,000	416,000	437,000	459,000
Future Bay-Delta Conservation Plan	-	-	-	·*	tbd	tbd	tbd	tbd	tbd	tbd
Subtotal	1,288,000	1,535,000	1,516,000	1,520,000	1,579,000	1,607,000	1,656,000	1,627,000	1,651,000	1,644,000
Total Charges	2,545,000	2,853,000	2,846,000	2,864,000	2,939,000	2,982,000	2,216,000	2,205,000	2,247,000	2,259,000
Cost per AF	2,034	2,281	2,275	2,289	2,349	2,384	1,771	1,763	1,796	1,806

Table 12. CCWA Cost Projections for Solvang

Source: Central Coast Water Authority, Financial Projections in 2016/17 Budget (pages 247 & 248)

5.4.6 Compliance with Bond Covenants

The District has a legal obligation to comply with covenants established to secure debt repayment for outstanding debt obligations. Pursuant to contractual agreements with each agency, the District is legally obligated to raise rates, fees, and tax assessments as needed to generate net revenues (revenues remaining after paying operating expenses) that are adequate to fund 125% of the contractual payments owed respectively to CCWA and COMB.

CCWA Bonds & Contractual Payments

The District's payments to CCWA are secured by a Water Supply Agreement that secures the District's repayment of its share of CCWA's operating and administrative expenses, and debt service payments. Pursuant to this Agreement, the District is required to set rates and charges adequate to fund 125% of the District's total contract payments to CCWA.

The District's contract payments to CCWA include payments for both: a) the District's contractual water supply; and b) contractual water supply for the City of Solvang, which is not a CCWA contract agency. As a CCWA contract agency, the District maintains contractual rights for water supply from CCWA on behalf of Solvang and is directly obligated to pay CCWA for Solvang's share of CCWA costs. The District in turn, passes these costs through to Solvang. However, the District is responsible for meeting its 125% coverage requirements for all contractual payments to CCWA, including pass-through payments made on behalf of Solvang.

To help meet its 125% coverage requirement, the District and the City have funded a rate coverage reserve fund with CCWA that allows the District to meet up to 25% of the 125%

coverage requirement with fund reserves held by CCWA. The District also maintains a rate coverage reserve fund on behalf of Solvang, which was funded by Solvang. Currently, the District maintains rate coverage reserve funds of approximately \$419,000 for itself, and about \$608,000 on behalf of Solvang.

The rate coverage reserve funds can potentially be applied to the District's contractual payments to CCWA (on behalf of itself and Solvang) when the CCWA bonds reach final maturity in fiscal year 2021/22.

Series 2004A Bonds & 2016 Refunding Certificates of Participation

The District's payments for its share of the Series 2004A bonds is secured by two Joint Participation Agreements that secure payments by both: a) the District's annual net revenues and rates as well as; b) the District's tax assessments. Under the Joint Participation Agreements, the District is required to set rates and tax assessments that are adequate to generate net revenues sufficient to pay 125% of contractual payments. The District's legal obligations for the Series 2004 Bonds will terminate and be replaced by new legal covenants when the District issues its anticipated 2016 Certificates of Participation to refund the outstanding Series 2004 Bonds and help finance the District's Chromium-6 water treatment facility.

5.4.7 Replenish Reserves

The District has drawn down its reserves by approximately \$1.7 million over the past two fiscal years and anticipates additional depletion of reserves in the current fiscal year. The District may experience additional deficits in upcoming years until rates are phased in to adequate levels to fully support the District's revenue requirements. Subsequently, the ongoing phase-in of additional rate increases would enable the District to eventually start replenishing reserves. However, the District has a few options for restoring reserves sooner including:

- Increase the tax assessment to generate additional revenues.
- Issue additional debt to help finance other District capital improvements over the next few years. For example, the District could opt to issue an additional \$1 to \$2 million of bonds when it issues debt for the Chromium 6 treatment facility. The additional funding would enable the District to retain funds it otherwise would have spent on capital projects in the near term at a cost of approximately \$65,000 per year of additional debt service for each \$1 million of additional funding.
- Front-load the rate increases more than currently proposed.



5.4.8 Ongoing Cost Inflation

The District faces ongoing operating cost inflation due to annual increases in a range of expenses including materials, utilities, insurance, supplies, etc. In addition to other revenue increases, small annual rate increases are generally needed to keep revenues aligned with cost inflation and prevent rates from falling behind the cost of providing service.

5.5 Water Enterprise Financial Projections

BWA developed 10-year cash flow projections to determine the District's annual revenue requirements and revenue increases. The financial projections incorporate the latest information available as well as a number of reasonable and slightly conservative assumptions developed with input from the District. Key assumptions include:

WATER SALES & PURCHASES

- Water sales are based on actual sales from 2015/16. The projections assume future water sales remain at current low levels. Any future rebound in water sales would increase revenues and either provide the District with some additional funding for capital needs and replenishment of reserves, or potentially enable the District to implement a lower level of rate increases in future years.
- Wholesale water purchases and payments to CCWA are based on CCWA's 10-year projections adjusted to account for savings attained by CCWA's issuance of 2016 refunding bonds. As noted, roughly 80% of these payments are fixed and do not vary with changes in actual water supply.

REVENUE PROJECTIONS

- Future revenues assume future rate increases go into effect on February 1, 2017 and January 1 of each future year.
- Water sales are based on 2015/16 consumption levels and are projected to gradually increase by 3% per year in each of the next 4 fiscal years, from 2017/18 through 2021/22, resulting in a total rebound in consumption of roughly 12.5%.
- Tax assessments are re-established at the annual level of \$750,000 in 2016/17 and gradually increase to \$1,250,000 per year over 5 years through 2021/22. These levels of assessments are substantially lower than the District's appropriations limit, which is currently approximately \$1.7 million and is projected to increase to about \$2.0 million over the next 5 years, and is roughly equal to the District's historical level of \$750,000 adjusted for inflation. The District retains flexibility to change the level of assessments in response to future funding needs.



- Interest earnings are projected based on the beginning fund balance projected each year and projected interest rates as shown on the table.
- The projections assume Solvang continues to pay for its share of CCWA contractual payments on a pass-through basis.
- Capital facilities fees from new development are projected at \$50,000 per year.
- Other miscellaneous revenues are projected at \$50,000 per year starting 2017/18.

EXPENSE PROJECTIONS

- District operating and maintenance expenses are based on the 2016/17 budget.
- CCWA expenses projected based on CCWA's 10-year budget projections adjusted to account for reduced debt service due to CCWA's recent refinancing of outstanding bonds.
- Costs for USBR Irrigation or Agricultural water supply is projected to increase from \$105 per AF in 2016/17 to \$505 per AF starting 2017/18. In prior years, USBR's Irrigation rate was maintained at low levels as certain costs were deferred from recovery for a number of years
- Infrastructure Maintenance expenses are projected to increase from current, temporarily depressed levels, to \$200,000 per year starting 2017/18.
- The projections include a preliminary placeholder estimate of an additional \$500,000 per year in new costs for Chromium 6 treatment and operations starting 2019/20.
- Operating and maintenance expenses are based on the District's 2016/17 budget.
- Future operating cost inflation is projected at 4% per year.
- Debt service for the Chromium 6 project assumes issuance of 30-year bonds to finance the initial \$8.5 million Chromium 6 Treatment Facility, associated infrastructure and replacement wells. Debt service is layered over outstanding debt in order to result in more level annual debt service in future years. Costs and timing of a) the Chromium 6 treatment improvements, b) future Phase 2 expansion with new well, and c) future blending infrastructure are shown on the table.
- Infrastructure repairs and replacements are projected at \$500,000 per year escalating at the annual rate of 2%.
- The projections include \$200,000 per year for special legal costs and other non-operating costs.

MINIMUM RESERVE TARGET

 The projections include a *minimum* reserve target equal to 40% of annual operating, maintenance and debt service costs plus \$1 million for emergency capital reserves. Maintaining a prudent level of reserves is an important component of financial management and provides the District with a financial cushion for dealing with revenue shortfalls, unanticipated and emergency expenditures, and mismatches in the timing of revenues and expenses. This is a minimum target level; the District has historically aimed to maintain a higher level of reserves.

The table on the following page shows 10-year cash flow projections incorporating the assumptions described above. The projections shown on the table are designed to fund the District's cost of providing service while aiming for future balances budgets and maintenance of prudent minimal levels of fund reserves each year.



	Santa	Ynez Rive	r Water Co	nservation	District ID#	1 Cash Flov	v Projection	IS	-	
	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/20
Effective Date	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Target Rate Revenue Adjustment	15%	15%	5%	5%	5%	0%	0%	0%	0%	09
Annual % Change in Water Sales	0.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Interest Earnings Rate	0.5%	0.75%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.09
District Cost Escalation		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.09
Beginning Fund Balances	\$4,710,000	\$4,120,000	\$3,979,000	\$4,615,000	\$5,254,000	\$5,200,000	\$4,801,000	\$4,700,000	\$5,438,000	\$5,872,000
REVENUES										
Water Sales & Services	6.020.000	7.015.000	7.861.000	8,456,000	9.089.000	9,258,000	9.258.000	9,258,000	9,258,000	9,258,000
Solvang SWP Passtbrough	2,525,000	2,853,000	2 846 000	2 864 000	2,939,000	2 982 000	2 216 000	2 205 000	2 247 000	2 259 000
Special Assessments	750.000	875.000	1 000 000	1 125 000	1 250 000	1 250 000	1 250 000	1 250 000	1 250 000	1 250 000
Interest Farnings	24,000	31,000	40,000	45 000	53 000	57 000	1,250,000	1,250,000	54.000	50,000
Capital Excilition & Polated Econ	24,000	51,000	40,000	40,000	50,000	52,000	48,000	47,000	54,000	59,000
Capital Facilities & Related Fees	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Other/Miscellaneous	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Total Revenues	9,419,000	10,874,000	11,847,000	12,591,000	13,431,000	13,642,000	12,872,000	12,860,000	12,909,000	12,926,000
Bond Proceeds for Chrome 6 Projects	1,800,000	2,850,000	2,850,000	1,000,000						_
EXPENSES Operating & Maintenance Sources of Supply										
CCWA/DWB Eived Charges ID-1	1.064.000	1 163 000	1 174 000	1 194 000	1 230 000	1 257 000	1 030 000	1 040 000	1 067 000	1 085 000
CCWA/DWR Haed Charges ID-1	278,000	266,000	279 000	202,000	1,230,000	1,237,000	435,000	451 000	1,007,000	1,085,000
CCWA/DWR Variable Charges ID-1	526,000	300,000	378,000	332,000	403,000	420,000	435,000	451,000	467,000	483,000
CCWA Bonds/Credits ID-1	89,000	335,000	333,000	333,000	333,000	332,000	0	1 205 200	0	
CCWA/DWR Charges/CCWA Bonds Solvang	2,545,000	2,853,000	2,846,000	2,864,000	2,939,000	2,982,000	2,216,000	2,205,000	2,247,000	2,259,000
Cachuma Project/USBR Water Supply	500,000	653,000	653,000	653,000	653,000	653,000	653,000	653,000	653,000	653,000
Grndwtr/State Licenses/Cloud Seeding	58,000	60,000	62,000	64,000	67,000	70,000	73,000	76,000	79,000	82,000
Infrastructure Maintenance	48,000	200,000	208,000	216,000	225,000	234,000	243,000	253,000	263,000	274,000
Pumping/Treatment	651,000	677,000	704,000	732,000	761,000	791,000	823,000	856,000	890,000	926,000
Transmission/Distribution	923,000	960,000	998,000	1,038,000	1,080,000	1,123,000	1,168,000	1,215,000	1,264,000	1,315,000
General & Administrative	2,174,000	2,261,000	2,351,000	2,445,000	2,543,000	2,645,000	2,751,000	2,861,000	2,975,000	3,094,000
Special Studies/Legal/Engin Services	92,000	100,000	104,000	108,000	112,000	116,000	121,000	126,000	131,000	136,000
Chromium 6 Operating & Maintenance	0	0	0	500,000	520,000	541,000	563,000	586,000	609,000	633,000
Subtotal	8,472,000	9,628,000	9,811,000	10,539,000	10,868,000	11,164,000	10,076,000	10,322,000	10,645,000	10,940,000
District Debt Service										
USBR SOD/Irrig Repayment	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,00
Series 2004 Bonds	290,000	0	0	0	0	0	0	0	0	
Series 2016 Bonds, Befl 2004 & Chrome 6	110.000	670.000	665,000	660.000	645.000	585.000	585.000	530,000	530.000	530.00
Subtotal	417.000	687.000	682,000	677.000	662.000	602.000	602.000	547.000	547.000	547.000
Capital & Non-Operating										
Capital Rehab/Replacement (+2%)	915 000	500.000	510.000	520.000	530.000	541 000	552 000	1 000 000	1 020 000	1 040 00
Legal (Other Nep Operating	205,000	300,000	308,000	316,000	330,000	341,000	342,000	252,000	1,020,000	274.000
Chromium & Broject Evron ditures	1 200,000	200,000	208,000	210,000	225,000	234,000	243,000	255,000	203,000	274,00
Chromium o Project Expenditures	1,800,000	2,850,000	2,850,000	1 000 000	1 200 000	0	0	0	U	
Phase 2 Chrome 6 IP Expansion/Well	0	0	0	1,000,000	1,200,000	0	0			
Phase 3 Blending	0	0	0	0	0	1,500,000	1,500,000	0	0	
Subtotal	2,920,000	3,550,000	3,568,000	1,736,000	1,955,000	2,275,000	2,295,000	1,253,000	1,283,000	1,314,000
Total Expenses	11,809,000	13,865,000	14,061,000	12,952,000	13,485,000	14,041,000	12,973,000	12,122,000	12,475,000	12,801,000
Revenues Less Expenses	(590,000)	(141,000)	636,000	639,000	(54,000)	(399,000)	(101,000)	738,000	434,000	125,00
Ending Fund Balances	4,120,000	3,979,000	4,615,000	5,254,000	5,200,000	4,801,000	4,700,000	5,438,000	5,872,000	5,997,00
Min Fund Reserve Target (40%0&M&D+\$1M)	4,556,000	5,126,000	5,197,000	5,486,000	5,612,000	5,706,000	5,271,000	5,348.000	5,477,000	5,595,00
Debt Svc Coverage on District Debt	2.27	1.81	2.99	3.03	3.87	4.12	4.64	4.64	4.14	3.6
Debt Svc Cvg on CCWA Bonds w/o Bond Bene	1 74	1 26	1 43	1 43	1.52	1.50				5.0
Debt Suc Cug on CCWA Bonds, w/ bond Raivs	1.40	1.40	1.45	1.45	1 72	1.70				
Debr Svc Cvg on CCVVA Bonds, w/ Bond Ksrvs	1.49	1.48	1.05	1.04	1.73	1.70				

5.6 Projected Rate Revenue Increases

The following table shows projected overall increases needed to meet the District's annual revenue requirements. The proposed increases are phased in over 5 years. The projections assume the rate increases would go into effect starting on February 1, 2017, and each year thereafter on January 1.

	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1
	2017	2018	2019	2020	2021
Target Rate Revenue Increase	15%	15%	5%	5%	5%

Table 14. Projected Overall Rate Revenue Increases

Due to modifications to the rate structure, impacts to customers' monthly water bills may vary widely based on customer class and water use. Note that water consumption typically varies due to seasonal variations in weather and/or other factors. Hence a single customer could face a range of impacts throughout the year depending on their variations in monthly water use.

In future years, the District can re-evaluate its future rate and revenue requirements based on future updates of long-term financial projections. The District always has the flexibility to implement rates that are lower than those adopted pursuant to the Proposition 218 process. However, future rates cannot exceed levels adopted via the Proposition 218 process without going through the Proposition 218 process for any additional increases. Rates adopted pursuant to Proposition 218 process are essentially future rate caps.

6 RATE ANALYSIS

6.1 Rate Derivation

The California Constitution does not give agencies leeway to arbitrarily set rates purely based on policy preferences. Instead, it provides agencies with flexibility to implement rates within a framework established by Articles 10 and 13D. Together, these Articles establish that rates should both a) discourage waste and encourage conservation of water, and b) not exceed the costs of service attributable to each parcel or customer.

In reality, many costs of providing service do not exclusively tie in to specific components of an agency's rate structure; some costs can be attributed to different components of an agency's rate structure based on a range of reasonable approaches. For example, costs for water system administration, debt service, and capital improvements can reasonably be treated as a) fixed annual costs that should be recovered from fixed charges, b) costs related to providing water supply and system capacity to meet customer demand and therefore costs that should be recovered from fixed on each customer's water use, or c) costs that can be recovered by both fixed and variable rates, a middle-road approach. Likewise, costs related to providing ongoing water service to the District's domestic customers 24/7 on demand, differs from costs related to providing interruptible service to agricultural customers, who the District can stop supplying if ever needed. The differences between permanent and interruptible service can be quantified via a range of perspectives and reasonable approaches.

Ultimately, there is no single correct way to allocate or attribute costs. Hence, five similar agencies may have five different rate structures provided each agency can establish a reasonable cost basis for their own particular rate structure within the parameters of meeting the various requirements of the California Constitution.

While there is no single correct approach for cost attribution and rate-setting, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency within the parameters of having a reasonable cost basis. The rates developed in this report are designed to achieve the District's policy preferences while complying with the requirements of the California Constitution.

The District's service requirements vary by customer type. This in turn has an impact on the costs of providing service to each customer. The District serves a few types of customers including:



- Domestic These customers include residential, commercial, and institutional accounts. The District provides these customers with permanent ongoing service to meet health and safety requirements and customer needs upon demand.
- Agricultural These customers include commercial agricultural enterprises. These
 customers typically only use water on a seasonal basis, typically 6 to 8 months per year.
 Water service to these customers is interruptible; the District can temporarily terminate
 water service if ever needed, such as during supply shortages. Additionally, agricultural
 use provides some groundwater recharge, which is a benefit to the District.
- Rural Residential/Limited Ag These customers are residential accounts on large lots that sometimes use water for limited agricultural purposes.

The cost-recovery allocations developed in this report reflect the costs for serving each type of customer class and account for cost-differences for domestic vs. agricultural water supplies and operations considering ag customers are only operational approximately 60% of the year and receive interruptible water service that can be shut off if ever needed.

The District also serves a limited number of special customers as follows.

- On-Demand Customers These customers serve their own local service areas and require access to District water supply on an uninterruptible basis to supplement other sources of supply. Although these customers have historically only relied on the District for limited amounts of water purchases most years, the District incurs substantial costs maintaining the operational and water supply capacity to serve these customers on demand. Unlike the District's water service contract accounts, which pay charges based on the number and type of end users in reflection of the underlying demand placed on the single "master meter" connection, which is substantially lower. Additionally, these customers never paid connection fees to buy-in for their share of District infrastructure based on their potential actual demand that could be placed on the District.
- Temporary Customers These customers do not become ongoing District customers and do no pay any connection fees since they only require a temporary water service connection, such as for a construction meter. The rates charged to these customers should be substantially higher in order to ensure adequate cost recovery for District infrastructure and water supply.
- Cachuma Park This account receives untreated water from the District directly from Lake Cachuma and has historically paid the District a cost-of-service rate that reflects the District's expenses for providing the water supply.

The cost-recovery allocations developed in this report reflect the costs for serving each type of customer class and account for cost-differences for domestic vs. agricultural water supplies and operations considering ag customers are only operational approximately 60% of the year and receive interruptible water service that can be shut off if ever needed.

The following tables calculate rates over the next five years through fiscal year 2020/21. In order to help minimize the annual impact due to overall rate increases and rate structure modifications, rates in intervening years are phased in from current levels to the proposed levels calculated for 2020/21 based on annual revenue requirements each year.

6.1.1 Fixed vs. Variable Revenue Recovery

Table 15 allocates costs projected for 2020/21 for recovery from the District's fixed vs. variable rates. Key cost-recovery allocations are summarized as follows:

- Variable costs of water supply are allocated for 100% recovery from variable water rates to ensure that the District's water consumption charges recover the variable costs of obtaining water supply.
- Most other costs are allocated for a balanced recovery of 40% to 50% from fixed meter charges and 50% to 60% from water consumption charges. This ensures a reasonable level of revenue stability and also reflects that although most of these costs are fixed costs that do not vary based on water consumption, it is also reasonable and equitable to allocate and recover these costs based on actual water use.



	Projected	Cost Reco	overy %	Cost Red	Recovery \$	
	2020/21	Fixed	Variable	Fixed	Variable	
EXPENSES						
Operating & Maintenance						
Sources of Supply						
CCWA: DWR Fixed Charges, District	788,000	50%	50%	394,000	394,000	
CCWA: DWR Variable Charges	264,000	0%	100%	0	264,000	
CCWA: Cachuma Exchange Fixed	442,000	50%	50%	221,000	221,000	
CCWA: Cachuma Exchange Variable	141,000	0%	100%	0	141,000	
District Share of CCWA Bonds	333,000	50%	50%	166,500	166,500	
Solvang CCWA/DWR Charges	pass-through	-	-	-	4	
Cachuma Project/USBR Supply	653,000	0%	100%	0	653,000	
Grndwtr/State Licenses/Cloud Seeding	67,000	40%	60%	26,800	40,200	
Infrastructure Maintenance	225,000	40%	60%	90,000	135,000	
Pumping/Treatment	761,000	0%	100%	0	761,000	
Transmission/Distribution	1,080,000	40%	60%	432,000	648,000	
General & Administrative	2,543,000	50%	50%	1,271,500	1,271,500	
Special Studies/Legal/Engin Services	112,000	40%	60%	44,800	67,200	
Chromium 6 Operating & Maintenance	520,000	0%	100%	0	520,000	
Subtotal	7,929,000	33%	67%	2,646,600	5,282,400	
District Debt Service						
USBR SOD Repayment	17,000	40%	60%	6,800	10,200	
2016 Bonds - Refi of Series 2004A Bonds	220,000	40%	60%	88,000	132,000	
2016 Bonds - Chrome 6 Funding (\$8.5M)	425,000	40%	60%	170,000	255,000	
Subtotal	662,000	40%	60%	264,800	397,200	
Capital & Non-Operating						
Capital Rehab/Replacement	530,000	40%	60%	212,000	318,000	
Legal/Other Non-Operating	225,000	40%	60%	90,000	135,000	
Chromium 6 Project Expenditures	debt financed	-		-	-	
Phase 2 Chr 6 Expn/Other (Target)	1,000,000	40%	60%	400,000	600,000	
Subtotal	1,755,000	40%	60%	702,000	1,053,000	
Total Expenses	10,346,000	35%	65%	3,613,400	6,732,600	
NET ELINDING REQUIDED EDOM WATED D	ATES					
Total Expenses	10 346 000	35%	65%	3,613,400	6 732 600	
Less Tax Assessments	(1,250,000)	35%	65%	(437 500)	(812 500)	
Less Other Funding Sources	(157 000)	100%	0%	(157,000)	012,000	
Contingency/Contrib to Fund Reserves	100,000	40%	60%	40,000	60,000	
Net Funding Reg't from Water Rates	9,039,000	33.8%	66.2%	3,058,900	5,980,100	

Table 15. Fixed vs. Variable Revenue Recovery

Excludes capital improvement projects funded by debt, but includes associated debt service.



6.1.2 Fixed Rate Recovery

Costs allocated for recovery from the District's fixed charges are further allocated for recovery from the District's domestic rates vs. interruptible agricultural rates as shown on Table 16. Key fixed cost-recovery allocations are summarized as follows:

- Costs related to domestic water supplies are allocated for recovery from domestic charges and costs related to agricultural supplies are allocated for recovery from ag charges.
 - Costs related to water supply from California's Department of Water Resources (DWR) is 100% for domestic purposes.
 - Costs related to Cachuma Exchange/USBR supply is allocated based on the District's anticipated allocation of USBR water supply requests at 67% for domestic supply and 33% for agricultural supply.
 - Chromium 6 treatment facilities and operations are required to meet stringent new drinking water regulations and hence are allocated for recovery from domestic water rates.
- General and Administrative costs are allocated to domestic and ag customers based on a weighted average of a) number of accounts, and b) meter equivalents adjusted to reflect that ag customers are typically in operation approximately 60% of the year.
- Most other operating and capital costs are allocated for recovery based on a weighted allocation that accounts for a) the number of domestic vs. agricultural meter equivalents, adjusted to reflect that ag customers are typically in operation or only approximately 60% of the year.

The costs allocated for recovery from domestic vs. agricultural customers are subsequently divided by the number of domestic and agricultural meter equivalents, respectively, to determine the base fixed meter charges for each type of account. The number of meter equivalents for a given meter size is based on the capacity of each meter in relation to a 5/8-inch domestic meter, or 1-1/2-inch agricultural meter. For example, a 1-inch meter has two times the capacity of a 5/8-inch meter and hence is assigned the equivalent capacity and charge of two 5/8-inch meters.

Table 17 calculates the number of meter equivalents for domestic and agricultural accounts.

Table 18 calculates fixed meter charges for each year through 2020/21. The table phases in meter charges over the next 5 years to a targeted level of a little under 34% of total rate revenue recovery based on fixed rate cost-recovery allocation previously calculated.

Total Domestic+ Ag 2,424 111 2,535 Accounts % of Total 4% 96% Meter Equivalents (5/8") 5,191 2,278 7,469 Adjustment to Account for Interruptible & Partial Year Svc 100% 60.0% Adjusted Meter Equivalents 5,191 1,367 6,558 % of Total 79.2% 20.8% 100.0% Water Demand 800,000 1,800,000 1,000,000 % of Total 55.6% 44.4% 100.0% 12.6% 100.0% 1/2 Accounts & 1/2 Adjusted Meter Equivalents % 87.4% Fixed % **Fixed** Rate Cost Recovery % Cost Recovery \$ Recovery **Cost Recovery** Domestic Ag Domestic Ag FIXED RATE COST RECOVERY **Operating & Maintenance Expenses** Sources of Supply CCWA/DWR Fixed Charges, District 50% 394,000 100.0% 0.0% 394,000 0 CCWA/DWR Variable Charges 0% 0 CCWA: Cachuma Exchange Fixed 50% 221,000 67.0% 33.0% 148,070 72,930 CCWA: Cachuma Exchange Variable 0% n 0 **District Share of CCWA Bonds** 50% 166,500 100.0% 0.0% 166,500 Solvang CCWA/DWR Charges pass-through Cachuma Project/USBR 0% 0 Grndwtr/State Licenses/Cloud Seeding 26,800 70.0% 30.0% 18,760 8,040 40% Infrastructure Maintenance 40% 90,000 79.2% 20.8% 71,245 18,755 Pumping/Treatment 0% 0 432,000 20.8% 341,976 90,024 Transmission/Distribution 40% 79.2% General & Administrative 50% 1,271,500 87.4% 12.6% 1,111,180 160,320 Special Studies/Legal/Engin Services 40% 44,800 79.2% 20.8% 35,464 9,336 Chromium 6 Operating & Maintenance 0% 0 Subtotal 2,646,600 86.4% 13.6% 2,287,195 359,405 District Debt Service **USBR SOD Repayment** 40% 6,800 67.0% 33.0% 4,556 2,244 2016 Bonds - Refi of Series 2004A Bonds 40% 88,000 67.0% 33.0% 58,960 29,040 2016 Bonds - Chrome 6 Funding 40% 170,000 100.0% 0.0% 170,000 0 264,800 Subtotal 88.2% 11.8% 233,516 31,284 **Capital & Non-Operating Expenses** 212,000 Capital Improvements 40% 79.2% 20.8% 167,822 44,178 Legal/Other Non-Operating 40% 90,000 79.2% 20.8% 71,245 18,755 Chromium 6 Project Expenditures Phase 2 Chr 6 Expn/Other (Target) 40% 400,000 85.0% 15.0% 340,000 60,000 Subtotal 702,000 82.5% 17.5% 579,067 122,933 **Total Expenses** 3,613,400 85.8% 14.2% 3,099,778 513,622 NET FUNDING REQUIRED FROM WATER RATES 35% 85.8% **Total Expenses** 3,613,400 14.2% 3,099,778 513,622 Less Tax Assessments 35% (437,500) 79.2% 20.8% (346,330) (91,170) Less Other Funding Sources 100% (157,000) 79.2% 20.8% (124, 283)(32,717) Contingency/Contrib to Fund Reserves 40% 100,000 79.2% 20.8% 79,161 20,839 13.2% Net Funding Requirement from Water Rates 3,118,900 86.8% 2,708,326 410,574

Table 16. Fixed Rate Revenue Allocation



					Est. Meter	Meter	Meter
Meter Size		Number of	Accounts		Capacity (gpm)	Ratios	Equivalents
Domestic/	Rural Resid	ential					
	Domestic	RR/Ltd Ag	Temp	Subtotal			
5/8"	779	1	-	780	25	1.0	780.0
3/4"	616	-	-	616	30	1.2	739.2
1"	592	-	-	592	50	2.0	1,184.0
1-1/2"	13	181	-	194	100	4.0	776.0
2"	27	202	-	229	160	6.4	1,465.6
3"	5	2	1	8	300	12.0	96.0
4"	1	-	-	1	500	20.0	20.0
6"	-	-	-	-	1,000	40.0	-
8"	÷.	-	-	-	1,600	64.0	-
Subtotal	2 033	386	1	2 420			5 060 8
City of Solv	ang		6" & 8"	<u>Parcels</u> 2,178	2,600		104.0
Pancha Ma	realize W/t	9. Suc Co	0 00 0	2,178	2,000		104.0
Skyline Par	k & Wtr Sve	- Co	4"	98	500		20.0
C. Land					500		120.0
Subtotal				2,356			130.4
Total Dome	estic/RR/MI	М					5,191.2
Agricultura	Accounts						
With interre	uptible wat	er supply.		Accounts			
1-1/2"				3	100	4.0	12.0
2"				29	160	6.4	185.6
3"				5	300	12.0	60.0
4"				47	500	20.0	940.0
6"				27	1,000	40.0	1,080.0
Total				111			2,277.6

Table 17. Meter Equivalents

Met	er Current	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Capaci	ty Rates	2017	2018	2019	2020	2021
Total Rate Revenue Requirement						
With Annualized Rate Increase		\$6,613,000	\$7,729,000	\$8,251,000	\$8,810,000	\$9,408,000
Fixed Charge Becovery %		47 1%	37.0%	36.0%	35.0%	33 7%
Fixed Charge Recovery \$		\$2,782,089	\$2,859,730	\$2,970,360	\$3,083,500	\$3,170,496
Domestic Cost Recovery %		86.8%	86.8%	86.8%	86.8%	86.8%
Domestic Cost Recovery \$		2,415,853	2,483,273	2,579,340	2,677,586	2,753,130
Domestic Meter Equivalents		5,191.2	5,191.2	5,191.2	5,191.2	5,191.2
Annual Charge per Meter Equivalent		465.37	478.36	496.87	515.79	530.35
Monthly Charge per Meter Equivalent		38.78	39.86	41.41	42.98	44.20
MONTHLY METER CHARGE						
Domestic & Bural Residential/Limited A	riculture					
Meter Size	Silventare	No Change				
5/8"	5 \$38 78	\$38 78	\$39.86	\$41 41	\$42 98	\$44.20
3/0"	46.47	16.17	17.84	19 69	51 58	53.03
5/4	0 40.42	40.42	47.04	49.09	95.07	00 20
1 1/2"	0 76.98	152.52	19.75	02.01	171.02	176.79
1-1/2"	153.62	153.62	159.45	165.62	1/1.93	1/6./8
2" 16	243.80	243.80	255.13	265.00	275.09	282.85
3" 30	00 490.60	490.60	478.36	496.87	515.79	530.35
4" 50	00 661.91	661.91	797.27	828.11	859.66	883.91
6" 1,00	0 1,543.43	1,543.43	1,594.54	1,656.23	1,719.31	1,767.82
8" 1,60	0 2,455.55	2,455.55	2,551.26	2,649.96	2,750.90	2,828.51
Ag Cost Recovery %		13.2%	13.2%	13.2%	13.2%	13.2%
Ag Cost Recovery \$		\$366,236	\$376,457	\$391,020	\$405,914	\$417,366
Ag Meter Equivalents		2,277.6	2,277.6	2,277.6	2,277.6	2,277.6
Annual Charge per Meter Equivalent		\$160.80	\$165.29	\$171.68	\$178.22	\$183,25
Monthly Charge per 5/8" Mtr Equivalent		\$16.08	\$16.53	\$17.17	\$17.82	\$18.32
Assumes 8 months in service, 4 months of	offline	7.0.00		1		
Adjusted by Capacity Ratio to 1-1/2" Met	er	\$64.32	\$66.11	\$68.67	\$71.29	\$73.30
MONTHLY METER CHARGE						
Charge applied during periods of water s	ervice, 50% of ch	arge applied	during periods	of non-opera	ition.	
Agricultural						
Meter Size		No Change				
1-1/2" 10	0 \$62.40	\$62.40	\$66.11	\$68.67	\$71.29	\$73.30
2" 16	103.14	103.14	105.78	109.88	114.06	117.28
3" 30	207.56	207.56	209.66	211.76	213.86	219.90
4" 50	0 289.06	289.06	330.57	343.36	356.44	366.50
6" 1.00	645.61	645.61	661.15	686.72	712.88	732.99

Table 18. Fixed Meter Rate Calculation

6.1.3 Water Consumption Charge Derivation

The following tables derive proposed water consumption charges for each of the District's customer classes. On Table 19, costs allocated for variable rate recovery are further allocated for recovery from domestic vs. agricultural supply. The table assumes water supply for Limited Ag customers is based on 75% agricultural water supply and 25% domestic supply.

Key variable cost-recovery allocations are summarized as follows:

- Costs related to domestic water supplies are allocated for recovery from domestic charges and costs related to agricultural supplies are allocated for recovery from ag charges.
 - Costs related to water supply from California's Department of Water Resources (DWR) is 100% for domestic purposes.
 - Costs related to Cachuma Exchange/USBR supply is allocated based on the District's anticipated allocation of USBR water supply requests at 67% for domestic supply and 33% for agricultural supply, with the exception that costs for the actual water purchases are allocated based on the price of purchasing domestic vs. ag supplies. The District recently received notice from United States Bureau of Reclamation that the wholesale rate for ag water is increasing from \$105 to slightly over \$505 per acre-foot, while the rate for domestic supply is increasing to \$119 per acre-foot.
 - Costs related to Chromium 6 treatment facilities and operations are allocated for recovery from domestic water rates since these costs are being incurred due to drinking water regulations.
- Some costs are allocated for recovery based on the percentage share of projected domestic vs. agricultural water use, as shown on the table.
- Cost recovery for most other operating, maintenance, and capital expenses are allocated for recovery based on the share of projected domestic vs. ag water use adjusted to reflect that ag customers are typically in operation for only approximately 60% of the year.

					Domestic	Ag	Total		Domestic	Ag
Projected Water Use 2020/21 (hcf)					850,000	950,000	1,800,000	Calculation of C	Cost per hcf	
% of Total Water Use					47.2%	52.8%	100.0%	Costs	\$4,251,629	\$1,729,471
% of Adjusted Water Use (with 60% factor	r for partial year int	erruptible suppl	ly)	В	68.3%	31.7%	100.0%	Use (hcf)	850,000	950,000
Cachuma/USBR Water Supply				С	67.0%	33.0%	100.0%	Cost per hcf	\$5.00	\$1.82
DWR Water Supply		D	100.0%	0.0%	100.0%	Note: Ltd Ag b	ased on 1/3 Doi	m & 2/3 Ag		
	Projected	Variable Co	st Recovery	9	Cost Recovery	Allocation %	5	Cost Re	ecovery Allocat	ion \$
	2020/21	%	\$		Domestic	Ag	Total	Domestic	Ag	Tota
EXPENSES										
Operating & Maintenance										
Sources of Supply										
CCWA: DWR Fixed Charges, District	788,000	50%	394,000	D	100.0%	0.0%	100.0%	394,000	0	394,000
CCWA: DWR Variable Charges	264,000	100%	264,000	D	100.0%	0.0%	100.0%	264.000	0	264,000
CCWA: Cachuma Exchange Fixed	442,000	50%	221,000	с	67.0%	33.0%	100.0%	148.070	72,930	221,000
CCWA: Cachuma Exchange Variable	141,000	100%	141,000	с	67.0%	33.0%	100.0%	94,470	46 530	141.000
District Share of CCWA Bonds	333,000	50%	166.500	D	100.0%	0.0%	100.0%	166.500	0,550	166 500
Solvang CCWA/DWR Charges	pass-through	-	-			-		100,000	0	100,000
Cachuma Project/USBR Supply	653.000	100%	653,000	USBR Cost	33.0%	67.0%	100.0%	215 490	137 510	653 000
Grndwtr/State Licenses/Cloud Seeding	67.000	60%	40,200	A	47.2%	52.8%	100.0%	18 083	21 217	40 200
nfrastructure Maintenance	225.000	60%	135,000	Δ	47.2%	52.8%	100.0%	62 750	71 250	125.000
Pumping	690,000	100%	690,000	Δ	17 2%	52.0%	100.0%	275 022	264 167	135,000
Freatment	72 000	100%	72 000	A	17 7%	57 90/	100.0%	323,833	304,107	72,000
Fransmission/Distribution	1 080 000	60%	648,000		47.270	52.0%	100.0%	34,000	38,000	72,000
Seneral & Administrative	2 543 000	50%	1 271 500		47.270 50 20/	21 70/	100.0%	506,000	342,000	648,000
Special Studies/Legal/Engin Services	112 000	60%	67 200	Δ	47 70/	51.7%	100.0%	21 722	402,642	1,2/1,500
Chromium 6 Operating & Maintenance	520,000	100%	520,000	Drinking	100.0%	0.0%	100.0%	51,755	35,467	67,200
Subtotal	7.930.000	67%	5 283 400	Drinking	65.3%	34.7%	100.0%	3 451 699	1 921 712	5 292 400
District Data Section	.,,	0.10	5,205,400		03.370	54.775	100.070	5,451,000	1,031,712	5,205,400
USBR COD Bessiverent	17 000						10000			
OSBR SOD Repayment	17,000	60%	10,200	C	67.0%	33.0%	100.0%	6,834	3,366	10,200
2016 Bonds - Refi of Series 2004A Bonds	220,000	60%	132,000	C	67.0%	33.0%	100.0%	88,440	43,560	132,000
2016 Bonds - Chrome 6 Funding	425,000	60%	255,000	Drinking	100.0%	0.0%	100.0%	255,000	<u>0</u>	255,000
Subtotal	662,000	60%	397,200		88.2%	11.8%	100.0%	350,274	46,926	397,200
Capital & Non-Operating										
Capital Improvements	530,000	60%	318,000	A	47.2%	52.8%	100.0%	150,167	167.833	318.000
Legal/Other Non-Operating	225,000	60%	135,000	A	47.2%	52.8%	100.0%	63,750	71,250	135.000
Chromium 6 Project Expenditures	debt financed		-		-	-		-		
Phase 2 Chr 6 Expn/Other (Target)	1,000,000	60%	600,000	Drinking	100.0%	0.0%	100.0%	600.000	0	600.000
Subtotal	1,755,000	60%	1,053,000		77.3%	22.7%	100.0%	813,917	239,083	1,053,000
Total Expenses	10,347,000	65%	6,733,600		68.5%	31.5%	100.0%	4.615.879	2.117.721	6,733,600
									-,,,.==	
	ATES		and an and a little				and had			
lotal Expenses	10,347,000	65%	6,733,600		68.5%	31.5%	100.0%	4,615,879	2,117,721	6,733,600
Less Tax Assessments	(1,250,000)	65%	(812,500)		50.0%	50.0%	100.0%	(406,250)	(406,250)	(812,500
Less Other Funding Sources	(157,000)	0%	0		50.0%	50.0%	100.0%	0	0	(
Contingency/Contrib to Fund Reserves	100,000	60%	60,000	% revs	70.0%	30.0%	100.0%	42,000	18,000	60,000
Net Funding Req't from Water Rates	9,097,000	65.7%	5,981,100		71.1%	28.9%	100.0%	4,251,629	1,729,471	5,981,100

BARTLE WELLS ASSOCIATES SYRWCD-ID1 Water Financial Plan & Rate Study

20

Table 20 summarizes the underlying costs of service for domestic, limited ag, and agricultural customers based on the cost-recovery allocations developed in the prior tables.

	Domestic	Ag	Total	
Projected Water Use 2020/21 (hcf)				
Domestic	800,000	0	800,000	
Limited Ag	50,000	150,000	200,000	
Ag	<u>0</u>	800,000	800,000	
Total	850,000	950,000	1,800,000	
Projected Cost per Unit (\$/hcf)	\$5.00	\$1.82		
Total Cost per Customer Class				
Domestic	\$4,001,533	\$0	\$4,001,533	
Limited Ag	250,096	273,074	523,170	
Ag	<u>0</u>	1,456,397	1,456,397	
Total	4,251,629	1,729,471	5,981,100	
			Avg Cost/hcf	Rate Req'
Cost per Unit per Customer Class	Costs	hcf	2020/21*	01/01/21
Domestic	\$4,001,533	800,000	\$5.00	\$5.15
Limited Ag	523,170	200,000	2.62	2.69
Ag	1,456,397	800,000	1.82	1.88

Table 20. Water Quantity Charges per Customer Class

* These rate represent the average rate that needs to be charged over the course of the full fiscal year in order to generate the target level of revenues. Rates that become effective on Jan-1, half way through the fiscal year need to be a little higher in order to result in the fiscal year average calculated above.



7 PROPOSED RATES & IMPACTS

7.1 Proposed Water Rates

Table 21 projects rates over the next five fiscal years incorporating a) the overall level of rate increases required to fund the District's projected costs of providing service, and b) the proposed rate structure modifications and revenue recovery allocations developed to equitably recover costs from the District's customer base.

Fixed Meter Charges

- The proposed rates include <u>no increases to fixed meter charges in 2017</u> followed by small gradual increases in subsequent years.
- Domestic meter charges increase approximately 14% through 2021, which equates to an average annual increase of 2.6% over the next 5 years.
- Agricultural meter charges, which are currently significantly lower than comparable domestic charges, increase by approximately 17.5% through 2021, which equates to an average annual increase of 3.3% over the next five years. With the proposed increases, ag meter charges will remain substantially less than half of comparative domestic meter charges based on the cost allocations.

Water Consumption Charges

- Domestic water rates (which apply to residential and commercial use) increase by \$1.34 per hundred cubic feet of water (748 gallons) over the next 5 years. This equates to an increase of approximately 17.9 cents per 100 gallons of water over the next 5 years.
- Agricultural water rates increase by \$1.37 per hundred cubic feet over the next 5 years, partially in response to an increase in the cost of USBR agricultural water supply. This equates to an increase of approximately 18.4 cents per 100 gallons of water over the next 5 years. Note that while the ag rates increase a less than domestic rates in dollars, the percentage increase is substantially higher for ag customers since ag rates are currently substantially lower than domestic rates. Ag rates are projected to remain substantially lower than domestic rates. With the proposed increase from about 13% to roughly 36% of domestic water rates. With the proposed increase, the District's ag rates in 5 years will remain below the current ag rates of other regional water agencies as previously summarized on Table 2.

			Meter	Current		Proposed Ra	ates Effectiv	e on or After	10000
	Number of	Meter	Capacity	Water	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1
-	Accounts	Capacity	Ratio	Rates	2017	2018	2019	2020	2021
MONTH	LY METER CH	ARGE							
Domest	ic. Commerci	al & Rural	Resident	tial/Limited	Agriculture				
Meter	Size				•				
5/8"	780	25	1.0	\$38.78	\$38.78	\$39.86	\$41.40	\$42.98	\$44.19
3/4"	616	30	1.2	46.42	46.42	47.83	49.68	51.57	53.03
1"	592	50	2.0	76.98	76.98	79.72	82.80	85.96	88.38
1-1/2'	' 194	100	4.0	153.62	153.62	159.44	165.60	171.91	176.76
2"	229	160	6.4	243.80	243.80	255.10	264.97	275.06	282.82
3"	8	300	12.0	490.60	490.60	478.31	496.81	515.73	530.29
4"	1	500	20.0	691.91	691.91	797.18	828.02	859.56	883.81
6"	0	1,000	40.0	1,543.43	1,543.43	1,594.36	1,656.04	1,719.12	1,767.62
8"	0	1,600	64.0	2,455.55	2,455.55	2,550.98	2,649.66	2,750.59	2,828.19
Agricult	ural								
Meter	Size			A					
1-1/2"	' 3	100	4.0	\$62.40	\$62.40	\$66.16	\$68.72	\$71.34	\$73.35
2"	29	160	6.4	103.14	103.14	105.86	109.96	114.15	117.37
3"	5	300	12.0	207.56	207.56	209.71	211.87	214.02	220.06
4"	47	500	20.0	289.06	289.06	330.82	343.62	356.71	366.77
6"	27	1,000	40.0	645.61	645.61	661.64	687.24	713.41	733.54
Private F	ire Protectio	'n							
Service C	Connection or	Meter Size	e	1000					
Up to :	1" 22	50	2.0	\$19.40	\$7.70	\$8.00	\$8.30	\$8.60	\$8.80
1-1/2"	7	100	4.0	19.40	15.40	15.90	16.60	17.20	17.70
2"	7	160	6.4	19.40	24.40	25.50	26.50	27.50	28.30
3"	-	300	12.0	29.10	49.10	47.80	49.70	51.60	53.00
4"	29	500	20.0	38.80	69.20	79.70	82.80	86.00	88.40
6"	16	1,000	40.0	97.00	154.30	159.40	165.60	171.90	176.80
8"	11	1,600	64.0	194.00	245.60	255.10	265.00	275.10	282.80
CONSUM	APTION CHAP	RGES							
Charge p	er hundred c	ubic feet (hcf) of m	etered wate	r consumpti	on.			
Domesti	C (Residential &	Commercial)	\$3.81	\$4.30	\$4.80	\$4.95	\$5.05	\$5.15
Rural Res	sidential/Limi	ted Agricul	ture	1111					
First 12	5 units			3.81	4.30	4.80	4.95	5.05	5.15
Over 12	5 units			1.31	1.65	1.98	2.22	2.46	2.69
Agricultu	Ire (No Domesti	c Use)		0.50	0.77	1.04	1.31	1.59	1.87
On-Dem	and (2x Domest	tic Rate)		6.08	8.60	9.60	9.90	10.10	10.30
Tempora	ITV (3x Domestic	Rate)		6.25	12.90	14.40	14.85	15.15	15.46
. empora		- narcy		5.25	12.50	1.40	27.00		10.40

Table 21. Proposed Water Rates

Note: One hundred cubic feet (hcf) = 748 gallons



7.2 Rate Structure Modifications

The proposed rates developed in this report incorporate some modifications to the District's rate structure designed to fairly apportion costs of service to all District customers. Rate structure modifications are summarized as follows.

7.2.1 Charge 50% of the Fixed Meter Charges when Ag Customers are Offline

The District incurs a substantial amount of costs maintaining capacity to serve its customers, even when they are not using any water. The District's fixed monthly meter charges help ensure all customers are paying in for a share of District costs to be ready to provide service when needed. However, since agricultural water service is interruptible, the proposed rates are designed to recover 50% of the fixed meter charges for ag accounts when ag customers are offline. Currently, these customers do not pay any fixed charges when offline. Proposed rates were derived assuming this modification was implemented otherwise the fixed meter charges for ag customers would have been higher.

7.2.2 Phase In Limited Ag Rate to 25% of Domestic Rate & 75% of Ag Rate

Rural Residential/Limited Ag water use includes both domestic water use as well as some agricultural or other non-domestic use. A significant amount of water use by Rural Residential/Limited Ag customers is for purposes that do not meet the USBR's or District's definitions for commercial agricultural. Based on evaluation of alternatives, the proposed water consumption charges for Limited Ag accounts is set to phase in over 5 years to a blended rate equal to 25% of the Domestic Rate and 75% of the Agricultural Rate as an approximation to equitably recover the costs of service.

7.2.3 Set On-Demand Consumption Rate to 2x the District's Domestic Rates

As previously discussed, On-Demand customers serve their own local service areas and require access to District water supply on an uninterruptible basis to supplement other sources of supply. Although these customers have historically only relied on the District for limited amounts of water purchases most years, the District incurs substantial costs maintaining the operational and water supply capacity to serve these customers on demand. Unlike the District's water service contract accounts, which pay charges based on the number and type of end users in reflection of the underlying demand placed on the water system, the District's On-Demand customers only pay fixed charges based on a single "master meter" connection, which is substantially lower than what these customers would pay if they were treated the same as other master meter accounts. Unlike other District customers, the On-Demand accounts never paid connection fees to buy-in for their share of District infrastructure. Additionally, these On-Demand customers tend to use water during periods of peak system usage thereby requiring the District to oversize infrastructure to handle peak demands accounting for On-

Demand customer consumption. To help recover costs for infrastructure capacity, maintenance, and water supply needed to serve the District's On-Demand customers, the proposed rate for this customer class is proposed to be set at 2x the District's standard Domestic Rates. Even with these rates, the District may not fully recover its cost of service as these customers tend to use only small amounts of water on a limited basis. Hence the fixed meter charges – which are based on the size of the master service connection and do not reflect end-user demand - may not be adequately supplemented by water consumption charges when water use is low.

As an alternative, the District could opt to treat these customers the same as other water service contract accounts and levy fixed charges based on the number and type of end user. However, since these On-Demand accounts own and operate their own local water systems, fixed charges levied under this alternative approach would need to be scaled down to exclude cost recovery for services not provided by the District.

7.2.4 **Private Fire Protection Charges**

There are a wide range of perspectives regarding how private fire protection service charges should be recovered.

- At one extreme, one perspective is that the charges could be set at the same level as standard fixed meter charges for water service since the service connection is capable of delivering the same capacity of water, and represents the same level of potential demand on the water system.
- At the other extreme, the charges could be eliminated under a perspective that the District already provides water for fighting fires to all customers regardless of whether they have a separate private fire service connection or not. Hence, a private fire service connection does not put any additional demands on the system. In fact, a private fire service connection can reduce water demands for fire-fighting by more effectively containing a fire at its source. Additionally, private fire service connections benefit all customers via reducing the potential for the spread of fire from the building served.

As a reasonable middle-road approach, BWA recommends setting the private fire service charge at 10% of the standard water meter charges. This a relatively low charge that is both within industry norms and in line with the District's current rates.

7.3 Water Rate Impacts

Table 22 projects monthly water bills for different types of customers with a range of water usage levels. Customers can mitigate the impact of rate increases by reducing water use.

	Monthly	Current	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1
	Use (hcf)	Rates	2017	2018	2019	2020	2021
DOMESTIC &	COMMERCIAL						
5/8" Meter	5	\$57.83	\$60.28	\$63.86	\$66.15	\$68.23	\$69.95
	10	76.88	81.78	87.86	90.90	93.48	95.71
	20	114.98	124,78	135.86	140.40	143.98	147.23
	30	153.08	167.78	183.86	189.90	194.48	198.75
3/4" Meter	5	65.47	67.92	71.83	74.43	76.82	78.79
	10	84.52	89.42	95.83	99.18	102.07	104.55
	20	122.62	132.42	143.83	148.68	152.57	156.07
	30	160.72	175.42	191.83	198.18	203.07	207.59
1" Meter	10	115.08	119.98	127.72	132.30	136.46	139.90
	20	153.18	162.98	175.72	181.80	186.96	191.42
	50	267.48	291.98	319.72	330.30	338.46	345.98
RURAL RESIDE	NTIAL/LIMITE	DAG					
1-1/2" Meter	r 10	191.72	196.62	207.44	215.10	222.41	228.28
	50	344.12	368.62	399.44	413.10	424.41	434.36
	100	534.62	583.62	639.44	660.60	676.91	691.96
	200	728.12	814.87	907.94	950.85	987.66	1,022.51
2" Meter	10	281.90	286.80	303.10	314.47	325.56	334.34
	50	434.30	458.80	495.10	512.47	527.56	540.42
	100	624.80	673.80	735.10	759.97	780.06	798.02
	200	818.30	905.05	1,003.60	1,050.22	1,090.81	1,128.57
	300	949.30	1,070.05	1,201.60	1,272.22	1,336.81	1,397.57
AGRICULTURA	L (INTERRUPT	IBLE)				1.000	
2" Meter	200	203.14	257.14	313.86	371.96	432.15	492.02
	500	353.14	488.14	625.86	764.96	909.15	1,054.01
	1,000	603.14	873.14	1,145.86	1,419.96	1,704.15	1,990.66
4" Meter	500	539.06	674.06	850.82	998.62	1,151.71	1,303.42
	1,000	789.06	1,059.06	1,370.82	1,653.62	1,946.71	2,240.06
	2,000	1,289.06	1,829.06	2,410.82	2,963.62	3,536.71	4,113.35
	4,000	2,289.06	3,369.06	4,490.82	5,583.62	6,716.71	7,859.93

Table 22. Projected Mon	thly Bills	
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The following chart shows historical and projected monthly residential water bills for a range of residential customers with different levels of water use, accounting for roughly typical conservation. Although bills rise more significantly from current 2016 levels, the chart shows that over the longerrun, typical bills are projected to increase by the equivalent of a 2.5% to 3.5% average annual increase from 2010 assuming customers continue to conserve at current levels.

Figure 8: Historical & Projected Residential Bills



Historical & Projected Monthly Residential Bills with Conservation Single Family Home with a 5/8" meter

7.4 Water Consumption Charge Revenue Projections

The table on the following page projects future water consumption charge revenues by fiscal year based on projected water sales and rates for each customer class. The table indicates that revenues generated by the proposed rates may fall a little short of the targets initially developed in the cash flow projections due to the proposed phase in of rate increases.

			AU			
	Current	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1
	Nates	2017	2018	2015	2020	2021
ANNUALIZED REVENUE REQUIREMENT (W	ith rate incr	ease in effect	for full year)		*****	40.000.000
Total Revenue Target		\$6,613,000	\$7,729,000	\$8,251,000	\$8,810,000	\$9,408,000
Fixed Rate Recovery		(2,782,000)	(2,860,000)	(2,970,000)	(3,084,000)	(3,170,000
Variable Rate Revenue Requirement		3,831,000	4,869,000	5,281,000	5,726,000	6,238,000
PROJECTED WATER USE						
Domestic & Commercial		520,000	540,000	560,000	580,000	600,000
Rural Residential/Limited Agriculture						
First 125 units		130,000	135,000	140,000	145,000	150,000
Over 125 units		210,000	200,000	200,000	200,000	200,000
Agriculture		680,000	700,000	730,000	760,000	800,000
On-Demand		15,000	20,000	23,000	26,000	30,000
Temporary		1,000	1,000	1,000	1,000	1,000
Cachuma Park		15,000	20,000	20,000	20,000	20,000
Total		1,571,000	1,616,000	1,674,000	1,732,000	1,801,000
CONSUMPTION CHARGES						
Charge per hundred cubic feet of metered	water consu	mption.				
Domestic	\$3.81	\$4.30	\$4.80	\$4.95	\$5.05	\$5.15
Rural Residential/Limited Agriculture						
First 125 units	3.81	4.30	4.80	4.95	5.05	5.15
Over 125 units	1.31	1.65	1.98	2.22	2.46	2.69
Agriculture	0.50	0.77	1.04	1.31	1.59	1.87
On-Demand	6.08	8.60	9.60	9.90	10.10	10.30
Temporary	6.25	12.90	14.40	14.85	15.15	15.46
Cachuma Park	1.38	1.48	1.55	1.63	1.71	1.80
ESTIMATED REVENUES						
Domestic		\$2,236,000	\$2,592,000	\$2,772.000	\$2,929,000	\$3.091.184
Rural Residential/Limited Agriculture		+-,,	+=,====	+-,	+=,===,===	+=,===.
First 125 units		559,000	648,000	693.000	732,250	772.796
Over 125 units		346,500	396,000	444,000	492,000	538,000
Agriculture (No Dwellings)		523,600	728.000	956.300	1.208.400	1,498,632
On-Demand		129.000	192,000	227,700	262,600	309.000
Temporary		12,900	14,400	14.850	15,150	15,460
Cachuma Park		22.200	31.000	32,600	34,200	36.000
Total		3,829,200	4,601,400	5,140,450	5,673,600	6,261,073
Revenue Target		\$3,831,000	\$4,869,000	\$5,281,000	\$5,726,000	\$6,238,000

Table 23. Water Consumption Charge Revenue Projections

		Water	Rates		Exh	nbit "A"
	Current		Proposed	Rates Effective	on or After	
	Water	Feb-1	Jan-1	Jan-1	Jan-1	Jan-1
	Rates	2017	2018	2019	2020	2023
MONTHLY METER CHARGES						
Domestic & Rural Residentia	I/Limited Agricu	lture				
Meter Size						
5/8-inch	\$38.78	\$38.78	\$39.86	\$41.40	\$42.98	\$44.19
3/4-inch	46.42	46.42	47.83	49.68	51.57	53.03
1-inch	76.98	76.98	79.72	82.80	85.96	88.38
1-1/2-inch	153.62	153.62	159.44	165.60	171.91	176.76
2-inch	243.80	243.80	255.10	264.97	275.06	282.82
3-inch	490.60	490.60	478.31	496.81	515.73	530.29
4-inch	691.91	691.91	797.18	828.02	859.56	883.81
6-inch	1,543.43	1,543.43	1,594.36	1,656.04	1,719.12	1,767.62
8-inch	2,455.55	2,455.55	2,550.98	2,649.66	2,750.59	2,828.19
Agricultural						
Meter Size						
1-1/2-inch	\$62.40	\$62.40	\$66.16	\$68.72	\$71.34	\$73.35
2-inch	103.14	103.14	105.86	109.96	114.15	117.37
3-inch	207.56	207.56	209.71	211.87	214.02	220.06
4-inch	289.06	289.06	330.82	343.62	356.71	366.77
6-inch	645.61	645.61	661.64	687.24	713.41	733.54
Private Fire Protection						
Service Connection or Meter S	lize					
Up to 1-inch	\$19.40	\$7.70	\$8.00	\$8.30	\$8.60	\$8.80
1-1/2-inch	19.40	15.40	15.90	16.60	17.20	17.70
2-inch	19.40	24.40	25.50	26.50	27.50	28.30
3-inch	29.10	49.10	47.80	49.70	51.60	53.00
4-inch	38.80	69.20	79.70	82.80	86.00	88.40
6-inch	97.00	154.30	159.40	165.60	171.90	176.80
8-inch	194.00	245.60	255.10	265.00	275.10	282.80
CONSUMPTION CHARGES						
Charge per hundred cubic fee	t (hcf) of metered	d water consun	nption.			
Domestic (Residential & Comm'l)	\$3.81	\$4.30	\$4.80	\$4.95	\$5.05	\$5.15
Rural Residential/Limited Agrid	culture					
First 125 units	3.81	4.30	4.80	4.95	5.05	5.15
Over 125 units	1.31	1.65	1.98	2.22	2.46	2.69
Agriculture (No Domestic Use)	0.50	0.77	1.04	1.31	1.59	1.87
On-Demand	6.08	8.60	9.60	9.90	10.10	10.30
Temporany	6.25	12 90	14.40	1/ 85	15 15	15 16
Cashuma Dauk	0.25	12.50	14.40	14.00	13.13	10.40
Launuma Park	1.38	1.48	1.55	1.63	1./1	1.80

Note: One hundred cubic feet (hcf) = 748 gallons

Resolution No. 756 – Approved on December 13, 2016