

County Service Area 16 – Shandon Water Rate Analysis

Prepared By:

County Public Works

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Water Rate Analysis County Service Area (CSA) 16 – Shandon, Water System

Purpose

The purpose of this report is to summarize the revenue requirements for the operations and maintenance of the CSA 16 water system and determine the appropriate water rate increase needed to generate those revenue requirements.

Background

The CSA16 water system was formed in 1972 and operates for the purpose of furnishing potable water to the residential, commercial and public customers in the community of Shandon. CSA 16 is located in the northeast portion of San Luis Obispo County.

The CSA 16 water supply is the groundwater pumped from the Paso Robles Upper Salinas Groundwater Basin, the large basin underlying the region. Currently, CSA 16 water is supplied by two wells (identified as Wells #4 and #5) with a total pumping capacity of 800 gallons per minute (gpm). These wells are located near Clarke Park and are used to fill a 212,000 gallon water storage tank located east of Shandon. Water is distributed via gravity from the water storage tank, which regulates water pressure, through a network of four, six, eight and ten-inch pipes. A map of the CSA 16 water distribution system is included as Exhibit "A".

Water rates in Shandon have not increased in 20 years. The last increase was implemented in 1994 after CSA 16 entered into contracts for State Water.

State Water

CSA 16 has been paying for a 100 Acre Foot per Year (AFY) allocation of State Water since the early 1990s; however, a connection to the State Water pipeline in order to deliver the allocation does not exist. A project to connect to the State Water pipeline is currently in design and is expected to be completed in 2015. Construction of this connection will allow CSA 16 to access and utilize its existing 100 AFY allocation of State Water. The project involves construction of an underground turnout facility to connect the existing Shandon (CSA 16) Water System to the State Water Project pipeline. Turnout facilities will generally include flow control and isolation valves, flow meter electrical, monitoring and controls equipment, instrumentation piping and a containment vault.

This connection will also require a treatment system upgrade from chlorine to chloramine water treatment. Construction of chloramine treatment upgrades at the existing CSA16 wells will allow for groundwater treatment to be compatible with State Water treatment and is anticipated to be completed concurrent with the connection to the State Water pipeline.

Capital cost of constructing the project has come from a combination of CSA 16 reserves and the County General Fund. The CSA 16 fund has no debt; however, reserves will be at the minimum desired level of approximately \$155,000 when the project is completed.

Operating costs related to the delivery of State Water are estimated to increase by approximately \$33,000 annually. This will be partially offset by a reduction in power costs related to the pumping of groundwater from the wells. Power costs are expected to be reduced by approximately \$11,000 annually.

Water Consumption

Table 1 shows the annual reduction in water use by the community over time. Consumption has decreased by 13% from the high point in fiscal year 2006/2007. The result of this reduction in consumption is that the revenue generated by the current rate structure is insufficient to cover the operating expenses of the system. This revenue shortfall has been slowly reducing the reserve balances in CSA 16. With the current drought conditions, it is assumed that future consumption will remain at current levels or could even reduce further with additional conservation measures. Thus, existing water use is assumed for the purpose of developing the new rate structure.

The number of water accounts in CSA 16 increased dramatically in the early 2000s with development on the east side of Shandon. Water accounts increased by approximately 100 and have held steady around the current 345 accounts since that time. This increase in water accounts is the major reason water rates have not had to be increased for such a long period of time. No additional water connections to the CSA 16 system have occurred since 2006. Additional accounts are not anticipated absent any large development and the existing number of accounts is assumed for the purpose of developing the new rate structure.

Revenue Requirements

Table 2 presents a nine year actual revenue and operating expenditure history for CSA 16. This shows that the system has been running at a deficit since 2008 with the deficit reducing reserves in CSA 16. The bottom of **Table 2** presents a pro forma operating expenditure estimate which shows what expenditures would have been with the delivery of State Water. The proposed revenue requirements assume the delivery of the full allocation of State Water and the reduced power costs related to pumping less groundwater.

The proposed revenue requirements also include a 15% contingency which totals \$37,500. The need for this contingency is threefold. First, it will provide funding for unanticipated expenditures of the system. This could be in the form of one time expenditures (i.e. equipment replacement) or increases in ongoing expenditures (i.e. the cost of State Water). Secondly, any unused contingency is available to fund pay as you go capital improvements. Finally, but not least important, is that the contract for State Water requires rates and charges to be set sufficiently to cover a 1.25 factor of the debt portion of the State Water bill. This works out to be approximately \$15,000 annually. This is referred to as a debt coverage factor and provides bondholders of State Water bonds security that they will continue to be paid according to contract.

The proposed revenue requirements total \$287,500. The amount of revenue needed from water sales equals \$240,800. Current water sales generate approximately \$180,000 annually. Therefore, current water rates need to be increased by 34% to provide the necessary revenue requirements.

Water Rate Structure

The rate table below shows the impact of the 34% increase on the water rates and presents the current and proposed water rates necessary to generate the revenue requirements from water sales. The current average monthly water bill for residential customers is \$43.80. The proposed rate adjustment would raise the monthly average to \$58.69. The recommended changes to the Basic Bi-Monthly Charge for Water Service represent an average increase of \$29.78 (\$14.89 per month). The adjustment will generate additional revenues of approximately \$61,000 per year. This adjustment is required to cover the cost of ongoing operations and maintenance expenditures given the reduced water consumption in the community due to the drought and conservation efforts. The increase is also needed to fund increased costs related to the delivery of State Water to Shandon. Annually thereafter, rates would increase based on increases in the Consumer Price Index. This will ensure that only non inflationary rate increases are needed in the future.

Additionally, the allowable quantities of water for tier levels 2 and 3 are being adjusted to further encourage water conservation and to bring them in line with other County operated water systems in the North County. A survey was mailed to the community to determine whether a large initial rate increase with smaller inflationary increases thereafter or a smaller phased increase over a longer period was preferable. The survey indicated the larger initial increase was the preferred option by 75% of the respondents. This option results in lower rates over the long term.

Water bills are computed on a bi-monthly basis (every other month). The charge for water is based on the amount of water used, measured in hundred cubic feet. This is abbreviated as CCF. One CCF equals 748 gallons. **Table 3** illustrates the proposed rate change to the Basic Bi-Monthly Charge for Water Service.

Table 1
CSA 16 Shandon Water Consumption

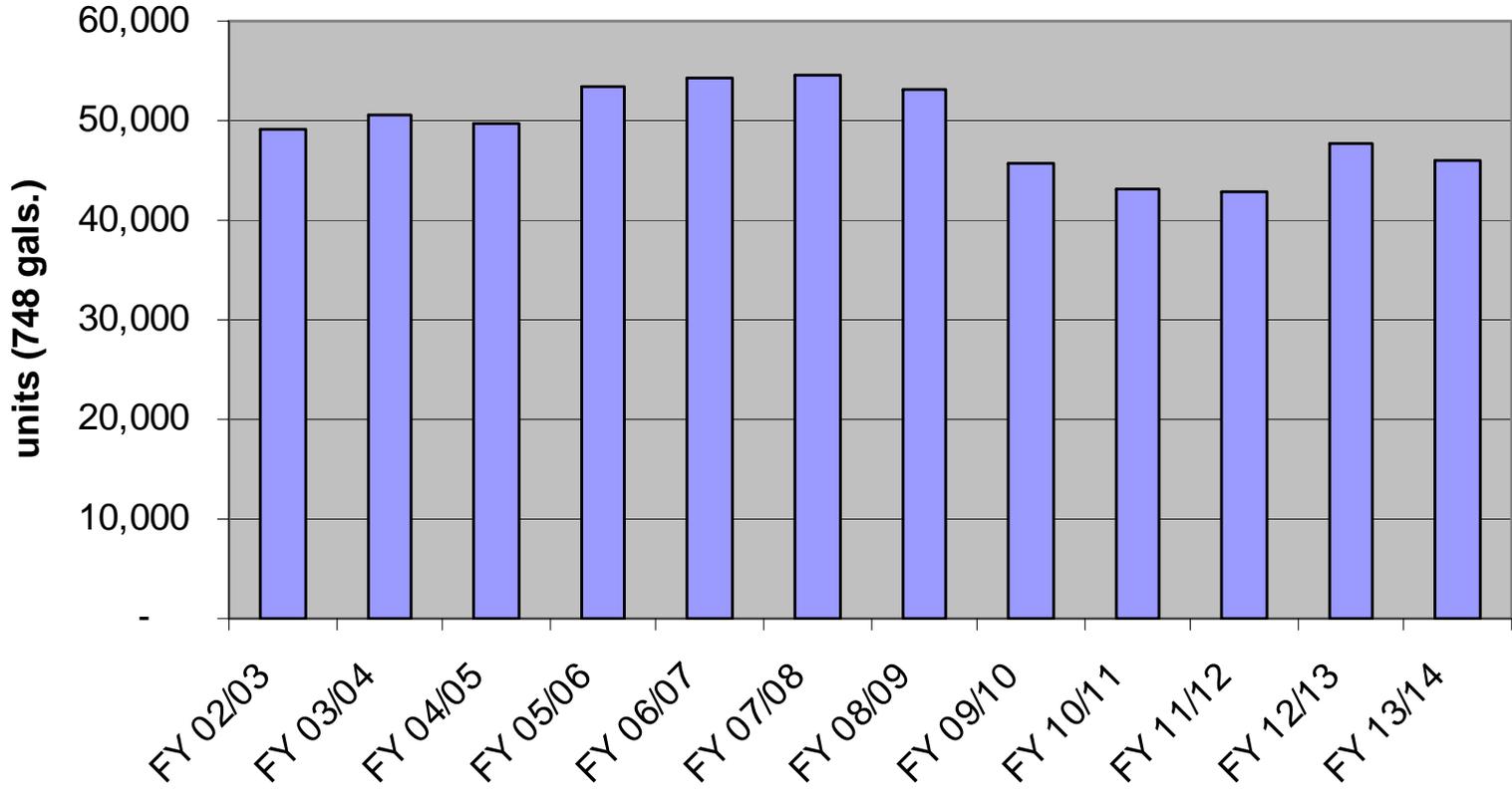


TABLE 2

CSA 16 Shandon Water
9yr Actual Revenues and Expenses

Actuals Pumped AF	157	163	160	158	146	135	144	150	142	
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Proposed
Water Sales	203,385	214,771	208,274	199,326	181,590	177,295	177,456	196,393	180,348	241,800
System Connection Fees	10,400	11,200	-	-	-	-	-	-	-	-
Water Availability	10,130	9,786	8,332	9,911	8,508	8,690	8,791	8,768	8,786	8,700
New Service - Water	7,567	11,382	-	-	-	-	-	-	-	-
Interest	16,989	23,753	18,195	8,204	2,587	1,336	1,602	1,370	964	-
Other Revenues	12,605	24,986	14,284	12,895	8,596	1,965	11,390	(3,433)	32,433	37,000
Total - Revenues	261,076	295,878	249,085	230,336	201,280	189,285	199,240	203,097	222,530	287,500
O&M - Other	153,428	168,667	172,297	198,587	190,549	176,945	167,683	151,705	150,919	151,000
Power	12,407	14,615	14,891	17,317	15,232	15,096	15,679	16,871	16,144	5,000
State Water Allocation	51,997	40,309	49,908	58,987	45,146	67,364	67,147	58,346	61,234	94,000
Contingency 15%	-	-	-	-	-	-	-	-	-	37,500
Total - O&M Expenses	217,832	223,591	237,096	274,890	250,927	259,405	250,509	226,922	228,297	287,500
Rev minus O&M Exp	43,244	72,287	11,989	(44,555)	(49,647)	(70,120)	(51,269)	(23,824)	(5,767)	-

CSA 16 Shandon Water
9yr Pro Forma Expense Estimates w/State Water Delivery of 100 AF

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Proposed
O&M - Other	153,428	168,667	172,297	198,587	190,549	176,945	167,683	151,705	150,919	151,000
Power (Pumping 100 AF less)	4,504	5,649	5,584	6,357	4,799	3,914	4,791	5,624	4,775	5,000
State Water Allocation	75,730	65,337	77,473	85,969	73,326	93,434	95,041	92,781	93,848	94,000
Contingency 15%	-	-	-	-	-	-	-	-	-	37,500
Total - O&M Expenses	233,662	239,652	255,354	290,913	268,674	274,293	267,515	250,110	249,542	287,500
Rev minus Exp	27,414	56,225	(6,269)	(60,577)	(67,394)	(85,008)	(68,275)	(47,012)	(27,012)	-

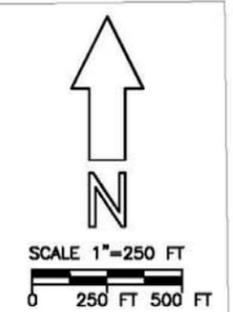
TABLE 3

Basic Bi-Monthly Charge for Water Service						
Level	Allowable Quantity		Current Rate		Proposed Rate	
	Current	Proposed				
1	0 CCF to 10 CCF *		\$50.00 Minimum Charge	\$25.00 <i>Monthly Equivalent</i>	\$67.00 Minimum Charge	\$33.50 <i>Monthly Equivalent</i>
2	11 CCF to 63 CCF	11 CCF to 16 CCF	\$3.00 Per CCF		\$4.02 Per CCF	
3	Greater than 63 CCF	Greater than 16 CCF	\$4.00 Per CCF		\$5.36 Per CCF	
<p><i>* (CCF is Hundred Cubic Feet or 748 gallons)</i></p> <p>All rates above shall be adjusted annually every January 1st by the average of the percentage increases in the Consumer Price Index ("CPI") for "All Urban Wage Earners and Clerical Workers" for all items for San Francisco/Oakland/San Jose and Los Angeles/Riverside/Orange Co. categories as published by the Bureau of Labor Statistics in October of each year with the allowable water quantities remaining unchanged.</p>						



LEGEND

- 2"
- - - 3"
- . - . 4"
- - - - 6"
- . - . - . 8"
- - - - - CSA 16 Boundary
- Fire Hydrant
- ⊕ Wharf Head Fire Hydrant
- ⊙ Sampling Station Location
- ⊗ Valve
- ⊞ Well
- ⊕ Blow-off Valve
- ⊕ Air Relief Valve



**SAN LUIS OBISPO COUNTY
PUBLIC WORKS DEPARTMENT**

WATER DISTRIBUTION SYSTEM

**COUNTY SERVICE AREA 16
SHANDON, CA.**

Drawn by: D. Rion
Drawing File: SHANDON_H2O_CSA16.dwg

Date	REVISIONS	By	Comments
7/20/09	1	Rion	Issued for final review
10/20/09	2	Rion	Issue for bid
11/20/09	3	Rion	Issue for bid
12/20/09	4	Rion	Issue for bid
1/20/10	5	Rion	Issue for bid
2/20/10	6	Rion	Issue for bid
3/20/10	7	Rion	Issue for bid
4/20/10	8	Rion	Issue for bid
5/20/10	9	Rion	Issue for bid
6/20/10	10	Rion	Issue for bid