

# **South San Luis Obispo County Sanitation District**



## **Wastewater Financial Plan & Rate Study**

**February 10, 2016**



**BARTLE WELLS ASSOCIATES**  
INDEPENDENT PUBLIC FINANCE ADVISORS



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February 10, 2016

South San Luis Obispo County Sanitation District  
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Attn: John Clemons, District Administrator

Bartle Wells Associates is pleased to submit the attached *Wastewater Financial Plan & Rate Study*. The study develops long-term financial projections and calculates wastewater treatment charges designed to equitably recover the costs of providing service. The recommended rates are designed to meet the District's operational and capital funding needs, comply with legal requirements, and be fair to all customers.

Prior to this study, the District had not increased its wastewater treatment charges in over five years. The proposed rate increases are needed to a) provide adequate funding for the costs of operating and maintaining the District's regional wastewater conveyance and treatment facilities, b) fund major new facility upgrades needed to comply with state and federal laws and regulations, and c) provide funding for repair and replacement of aging infrastructure.

The proposed rates incorporate both overall rate increases needed to meet the District's funding needs as well as some modifications to the rate structure designed to realign rates with the cost of providing service and improve rate equity. Rate increases are phased in over approximately five years to minimize the annual impact on District customers.

I enjoyed working with the District on this assignment and appreciate the cooperation and assistance received from District staff throughout the project. Please contact me if you have questions about the recommendations in this report or other related issues.

Sincerely,

BARTLE WELLS ASSOCIATES

Alex T. Handlers, CIPMA  
Principal/Vice-President

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# **South San Luis Obispo County Sanitation District**

## **Wastewater Financial Plan & Rate Study**

### **Key Findings & Recommendations**

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## **1 Background**

- The South San Luis Obispo County Sanitation District (SSLOCSD or District) is a special district that provides wastewater treatment services to the communities of Arroyo Grande, Grover Beach, and Oceano. The District is located in southwestern San Luis Obispo County, California approximately 15 miles south of the City of San Luis Obispo. The District serves a population of roughly 38,000 as well as commercial, industrial, and institutional accounts within its service area.
- The District was formed in 1963 and is governed by a three-member Board of Directors who are appointed by the governing bodies of its three member agencies: the Cities of Arroyo Grande and Grover Beach, and the Oceano Community Services District. Each Board Member has an equal vote.
- The District owns and operates a wastewater treatment plant with a permitted capacity of 5.0 million gallons per day (mgd) of average dry weather flow, an ocean outfall for disposal of treated effluent, and almost nine miles of wastewater trunk lines that convey sewage from its member agencies. The District also assists in providing wastewater source control programs and inspection services on behalf of its member agencies.
- The District needs to fund a major “redundancy project” to address requirements of the Regional Water Quality Control Board (RWQCB) and improve treatment plant reliability. Based on an updated engineering cost estimate from September 2015, the project cost is estimated at a little over \$19 million (current dollars) including design, permitting, construction, 30% construction cost contingency, and project management.

## **2 Financial Plan & Rate Study Objectives**

- In 2014, Bartle Wells Associates (BWA) was retained to develop a sewer rate study to support the District’s long-term financial needs. A key objective of the rate study is to recommend service charges adequate to fund future operating and capital needs including construction of the required redundancy project. Key elements of the rate study include

1. Develop 10-year financial projections to determine annual revenue requirements
2. Incorporate the latest available financial information and estimates of future operating and capital funding needs
3. Evaluate financing alternatives for the District's capital improvement program including a major capital upgrade to the District's treatment plant needed to improve reliability and redundancy and comply with RWQCB requirements.
4. Develop sewer rates that:
  - a. Recover the District's costs of providing service and support long-term financial stability
  - b. Provide adequate funding for capital needs including the District's long-term infrastructure repairs and replacements
  - c. Comply with the legal requirements of Proposition 218
5. Aim for steady, gradual annual rate increases to help minimize the annual impact on customers
6. Pursue low-cost financing alternatives for required debt financing
7. Maintain a prudent level of fund reserves

### **3 District Finances & Rates**

- SSLOCSO is a financially self-supporting district that relies primarily on sewer service charges collected on a pass-through basis from sewer customers served by its three member agencies.
  - Sewer rates are the District's main source of revenue and account for approximately 95% of total District revenues.
  - The District's rates should be set at levels adequate to fund the District's cost of providing service, including long-term operating and capital needs, and support the District's long-term financial stability.
- The District has not adopted any rate increases in over five years. Current rates have been in effect since May 1, 2010. The District has implemented a number of cost reduction measures over the past few years that have enabled the District to defer rate increases.
- The District currently levies a flat monthly residential charge \$14.86 per dwelling unit. Non-residential customers pay fixed charges that vary by customer type and other factors such as number of employees, number of seats in a restaurant, and number of students.

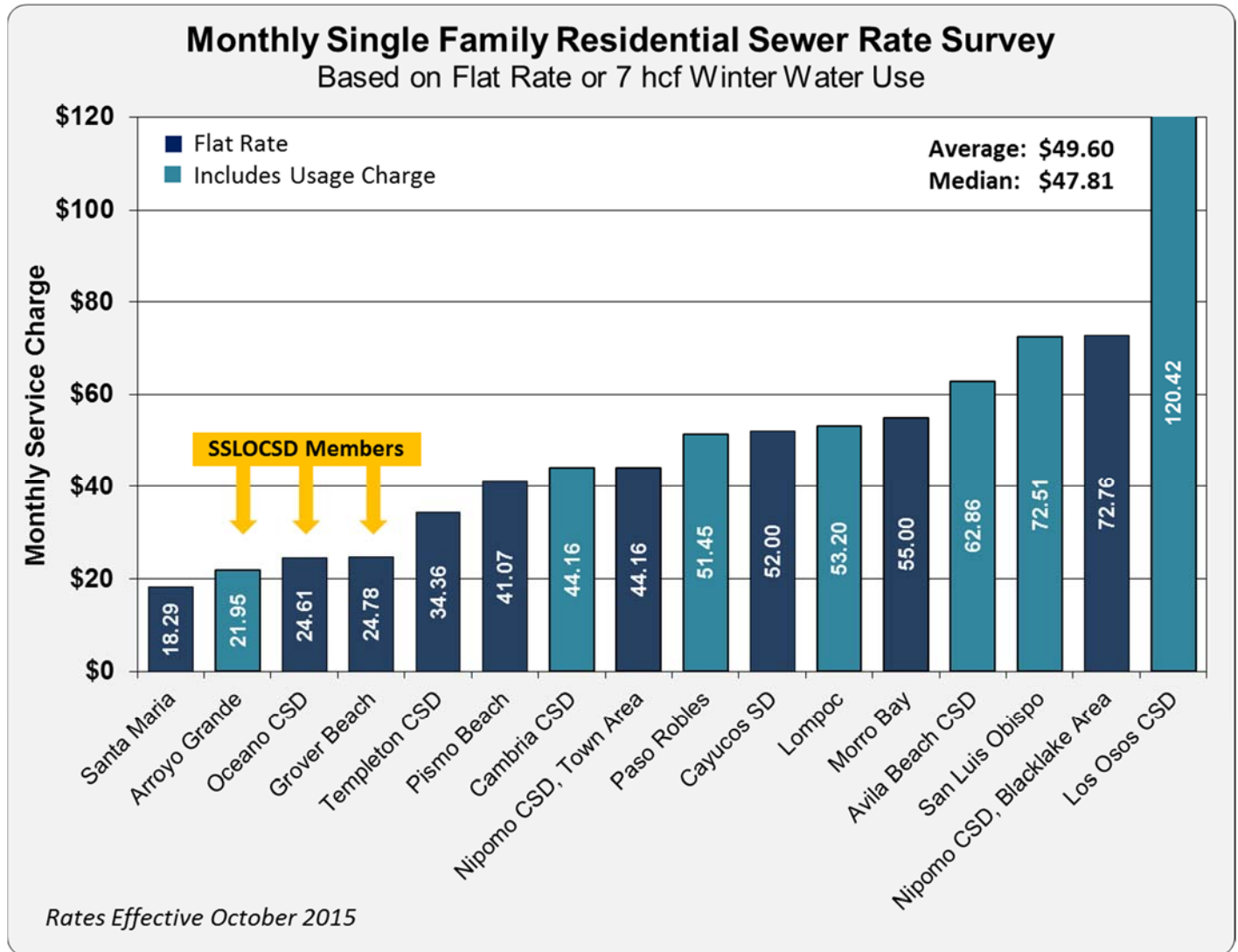
## Historical SSLOCSD Rates

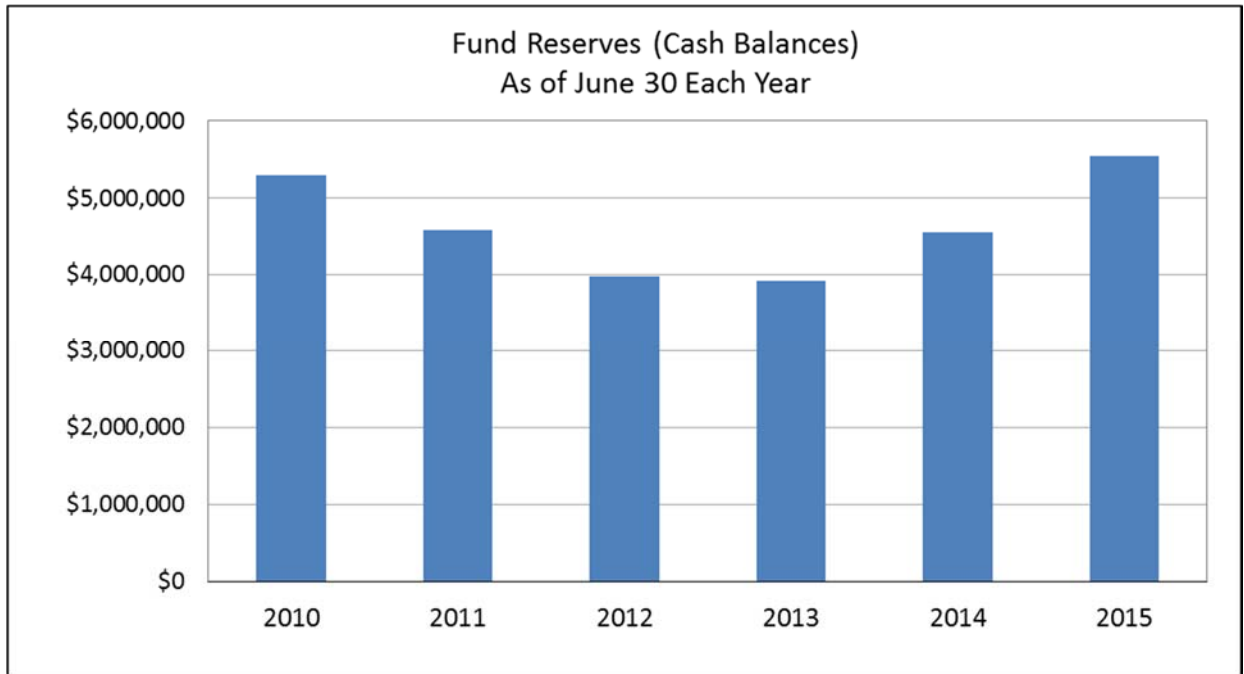
(Note: There have been no rate increases in over five years since May 1, 2010)

	Prior Rates	Jan 1 2007	May 1 2007	May 1 2008	May 1 2009	May 1 2010
a. Residences & Apartments	\$6.50	\$8.93	\$10.70	\$12.31	\$13.52	\$14.86
b. Hotel Units with Kitchens	5.20	9.41	11.29	12.98	14.28	15.71
c. Hotel Units without Kitchens	4.40	6.02	7.22	8.30	9.12	10.02
d. Hotel Room	4.55	6.22	7.46	8.58	9.42	10.36
e. Commercial Establishments	6.73	4.59	5.51	6.26	6.97	7.65
Each additional employee above 5	0.44	0.92	1.10	1.25	1.39	1.53
f. Beauty Shops	8.66	8.49	10.19	11.60	12.73	13.97
Each additional operator above 5	0.86	1.41	1.70	1.93	2.12	2.33
g. Eating Establishments w/o Grinders	9.31	9.11	10.92	12.56	13.79	15.16
Each additional 5 seats above 30	1.01	1.52	1.82	2.09	2.30	2.53
h. Restaurants (w/Grinders) less than 30 seats	14.78	17.30	20.67	24.31	28.12	31.07
Restaurants (w/Grinders) over 30 seats	18.29	22.18	26.51	31.17	36.06	39.84
i. Laundromats - per washing maching	2.96	5.83	7.01	7.98	8.85	9.71
Minimum Charge	8.71	17.50	21.03	23.93	26.54	29.14
j. Service Stations - no wash/rack	7.86	23.26	27.91	31.84	34.11	37.41
Service Stations - with wash/rack	12.47	34.18	41.06	46.56	49.65	54.40
k. Factories	12.47	13.34	16.02	18.30	20.08	22.05
Each additional employee above 20	0.38	0.66	0.80	0.91	1.00	1.10
l. Churches	6.71	7.57	9.10	10.34	11.44	12.56
Per ADA with elementary school	0.21	0.21	0.25	0.28	0.31	0.34
Per ADA with other school	0.30	0.30	0.36	0.42	0.46	0.51
m. Bottling Plants	12.47	13.34	16.02	18.30	20.08	22.05
n. Schools (Non-boarding)	3.25	4.27	5.13	5.83	6.44	7.07
Per ADA with elementary school	0.21	0.20	0.24	0.27	0.30	0.33
Per ADA with other school	0.30	0.31	0.36	0.43	0.47	0.52
o. Schools (Boarding)	3.25	4.27	5.13	5.83	6.44	7.07
Per ADA with elementary school	0.38	0.43	0.51	0.59	0.65	0.71
Per ADA with other school	0.48	0.57	0.68	0.78	0.86	0.95
p. Trailer/Mobile Home Space	6.50	2.52	3.02	3.47	3.81	4.19
q. RV Dump Stations - Less than 50 services	21.00	25.22	30.15	35.20	38.75	42.69
r. Brine (per gallon)	0.1125	0.1125	0.1125	0.1125	0.1125	0.1125

- The District's member agencies currently collect both a) their own charges for sewer collection services, and b) the District's charges for wastewater treatment. Wastewater treatment charges collected on the District's behalf are subsequently passed-through to the District.

- Accounting for both District and local agency charges, the total sewer rates levied by each of the District's three member agencies are among the very lowest in the region based on a survey of 16 regional wastewater agencies.





- The District's fund reserves totaled approximately \$5.5 million as of June 30, 2015.
  - Approximately \$4.1 million of these reserves are held in the District's Expansion Fund, which is used primarily to fund expansion projects and debt service allocated to expansion. Due to restrictions on the use of reserves in the Expansion Fund, BWA recommends the District spend these reserves whenever justified with the goal of instead maintaining a higher level of unrestricted operating reserves. For example, a pipeline replacement that provides no new capacity for expansion can be partially funded from the Expansion Fund assuming the pipeline already has excess capacity available for expansion, even if it is not being expanded further. Additionally, the District's connection fees (one-time levied on new development to recover the cost of facilities benefiting growth) may include buy-in for previously-funded wastewater system assets. If so, a portion of the fee can be used to reimburse the operating fund for the prior infrastructure investments made on behalf of future growth.

## 4 Financial Challenges

The District faces a number of financial challenges in upcoming years that put upward pressure on sewer rates. Key challenges include:

### 4.1 Redundancy Project

- The District has been proactively working to complete reliability and redundancy upgrades to the wastewater treatment plant in order to address requirements of the RWQCB. The District has been working to evaluate project alternatives and identify the most cost-effective infrastructure improvements that will reliably address the RWQCB requirements. Based on an updated engineering cost estimate from September 2015, the project cost is estimated at a little over \$19 million (current dollars) including design, permitting, construction, 30% construction cost contingency, and project management. With 3% cost inflation, the project is estimated at \$20.4 million in future dollars.
- In order to meet RWQCB requirements, the redundancy project is scheduled to be completed and operational by end of 2019, with preliminary engineering/design and construction bidding to be completed by the end of June 2017 followed by construction spread over the subsequent two years and startup/commissioning by the end of 2019.
- Preliminary engineering estimates project the redundancy project will increase the District's annual operating costs by roughly \$425,000. With 4% operating cost inflation, additional annual operating costs associated with the project are projected at \$500,000 in future dollars beginning fiscal year 2019/20.

## Redundancy Project Cost Estimates (Current \$)

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### Project Cost Estimates

Construction Cost		\$9,940,000
Deep Foundation Allowance		1,400,000
Floodproofing Allowance		500,000
Critical Pipe Repair/Replacement Allowance		<u>500,000</u>
Subtotal		12,340,000
Construction Cost Contingency	30%	<u>2,982,000</u>
Construction Cost with Contingency		15,322,000

### Other Project Costs: *Estimated as a % of Base Construction Costs + Allowances*

Design	12%	1,490,000
Permitting	1%	120,000
Engineering During Construction	3%	380,000
Construction Management	10%	1,234,000
Project Management/Administration	<u>4%</u>	<u>494,000</u>
Subtotal	30%	3,718,000

**Total Project Costs** **19,040,000**

**Annual O&M Cost Estimate** **425,000**

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Based on Technical Memorandum from Michael Nunley dated September 11, 2015;  
SSLOCSD Work Plan for Redundancy Project.

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## **4.2 Capital Needs and Repair & Replacement of Aging Facilities**

- The District's treatment plant was originally constructed in 1966 and has subsequently been upgraded and expanded to its current configuration. Due to the age and condition of various components of the District's facilities, the District anticipates needing to fund roughly \$500,000 (current dollars) on average each year for ongoing upgrades, repairs and replacements to its facilities to address current deficiencies and deferred maintenance needs and help ensure continued service reliability. Additional capital needs include an additional \$320,000 budgeted in the current fiscal year for grit removal. The financial projections also assume an average annual funding level of \$200,000 (current dollars) per year from the Expansion Fund or for additional ongoing capital needs. Total capital improvement costs over the 10 years are projected at roughly \$7.4 million in current dollars, and roughly \$8.3 million accounting for 3% construction cost inflation.

## **4.3 Operating Cost Inflation**

- Annual rate increases are needed to keep revenues in line with ongoing operating cost inflation. Cost inflation for water & wastewater utilities (whose costs are largely related to labor and capital) has historically been higher than CPI, which is more of a measure of urban goods and services. For planning purposes, the projections assume operating costs escalate at the annual rate of 4%.



## 5 Financial Projections

- BWA developed 10-year financial projections to evaluate annual revenue requirements and project sewer rate increases. The projections were based on reasonable and slightly conservative assumptions listed below.

### Key Assumptions

- Future operating cost projections are based on the 2015/16 Budget
- Operating cost inflation is projected at 4% per year for planning purposes
- The projections assume a relatively low growth scenario of 20 new single family homes or Equivalent Residential Units (ERUs) per year
- Salaries and Benefits include an additional combined \$225,000 in annual funding for a General Manager prorated to start January 2016. The cash flow projections also assume a corresponding reduction of \$80,000 of Administrative Costs starting 2016/17 that would have been needed without a General Manager.
- Assumes a redundancy project cost estimate of \$19.0 million (current \$) and \$20.4 million (future \$) based on the latest engineering cost estimates.
- Cash flow projections were developed under two financing scenarios:
  - SRF Financing: Projections were developed assuming the District funds the redundancy project with a Clean Water State Revolving Fund (SRF) loan. The SRF financing program currently offers 20 or 30-year loans with interest rates below 2%. For planning purposes, the projections assume a 30-year SRF loan with a 3% annual interest rate. The interest rate on SRF loan fluctuates based roughly on half of the State of California's General Obligation Bond Rate.
  - Revenue Bonds: Alternative cash flow and rate projections were developed based on funding the redundancy project with sewer revenue bonds assuming a 30-year bond with 5.5% average interest rate. Current interest rates are lower, however, it is difficult to predict future interest rates when project funding will be needed.
- Includes new operating costs for the redundancy project projected at \$425,000 (current dollars) plus 4% cost escalation through startup in 2019/20, at which point the escalated operating costs would total \$500,000 per year.
- Includes funding for the District's capital improvement program with 3% construction cost inflation

- Includes a \$1.1 million payment in 2015/16 to the RWQCB for fines related to a prior permit violation during an extreme storm event in December 2010
- Minimum fund reserve target for financial planning purposes: 50% of annual operating and maintenance expenses + \$1 million for emergency capital reserves

## 5.1 Projections with SRF Loan Financing

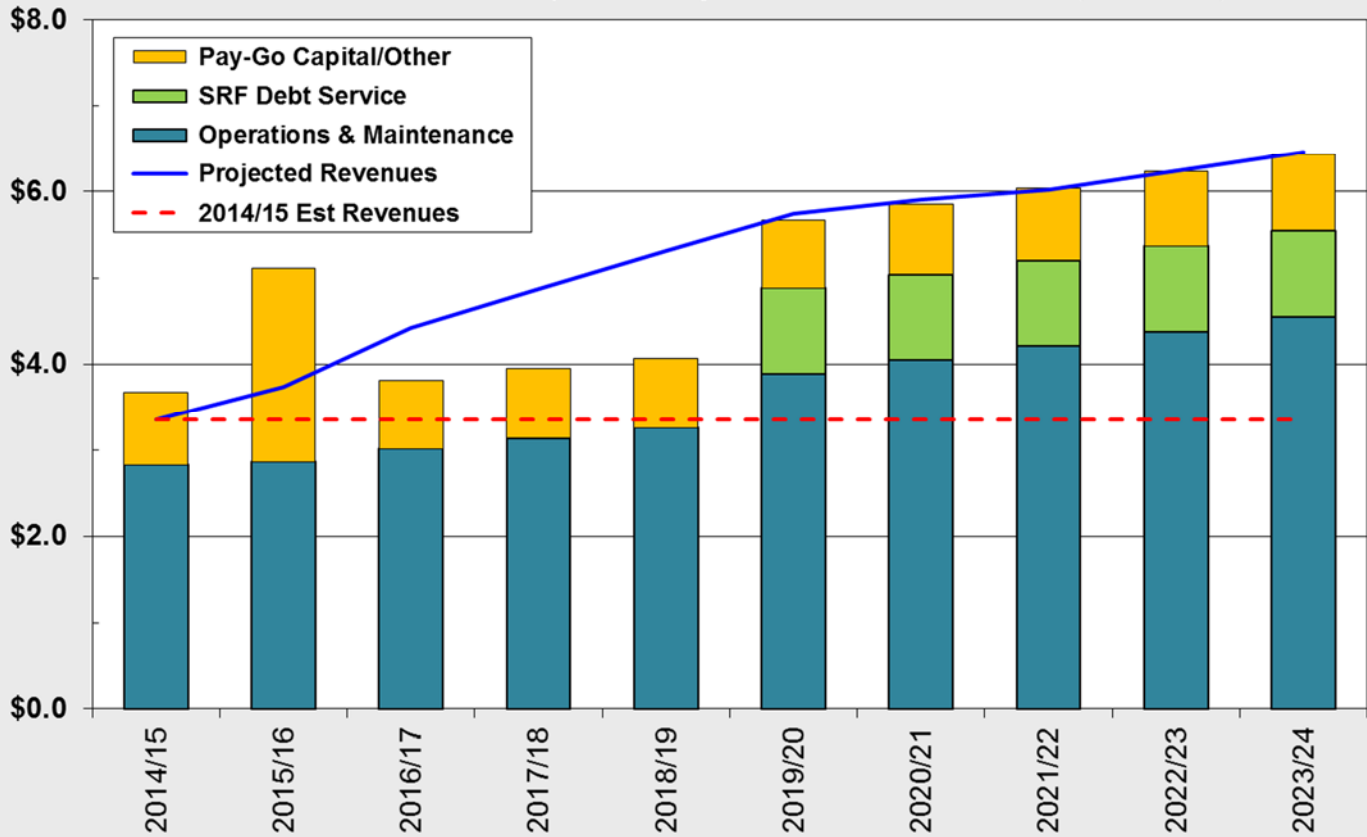
- The following table and chart show a summary of financial projections assuming the District obtains SRF Loan financing for the redundancy project. More-detailed cash flow projections are included in Appendix A.

**Summary Financial Projections**  
**With SRF Loan Financing for the Redundancy Project**

Fiscal Year	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
Monthly Residential Rate	\$14.86	\$18.00	\$20.00	\$22.00	\$24.00	\$26.00	\$26.50	\$27.00	\$28.00	\$29.00
Beginning Fund Reserves	\$5.5	\$5.2	\$3.2	\$4.3	\$5.2	\$5.5	\$5.6	\$5.6	\$5.6	\$5.6
<b>REVENUES</b>										
Sewer Service Charges	3.1	3.4	4.2	4.6	5.1	5.5	5.6	5.7	5.9	6.1
Other Revenues	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Subtotal	3.4	3.7	4.4	4.9	5.3	5.7	5.9	6.0	6.2	6.5
SRF Loan Proceeds	-	-	1.5	9.2	9.5	-	-	-	-	-
<b>Total</b>	<b>3.4</b>	<b>3.7</b>	<b>5.9</b>	<b>14.1</b>	<b>14.8</b>	<b>5.7</b>	<b>5.9</b>	<b>6.0</b>	<b>6.2</b>	<b>6.5</b>
<b>EXPENSES</b>										
Operating Expenses	2.8	2.9	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0
New Redundancy O&M	-	-	-	-	-	0.5	0.5	0.5	0.6	0.6
Debt Service	-	-	-	-	-	1.0	1.0	1.0	1.0	1.0
Redundancy Project	-	0.6	1.0	9.2	9.5	-	-	-	-	-
RWQCB Fine	-	1.1	-	-	-	-	-	-	-	-
Capital/Non-Operating	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
<b>Total</b>	<b>3.7</b>	<b>5.7</b>	<b>4.8</b>	<b>13.2</b>	<b>13.6</b>	<b>5.7</b>	<b>5.9</b>	<b>6.0</b>	<b>6.2</b>	<b>6.4</b>
Transfer to SRF Reserve	-	-	-	-	1.0	-	-	-	-	-
<b>Revenues Less Exps</b>	<b>(0.3)</b>	<b>(2.0)</b>	<b>1.1</b>	<b>0.9</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	<b>(0.0)</b>	<b>0.0</b>	<b>0.0</b>
<b>Ending Fund Reserves</b>	<b>5.2</b>	<b>3.2</b>	<b>4.3</b>	<b>5.2</b>	<b>5.5</b>	<b>5.6</b>	<b>5.6</b>	<b>5.6</b>	<b>5.6</b>	<b>5.7</b>
SRF Reserve Requirement	-	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0
Debt Service Coverage	-	-	-	-	-	1.86	1.87	1.83	1.88	1.92

## South San Luis Obispo County Sanitation District

10-Year Revenue & Expense Projections with SRF Loans (\$ Millions)



Excludes capital improvements funded by debt, but includes the associated debt service.

Excludes interfund transfers that are not expenditures.

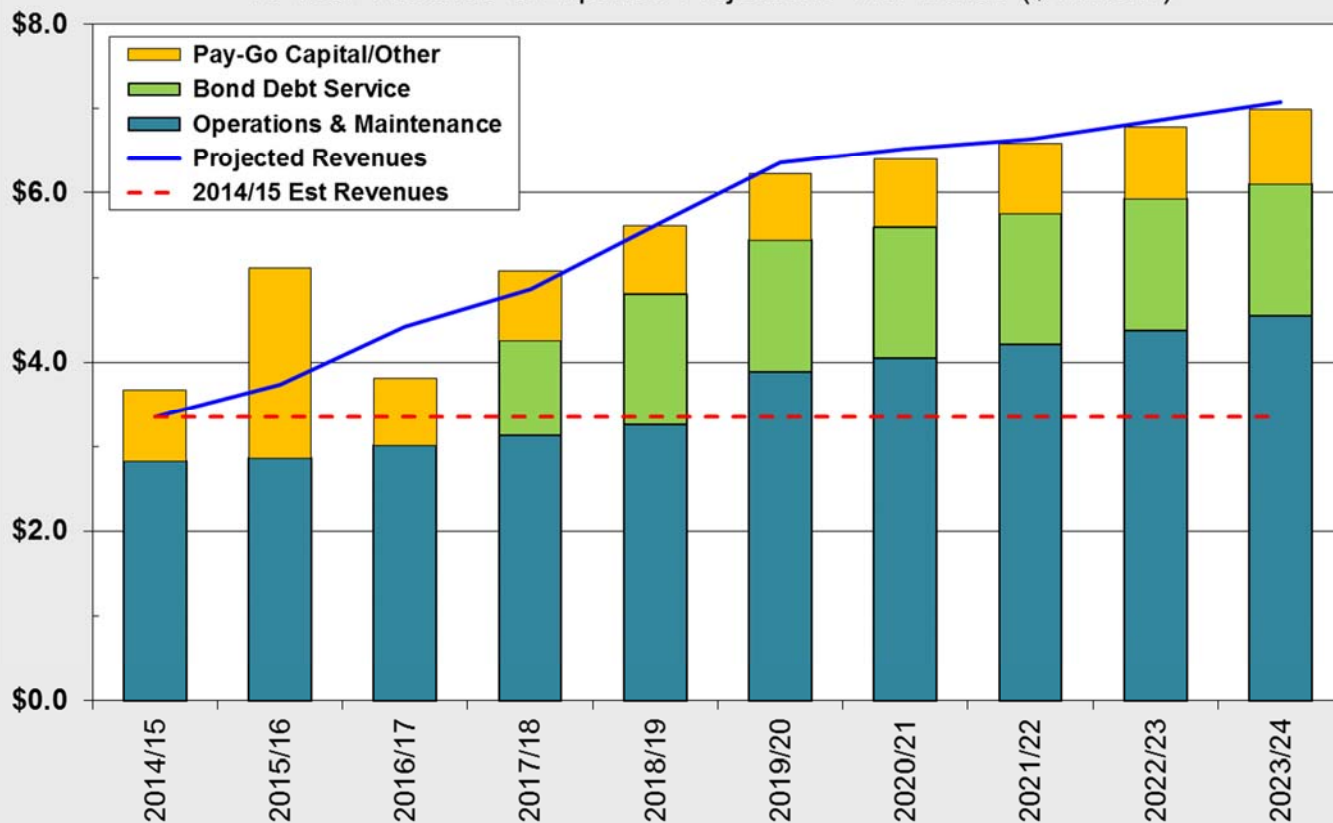
## 5.2 Projections with Bond Financing

- The following table and chart show a summary of financial projections assuming the District finances the redundancy project with sewer revenue bonds. More-detailed cash flow projections are included in Appendix A.

**Summary Financial Projections**  
**With Sewer Revenue Bond Financing for the Redundancy Project**

Fiscal Year	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
Monthly Residential Rate	\$14.86	\$18.00	\$20.00	\$22.00	\$25.50	\$29.00	\$29.50	\$30.00	\$31.00	\$32.00
Beginning Fund Reserves	\$5.5	\$5.2	\$3.2	\$2.8	\$4.2	\$4.2	\$4.4	\$4.5	\$4.5	\$4.6
<b>REVENUES</b>										
Sewer Service Charges	3.1	3.4	4.2	4.6	5.4	6.1	6.2	6.3	6.6	6.8
Other Revenues	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
Subtotal	3.4	3.7	4.4	4.9	5.6	6.4	6.5	6.6	6.9	7.1
Bond Proceeds	-	-	-	10.8	9.5	-	-	-	-	-
Total	3.4	3.7	4.4	15.7	15.1	6.4	6.5	6.6	6.9	7.1
<b>EXPENSES</b>										
Operating Expenses	2.8	2.9	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0
New Redundancy O&M	-	-	-	-	-	0.5	0.5	0.5	0.6	0.6
Debt Service	-	-	-	1.1	1.5	1.5	1.5	1.5	1.5	1.5
Redundancy Project	-	0.6	1.0	9.2	9.5	-	-	-	-	-
RWQCB Fine	-	1.1	-	-	-	-	-	-	-	-
Capital/Non-Operating	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Total	3.7	5.7	4.8	14.3	15.1	6.2	6.4	6.6	6.8	7.0
<b>Revenues Less Exps</b>	<b>(0.3)</b>	<b>(2.0)</b>	<b>(0.4)</b>	<b>1.4</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>
<b>Ending Fund Reserves</b>	<b>5.2</b>	<b>3.2</b>	<b>2.8</b>	<b>4.2</b>	<b>4.2</b>	<b>4.4</b>	<b>4.5</b>	<b>4.5</b>	<b>4.6</b>	<b>4.7</b>
Debt Service Coverage	-	-	-	1.54	1.52	1.60	1.60	1.57	1.60	1.63

# **South San Luis Obispo County Sanitation District** 10-Year Revenue & Expense Projections with Bonds (\$ Millions)



Excludes capital improvements funded by debt, but includes the associated debt service.  
 Excludes interfund transfers that are not expenditures.

## 6 Cost of Service Rate Realignment

- The District's rate structure was last reviewed and modified in 2007. In order to ensure the District's rates reasonably reflect the cost of service to each customer class, BWA developed new rates from the ground up, based on reasonable estimates of wastewater flow and strength for each of the District's customer classes.
- Revised sewer service charges were first calculated on a revenue-neutral basis with the District's current rates, as shown on table on the following page. The tables calculates new rates based on the number of Equivalent Residential Units (ERUs) assigned to each customer type. An ERU is unit of measurement based on the wastewater flow and strength loadings and associated wastewater system capacity needs of a typical single family home. Wastewater flow and strength loadings from different types of customers can be expressed in terms of ERUs in order to provide a standard unit of measurement representing the relative cost burden for serving each connection in relation to that of a single family home. The ERU assignments, in turn, are used to develop new rates aligned with the cost of providing service to each customer class.
- The number of ERUs assigned to each customer class is based on the standard wastewater flow and strength of each customer type. Specifically, ERUs are calculated based on the multiplication of the Wastewater Flow Factor and the Strength Factor of each class.
  - The Wastewater Flow Factor represents the volume of wastewater flow and system capacity requirements for each customer class in relation to that of a standard single family residence. The Wastewater Flow Factor formula can be expressed as:  
***Flow Factor = Typical Flow per Customer Class (gpd) / 200 gpd***
  - The Wastewater Strength Factor is calculated based on both a) the relative wastewater strength of each customer class in relation to that of a standard single family residence as measured by the standard wastewater strength parameters of Biological Oxygen Demand (BOD) and Suspended Solids (SS), and b) cost recovery based on 60% cost recovery from flow, 20% from BOD and 20% from SS. The Wastewater Strength Factor formula can be expressed as:  
***Strength Factor = 60% + 20% x  $\frac{\text{BOD Concentration}}{200 \text{ mg/l}}$  + 20% x  $\frac{\text{SS Concentration}}{200 \text{ mg/l}}$***
  - The number of ERU's assigned to each class is based on multiplying the Flow Factor by the Strength Factor.  
***ERUs = Flow Factor x Strength Factor***

- This methodology ensures that that rates charged to each customer class reasonably reflect the cost burden placed on the system by each type of connection, resulting in rates that are aligned with the costs of providing service.
- The proposed modifications result in a range of impacts on different customer classes with a revenue-neutral adjustment to the rate structure. A few key impacts include:
  - Residential: -Residential customers would face a 2%, or \$0.30 per month, rate reduction with the revenue-neutral modifications to the rate structure.
  - Trailer/Mobile Home Spaces: Prior to 2007, these accounts paid the same monthly rate as other residential dwelling units at \$6.50 per month. In 2007, the monthly charge for these accounts was decreased by over 60% to \$2.52 per month. The current rate is \$4.19 per unit. Under the proposed revenue-neutral rate structure modifications, the rate would be set at 60% of the standard residential charge, or \$8.74 per month.
  - Hotels and Motels: The various hotel and motel rate classes would face rate reductions of roughly \$2 to \$3 per room, equal to decrease in the range of 18% to 21%. Hotel Units with Kitchens are currently billed a monthly charge that is a little higher than the charge for a standard residential unit.
  - Eating Establishments & Restaurants: These accounts will face impacts ranging from 5% to 34% as shown on the following table. The revised rates are based on conservatively low estimates of wastewater flow and strength.
- **With the rate structure modifications, rates for all customer classes will remain low compared to other statewide and regional agencies.**

## Revised Sewer Rates With Cost-of-Service Realignment

	CURRENT		REVISED					IMPACTS				
	Sewer Rates	ERUs	Wastewater Flow		Wastewater Strength		Proposed ERUs	Revised Rates	% Rate Change	\$ Rate Change		
			Flow (gpd)	Flow Factor	BOD mg/l	SS mg/l	Strength Factor	Flow Factor x Revenue-Neutral Modifications				
a.	Residences & Apartments	\$14.86	1.00	200	1.00	200	200	1.0	1.00	\$14.56	-2%	(\$0.30)
b.	Hotel Units with Kitchens	15.71	1.06	175	0.88	200	200	1.0	0.88	12.74	-19%	(2.97)
c.	Motel Units without Kitchens	10.02	0.67	125	0.63	150	150	0.9	0.56	8.19	-18%	(1.83)
d.	Hotel Room	10.36	0.70	125	0.63	150	150	0.9	0.56	8.19	-21%	(2.17)
e.	Commercial Establishments Each additional employee above 5	7.65	0.51	100	0.50	150	150	0.9	0.45	6.55	-14%	(1.10)
		1.53	0.10	20	0.10	150	150	0.9	0.09	1.31	-14%	(0.22)
f.	Beauty Shops Each additional operator above 5	13.97	0.94	200	1.00	150	150	0.9	0.90	13.10	-6%	(0.87)
		2.33	0.16	30	0.15	150	150	0.9	0.14	1.97	-15%	(0.36)
g.	Eating Establishments w/o Grinders Each additional 5 seats above 30	15.16	1.02	200	1.00	400	400	1.4	1.40	20.38	34%	5.22
		2.53	0.17	30	0.15	400	400	1.4	0.21	3.06	21%	0.53
h.	Restaurants (w/Grinders) less than 30 seats	31.07	2.09	250	1.25	700	500	1.8	2.25	32.76	5%	1.69
	Restaurants (w/Grinders) over 30 seats	39.84	2.68	350	1.75	700	500	1.8	3.15	45.86	15%	6.02
i.	Laundromats - per washing maching Minimum Charge	9.71	0.65	150	0.75	150	110	0.9	0.65	9.39	-3%	(0.32)
		29.14	1.96	450	2.25	150	110	0.9	1.94	28.17	-3%	(0.97)
j.	Service Stations - no wash/rack	37.41	2.52	500	2.50	180	280	1.1	2.65	38.58	3%	1.17
	Service Stations - with wash/rack	54.40	3.66	800	4.00	150	200	1.0	3.80	55.33	2%	0.93
k.	Factories Each additional employee above 20	22.05	1.48	300	1.50	200	200	1.0	1.50	21.84	-1%	(0.21)
		1.10	0.07	15	0.08	200	200	1.0	0.08	1.09	-1%	(0.01)
l.	Churches Per ADA with elementary school	12.56	0.85	200	1.00	130	100	0.8	0.83	12.08	-4%	(0.48)
	Per ADA with other school	0.34	0.02	6	0.03	130	100	0.8	0.02	0.36	6%	0.02
		0.51	0.03	9	0.05	130	100	0.8	0.04	0.54	6%	0.03
m.	Bottling Plants	22.05	1.48	400	2.00	150	150	0.9	1.80	26.21	19%	4.16
n.	Schools (Non-boarding) Per ADA with elementary school	7.07	0.48	120	0.60	130	100	0.8	0.50	7.25	3%	0.18
	Per ADA with other school	0.33	0.02	6	0.03	130	100	0.8	0.02	0.36	9%	0.03
	Per ADA with other school	0.52	0.03	9	0.05	130	100	0.8	0.04	0.54	4%	0.02
o.	Schools (Boarding) Per ADA with elementary school	7.07	0.48	100	0.50	200	200	1.0	0.50	7.28	3%	0.21
	Per ADA with other school	0.71	0.05	10	0.05	200	200	1.0	0.05	0.73	3%	0.02
	Per ADA with other school	0.95	0.06	14	0.07	200	200	1.0	0.07	1.02	7%	0.07
p.	Trailer/Mobile Home Space	4.19	0.28	120	0.60	200	200	1.0	0.60	8.74	109%	4.55
q.	RV Dump Stations - Less than 50 services	42.69	2.87	100	0.50	2,700	6,000	9.3	4.65	67.70	59%	25.01

## 7 Rate Projections

- Rate projections were developed under two methods of financing for the redundancy project including a) SRF Loans, and b) sewer revenue bonds. While the projected rates are the same under both financing scenarios through fiscal year 2017/18, future rates in the last two years would need to be higher with bonds than with SRF Loans due to the higher level of annual debt service required for bond financing.
- BWA also develop rate projections with a) no changes to the rate structure, and b) with the proposed rate structure modifications designed to realign rates with the cost of service.
- Due to deferment of the rate study and requirement to go through the Proposition 218 process for increasing rates, the rate increase for the current fiscal year 2015/16 is being deferred until January 1, 2016. The District will not recoup rate increase revenues from the first half of fiscal year 2015/16. Future rate increases are projected to become effective on July 1 of each year.

### 7.1 Rate Projections with No Changes to Rate Structure

- These rates assume projected rate increases are applied on an across-the-board basis with the same percentage increase to all customer classes with *no changes to the District's existing rate structure*.

**Projected Rates with No Changes to Rate Structure**

	Current Monthly Rate	Projected Monthly Sewer Rates				
		2015/16	2016/17	2017/18	2018/19	2019/20
		Jan-1	July-1	July-1	July-1	July-1
<b>1A - With SRF Financing for the Redundancy Project</b>						
Monthly Residential Charge	\$14.86	\$18.00	\$20.00	\$22.00	\$24.00	\$26.00
<b>1B - With Bond Financing for the Redundancy Project</b>						
Monthly Residential Charge	\$14.86	\$18.00	\$20.00	\$22.00	\$25.50	\$29.00

- The tables on the following pages shows the full rate schedule with across-the-board rate increases projected for the next five years.

**Projected Rates 1A**  
**SRF Loan Financing for Redundancy Project**  
**No Rate Structure Modifications**

	Current Rates	Projected Rates with Across-the-Board Increases				
		2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	\$18.00	\$20.00	\$22.00	\$24.00	\$26.00
b. Hotel Units with Kitchens	15.71	19.03	21.14	23.25	25.36	27.47
c. Hotel Units without Kitchens	10.02	12.14	13.49	14.84	16.19	17.54
d. Hotel Room	10.36	12.55	13.94	15.33	16.72	18.11
e. Commercial Establishments	7.65	9.27	10.30	11.33	12.36	13.39
Each additional employee above 5	1.53	1.85	2.06	2.27	2.48	2.69
f. Beauty Shops	13.97	16.92	18.80	20.68	22.56	24.44
Each additional operator above 5	2.33	2.82	3.13	3.44	3.75	4.06
g. Eating Establishments w/o Grinders	15.16	18.36	20.40	22.44	24.48	26.52
Each additional 5 seats above 30	2.53	3.06	3.40	3.74	4.08	4.42
h. Restaurants (w/Grinders) <30 seats	31.07	37.64	41.82	46.00	50.18	54.36
Restaurants (w/Grinders) over 30 seats	39.84	48.26	53.62	58.98	64.34	69.70
i. Laundromats - per washing machine	9.71	11.76	13.07	14.38	15.69	17.00
Minimum Charge	29.14	35.30	39.22	43.14	47.06	50.98
j. Service Stations - no wash/rack	37.41	45.31	50.34	55.37	60.40	65.43
Service Stations - with wash/rack	54.40	65.90	73.22	80.54	87.86	95.18
k. Factories	22.05	26.71	29.68	32.65	35.62	38.59
Each additional employee above 20	1.10	1.33	1.48	1.63	1.78	1.93
l. Churches	12.56	15.21	16.90	18.59	20.28	21.97
Per ADA with elementary school	0.34	0.41	0.46	0.51	0.56	0.61
Per ADA with other school	0.51	0.62	0.69	0.76	0.83	0.90
m. Bottling Plants	22.05	26.71	29.68	32.65	35.62	38.59
n. Schools (Non-boarding)	7.07	8.56	9.51	10.46	11.41	12.36
Per ADA with elementary school	0.33	0.40	0.44	0.48	0.52	0.56
Per ADA with other school	0.52	0.63	0.70	0.77	0.84	0.91
o. Schools (Boarding)	7.07	8.56	9.51	10.46	11.41	12.36
Per ADA with elementary school	0.71	0.86	0.96	1.06	1.16	1.26
Per ADA with other school	0.95	1.15	1.28	1.41	1.54	1.67
p. Trailer/Mobile Home Space	4.19	5.08	5.64	6.20	6.76	7.32
q. RV Dump Stations - Less than 50 svcs	42.69	51.71	57.46	63.21	68.96	74.71

**Projected Rates 1B**  
**Revenue Bond Financing for Redundancy Project**  
**No Rate Structure Modifications**

	Current Rates	Projected Rates with Across-the-Board Increases				
		2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	\$18.00	\$20.00	\$22.00	\$25.50	\$29.00
b. Hotel Units with Kitchens	15.71	19.03	21.14	23.25	26.95	30.65
c. Hotel Units without Kitchens	10.02	12.14	13.49	14.84	17.20	19.56
d. Hotel Room	10.36	12.55	13.94	15.33	17.77	20.21
e. Commercial Establishments	7.65	9.27	10.30	11.33	13.13	14.93
Each additional employee above 5	1.53	1.85	2.06	2.27	2.63	2.99
f. Beauty Shops	13.97	16.92	18.80	20.68	23.97	27.26
Each additional operator above 5	2.33	2.82	3.13	3.44	3.99	4.54
g. Eating Establishments w/o Grinders	15.16	18.36	20.40	22.44	26.01	29.58
Each additional 5 seats above 30	2.53	3.06	3.40	3.74	4.34	4.94
h. Restaurants (w/Grinders) <30 seats	31.07	37.64	41.82	46.00	53.32	60.64
Restaurants (w/Grinders) over 30 seats	39.84	48.26	53.62	58.98	68.36	77.74
i. Laundromats - per washing machine	9.71	11.76	13.07	14.38	16.67	18.96
Minimum Charge	29.14	35.30	39.22	43.14	50.00	56.86
j. Service Stations - no wash/rack	37.41	45.31	50.34	55.37	64.18	72.99
Service Stations - with wash/rack	54.40	65.90	73.22	80.54	93.35	106.16
k. Factories	22.05	26.71	29.68	32.65	37.84	43.03
Each additional employee above 20	1.10	1.33	1.48	1.63	1.89	2.15
l. Churches	12.56	15.21	16.90	18.59	21.55	24.51
Per ADA with elementary school	0.34	0.41	0.46	0.51	0.59	0.67
Per ADA with other school	0.51	0.62	0.69	0.76	0.88	1.00
m. Bottling Plants	22.05	26.71	29.68	32.65	37.84	43.03
n. Schools (Non-boarding)	7.07	8.56	9.51	10.46	12.12	13.78
Per ADA with elementary school	0.33	0.40	0.44	0.48	0.56	0.64
Per ADA with other school	0.52	0.63	0.70	0.77	0.89	1.01
o. Schools (Boarding)	7.07	8.56	9.51	10.46	12.12	13.78
Per ADA with elementary school	0.71	0.86	0.96	1.06	1.23	1.40
Per ADA with other school	0.95	1.15	1.28	1.41	1.63	1.85
p. Trailer/Mobile Home Space	4.19	5.08	5.64	6.20	7.19	8.18
q. RV Dump Stations - Less than 50 svcs	42.69	51.71	57.46	63.21	73.27	83.33

## 7.2 Rate Projections with Modified Rate Structure

- These rates increases account for *both the overall level of rate increases needed to meet future revenue requirements as well as modifications to the sewer rate structure designed to realign rates with the cost of providing service.*

**Projected Rates with Rate Structure Realignment**

	Current Monthly Rate	Projected Monthly Sewer Rates				
		2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
2A - With SRF Financing for the Redundancy Project						
Monthly Residential Charge	\$14.86	\$17.64	\$19.60	\$21.56	\$23.52	\$25.48
2B - With Bond Financing for the Redundancy Project						
Monthly Residential Charge	\$14.86	\$17.64	\$19.60	\$21.56	\$24.99	\$28.42

- The tables on the following pages shows the full rate schedule accounting for both the overall rate increases and the proposed rate structure modifications.

**Projected Rates 2A**  
**SRF Loan Financing for Redundancy Project**  
**With Rate Structure Realignment**

		Revised Rates		Projected Rates with Rate Structure Modifications				
		Current	Rev-Neutral	2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a.	Residences & Apartments	\$14.86	14.56	\$17.64	\$19.60	\$21.56	\$23.52	\$25.48
b.	Hotel Units with Kitchens	15.71	12.74	15.43	17.14	18.85	20.56	22.27
c.	Hotel Units without Kitchens	10.02	8.19	9.92	11.02	12.12	13.22	14.32
d.	Hotel Room	10.36	8.19	9.92	11.02	12.12	13.22	14.32
e.	Commercial Establishments	7.65	6.55	7.93	8.81	9.69	10.57	11.45
	Each additional employee above 5	1.53	1.31	1.59	1.77	1.95	2.13	2.31
f.	Beauty Shops	13.97	13.10	15.87	17.63	19.39	21.15	22.91
	Each additional operator above 5	2.33	1.97	2.39	2.66	2.93	3.20	3.47
g.	Eating Establishments w/o Grinders	15.16	20.38	24.69	27.43	30.17	32.91	35.65
	Each additional 5 seats above 30	2.53	3.06	3.71	4.12	4.53	4.94	5.35
h.	Restaurants (w/Grinders) <30 seats	31.07	32.76	39.68	44.09	48.50	52.91	57.32
	Restaurants (w/Grinders) over 30 seats	39.84	45.86	55.55	61.72	67.89	74.06	80.23
i.	Laundromats - per washing machine	9.71	9.39	11.37	12.63	13.89	15.15	16.41
	Minimum Charge	29.14	28.17	34.12	37.91	41.70	45.49	49.28
j.	Service Stations - no wash/rack	37.41	38.58	46.73	51.92	57.11	62.30	67.49
	Service Stations - with wash/rack	54.40	55.33	67.02	74.47	81.92	89.37	96.82
k.	Factories	22.05	21.84	26.45	29.39	32.33	35.27	38.21
	Each additional employee above 20	1.10	1.09	1.32	1.47	1.62	1.77	1.92
l.	Churches	12.56	12.08	14.63	16.26	17.89	19.52	21.15
	Per ADA with elementary school	0.34	0.36	0.44	0.49	0.54	0.59	0.64
	Per ADA with other school	0.51	0.54	0.65	0.72	0.79	0.86	0.93
m.	Bottling Plants	22.05	26.21	31.75	35.28	38.81	42.34	45.87
n.	Schools (Non-boarding)	7.07	7.25	8.78	9.76	10.74	11.72	12.70
	Per ADA with elementary school	0.33	0.36	0.44	0.49	0.54	0.59	0.64
	Per ADA with other school	0.52	0.54	0.65	0.72	0.79	0.86	0.93
o.	Schools (Boarding)	7.07	7.28	8.82	9.80	10.78	11.76	12.74
	Per ADA with elementary school	0.71	0.73	0.88	0.98	1.08	1.18	1.28
	Per ADA with other school	0.95	1.02	1.24	1.38	1.52	1.66	1.80
p.	Trailer/Mobile Home Space	4.19	8.74	10.59	11.77	12.95	14.13	15.31
q.	RV Dump Stations - Less than 50 svcs	42.69	67.70	82.01	91.12	100.23	109.34	118.45

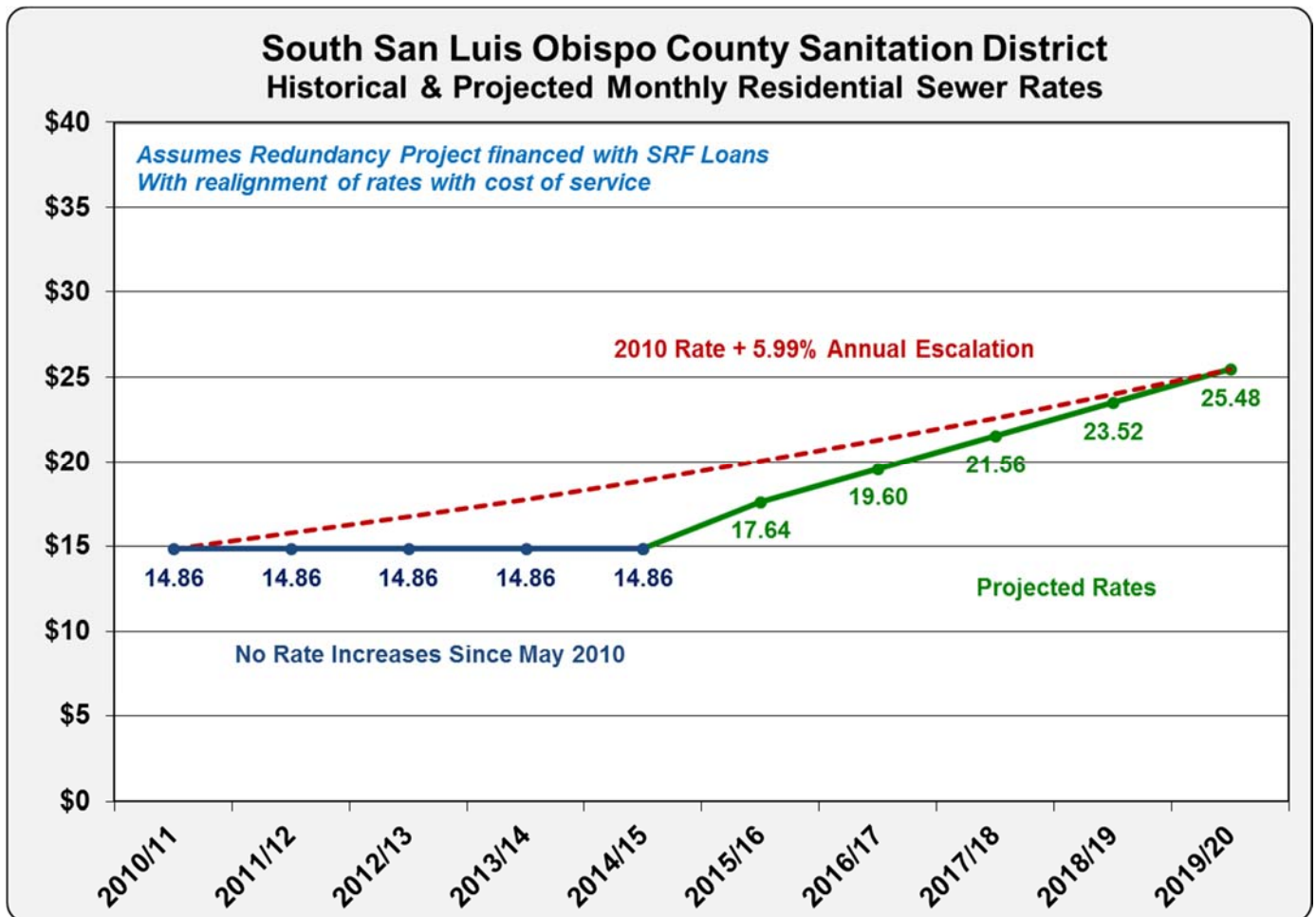
**Projected Rates 2B**  
**Revenue Bond Financing for Redundancy Project**  
**With Rate Structure Realignment**

	Revised Rates		Projected Rates with Rate Structure Modifications				
	Current	Rev-Neutral	2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	14.56	\$17.64	\$19.60	\$21.56	\$24.99	\$28.42
b. Hotel Units with Kitchens	15.71	12.74	15.43	17.14	18.85	21.85	24.85
c. Hotel Units without Kitchens	10.02	8.19	9.92	11.02	12.12	14.05	15.98
d. Hotel Room	10.36	8.19	9.92	11.02	12.12	14.05	15.98
e. Commercial Establishments	7.65	6.55	7.93	8.81	9.69	11.23	12.77
Each additional employee above 5	1.53	1.31	1.59	1.77	1.95	2.26	2.57
f. Beauty Shops	13.97	13.10	15.87	17.63	19.39	22.47	25.55
Each additional operator above 5	2.33	1.97	2.39	2.66	2.93	3.40	3.87
g. Eating Establishments w/o Grinders	15.16	20.38	24.69	27.43	30.17	34.97	39.77
Each additional 5 seats above 30	2.53	3.06	3.71	4.12	4.53	5.25	5.97
h. Restaurants (w/Grinders) <30 seats	31.07	32.76	39.68	44.09	48.50	56.22	63.94
Restaurants (w/Grinders) over 30 seats	39.84	45.86	55.55	61.72	67.89	78.69	89.49
i. Laundromats - per washing maching	9.71	9.39	11.37	12.63	13.89	16.10	18.31
Minimum Charge	29.14	28.17	34.12	37.91	41.70	48.33	54.96
j. Service Stations - no wash/rack	37.41	38.58	46.73	51.92	57.11	66.20	75.29
Service Stations - with wash/rack	54.40	55.33	67.02	74.47	81.92	94.95	107.98
k. Factories	22.05	21.84	26.45	29.39	32.33	37.47	42.61
Each additional employee above 20	1.10	1.09	1.32	1.47	1.62	1.88	2.14
l. Churches	12.56	12.08	14.63	16.26	17.89	20.74	23.59
Per ADA with elementary school	0.34	0.36	0.44	0.49	0.54	0.63	0.72
Per ADA with other school	0.51	0.54	0.65	0.72	0.79	0.92	1.05
m. Bottling Plants	22.05	26.21	31.75	35.28	38.81	44.98	51.15
n. Schools (Non-boarding)	7.07	7.25	8.78	9.76	10.74	12.45	14.16
Per ADA with elementary school	0.33	0.36	0.44	0.49	0.54	0.63	0.72
Per ADA with other school	0.52	0.54	0.65	0.72	0.79	0.92	1.05
o. Schools (Boarding)	7.07	7.28	8.82	9.80	10.78	12.50	14.22
Per ADA with elementary school	0.71	0.73	0.88	0.98	1.08	1.25	1.42
Per ADA with other school	0.95	1.02	1.24	1.38	1.52	1.76	2.00
p. Trailer/Mobile Home Space	4.19	8.74	10.59	11.77	12.95	15.01	17.07
q. RV Dump Stations - Less than 50 svcs	42.69	67.70	82.01	91.12	100.23	116.18	132.13

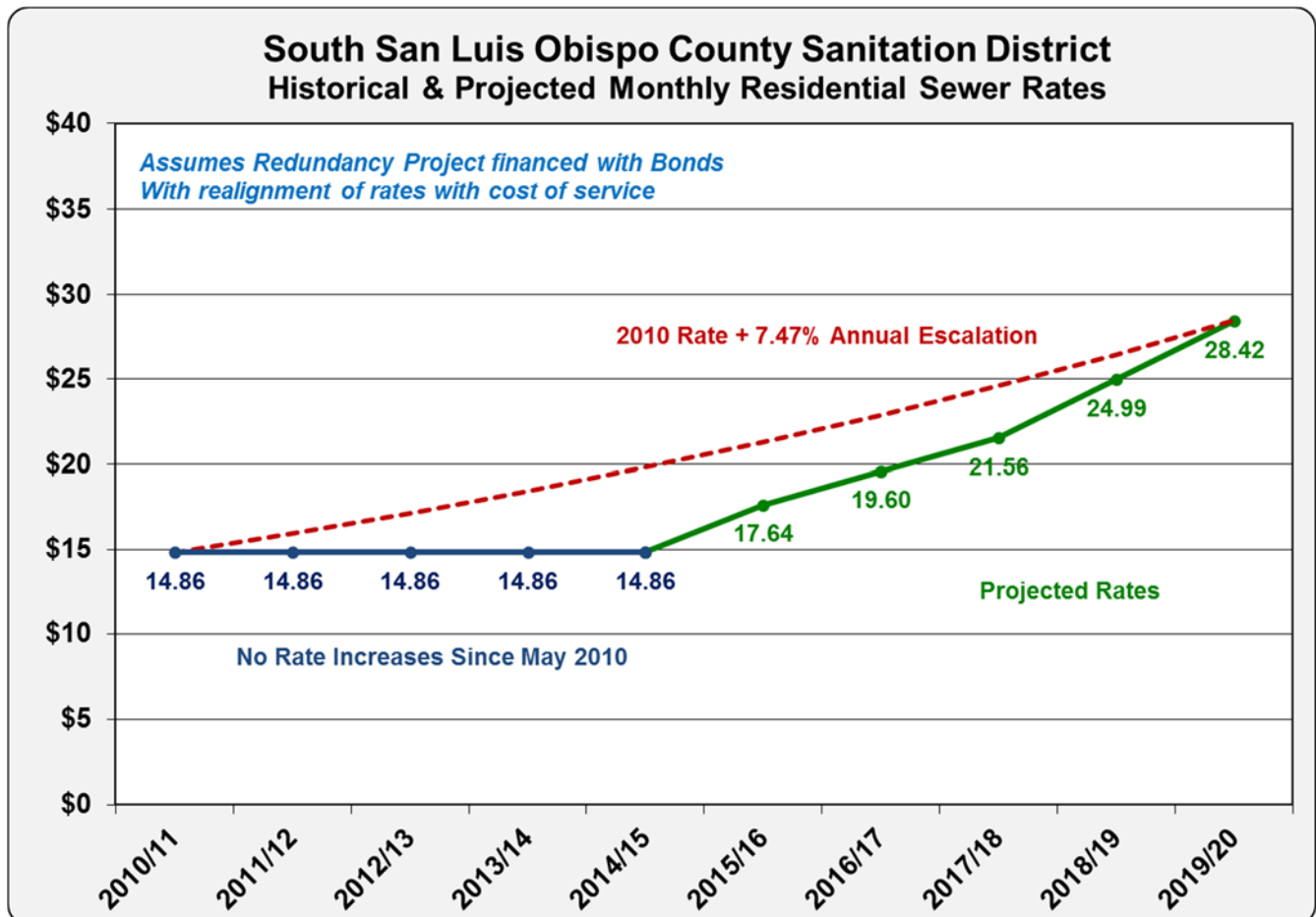
### 7.3 Other Rate Observations

- Deferring or reducing rate increases in the near-term would result in the need for higher rate increases in future years (and vice versa)
- Each \$1 increase in the monthly residential rate generates a little over \$200,000 of additional revenues.
- The financial projections also indicate the need for small annual rate increases in subsequent years, after the initial 5-year rate increase, to keep revenues in line with operating cost inflation and help minimize the potential for future rate spikes. The District can re-evaluate its finances and rates in the future to ensure future rates continue to recover the cost of providing service.
- **With the proposed rate increases, SSLOCSD member agency rates are projected to remain low compared to other regional and statewide agencies.** A number of other regional agencies are also anticipating or have adopted sewer rate increases for upcoming years.

- Assuming the District obtains SRF financing for the redundancy project and implements the proposed modified rate structure, the District's residential monthly rate in five years will be equal to the District's 2010 rate escalated by slightly below 6.0% per year, as shown on the following chart.



- If the District obtains bond financing for the redundancy project and implements the proposed modified rate structure, the District's residential monthly rate in five years will be equal to the District's 2010 rate escalated by slightly below 7.5% per year, as shown on the following chart.



## 8 Rate Recommendations

- Based on evaluation of the rate alternatives and input from both District staff and the Board of Directors, BWA recommends the District pursue rate alternative 2A, which a) assumes that the District obtains low-rate State Revolving Fund (SRF) financing for its redundancy project, and b) includes modifications to the sewer rate structure designed to realign rates with the cost of providing service.

## 9 Compliance with Proposition 218

- 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 service charges such as water, sewer, and garbage rates. Article 13D, Section 6 establishes both a) substantive requirements for property-related charges, and b) procedural requirements for imposing or increasing property-related charges.

### 9.1 Compliance with the Substantive Provisions of Proposition 218

- The recommended rates, which include modifications to the rate structure designed to realign rates with the cost of service, are designed to comply with all substantive provisions of Article 13D, which include:
  - 1. Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.**
    - The recommended rates are designed to recover the District's costs of providing wastewater conveyance, treatment, and effluent disposal services over the next 5 years. BWA developed financial projections to determine future annual revenue requirements and rate increases. The financial projections were based on the District's 2015/16 Budget with future adjustments for cost inflation and staffing, and incorporate the latest engineering cost estimates for the redundancy project needed to comply with state permit requirements and improve service reliability. The rate projections are designed to fund the District's costs of service while maintaining prudent levels of fund reserves at approximately current levels, and result in long-term balanced budgets.
  - 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.**
    - The District is a single-purpose agency that uses all service charge revenues to fund the costs of providing wastewater conveyance, treatment, and effluent disposal services. Rate revenues are not used for any other unrelated purposes. The District maintains detailed financial records which are audited annually by an independent Certified Public Accountant and demonstrate District compliance.

**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.**

- The recommended rates are designed to equitably recover costs from all District customers and reflect the proportional cost of service attributable to each connection. The District levies fixed sewer service charges based on the number of Equivalent Residential Units (ERUs) assigned to each connection. One ERU represents the wastewater flow and loadings from a typical single family home. ERUs are assigned to each customer based on reasonable estimates of wastewater flow and strength, and resulting wastewater system capacity needs, for different types of connections as described in Section 6 – Cost of Service Rate Realignment. By recovering costs of service in proportion to the number of ERUs assigned to each customer, the District's rates recover costs in proportion to both a) the burden and capacity needs placed on system by each connection, and b) the benefit received by each connection from the services provided. As such, the charge imposed on any parcel reflects the proportional cost of service attributable to that parcel.
- The recommended rates recover costs in proportion to the estimated wastewater flow and strength, and capacity needs, for each of the District's customer classes. The flow and strength estimates attributed to each customer class are in line with standards used by other agencies. The recommended rates were calculated with the objective of realigning the rates for each customer class with the cost of providing service.

**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.**

- The District's wastewater treatment service charges are only levied on customers that have connected to the sewer systems of each of its member agencies and initiated service. Wastewater collected from each member agency is in turn conveyed to the District for treatment and disposal. As such, District charges are only levied on properties that use and have ongoing access to District facilities and services.
- The District's charges are currently recovered via the utility bills of its member agencies with revenues collected by each agency subsequently passed-through to the District. This District anticipates transitioning its method of billing to direct collection via the County tax rolls. If this billing transition occurs, the District will only bill property owners of parcels that receive wastewater service.

**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 District does not levy any fees or charges for general governmental services.

## **9.2 Compliance with the Procedural Requirements of Proposition 218**

- In order to increase rates, the District must comply with the procedural requirements of Article 13D, Section 6 of the California Constitution, which was established by Proposition 218. These requirements require the District to:
  - Mail a notice to all affected property-owners informing them of a) the proposed rate increases, b) the basis for increases, and c) the date, time, and location of a Public Hearing at which the proposed rates will be considered for adoption.
    - To comply with this provision, the District mailed a Notice of Public Hearing on the proposed wastewater treatment rate increases to property owners of all affected parcels on December 30, 2015, more than 45 days prior to the Public Hearing scheduled for February 17, 2015. Notices were mailed to the property owners of all non-vacant parcels in the City of Grover Beach and the Oceano Community Services District, and to the property owners of all parcels that receive sewer service from the City of Arroyo Grande. The District went beyond the standard requirements of Proposition 218 and mailed notices to both a) the property owner of record and b) either the customer billing address when available, or the local property address in cases where the local address is different from the property owner of record's address.
    - There are differing legal opinions regarding who agencies must mail the required notice too. Many agencies mail notices to all affected property owners only, some mail to both property owners and tenant ratepayers responsible for paying the bill, and a few agencies only send the notice to ratepayers. However, in case of delinquency, agencies are only allowed to place a lien on the property if the notice was mailed to the property owner.
  - Hold a Public Hearing on the proposed rate increases not less than 45 days after the notice is mailed. Most agencies schedule the Public Hearing during a regularly-scheduled meeting of their governing body.
    - BWA recommends that the District establish a clear structure for the Board Meeting and Public Hearing in advance to help ensure the process is understandable to the Board and public and goes as smoothly as possible.

- The proposed rate increases are subject to “majority protest” and cannot be adopted if written protests are received from more than 50% of affected parcels prior to the close of the public hearing, with one protest counted per parcel. Assuming the District does not receive enough protests to constitute a “majority protest”, the District would be able to adopt rates at or below the levels shown in the notice.
  - BWA generally recommends agencies take a lenient approach to counting written protests at the Public Hearing to demonstrate a good-faith effort to account for every protest, even if some protests do not include all of the legally-required information.
- In future years, the District can always opt to implement rates below the levels initially adopted. However, the rates can never exceed levels adopted pursuant to the Proposition 218 process unless the District goes through the process again.

## 10 Debt Financing Recommendations

- BWA strongly recommends the District pursue funding from the Clean Water State Revolving Fund Financing Program to finance the redundancy project and any other future debt financing needs.
  - The SRF financing program offers low-rate loans with 30 year repayment terms and interest rates currently below 2%. Interest rates are based on approximately half the average interest rate of the most recent California state general obligation bond issuance.
  - Debt service on SRF loans is not due until one year following the project’s certified completion date.
  - In recent years, the SRF program has been requiring agencies to establish a debt service reserve fund equal to annual debt service.
  - The SRF program also typically requires agencies to maintain annual net revenues (gross revenues less operating expenses) equal to at least 1.10x of annual debt service, although some agencies may be required to maintain a 1.20x debt service coverage ratio.
  - Prior to award of funding, the SRF program requires agencies to adopt rates adequate to support debt repayment and achieve the required debt service coverage ratio.
  - The SRF financing program does not provide a final funding commitment until after the project has been designed and bid out in compliance with SRF specifications. Agencies

can subsequently seek reimbursement for preliminary design and other soft costs incurred prior to construction award. Due to the need for approximately \$1.6 million of funding for preliminary engineering, design, and other soft costs in 2015/16 - 2016/17, BWA recommends the District consider pursuing an SRF Planning Loan to help fund these costs. If awarded, repayment of the SRF Planning Loan could be rolled into the long-term SRF project loan.

- During construction, agencies fund ongoing construction invoices and can subsequently seek monthly reimbursement from SRF. However, the District needs to be prepared to fund a few months of project expenditures due to the lag in reimbursements. BWA has assisted agencies in competitively bidding out a line of credit in cases where an agency does not have adequate fund reserves to meet the cash flow needs for funding SRF projects. The District can evaluate if a line of credit or other short-term financing is needed to help fund construction invoices on an interim basis while awaiting reimbursement from the SRF financing program.
  - BWA also recommends the District submit an inquiry form to the California Financing Coordinating Committee to identify if the District is eligible for subsidized funding from other various state and federal financing programs.
  - If the District ends up pursuing bond financing, BWA recommends the District issue any bonds via a competitive sale process to help ensure the lowest-cost financing. BWA is a registered Municipal Advisor and charter member of the National Association of Independent Public Finance Advisors.
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# **Appendix A**

## **Complete Set of Tables & Charts**

Table 1

## South San Luis Obispo County Sanitation District

## Wastewater Rate Study

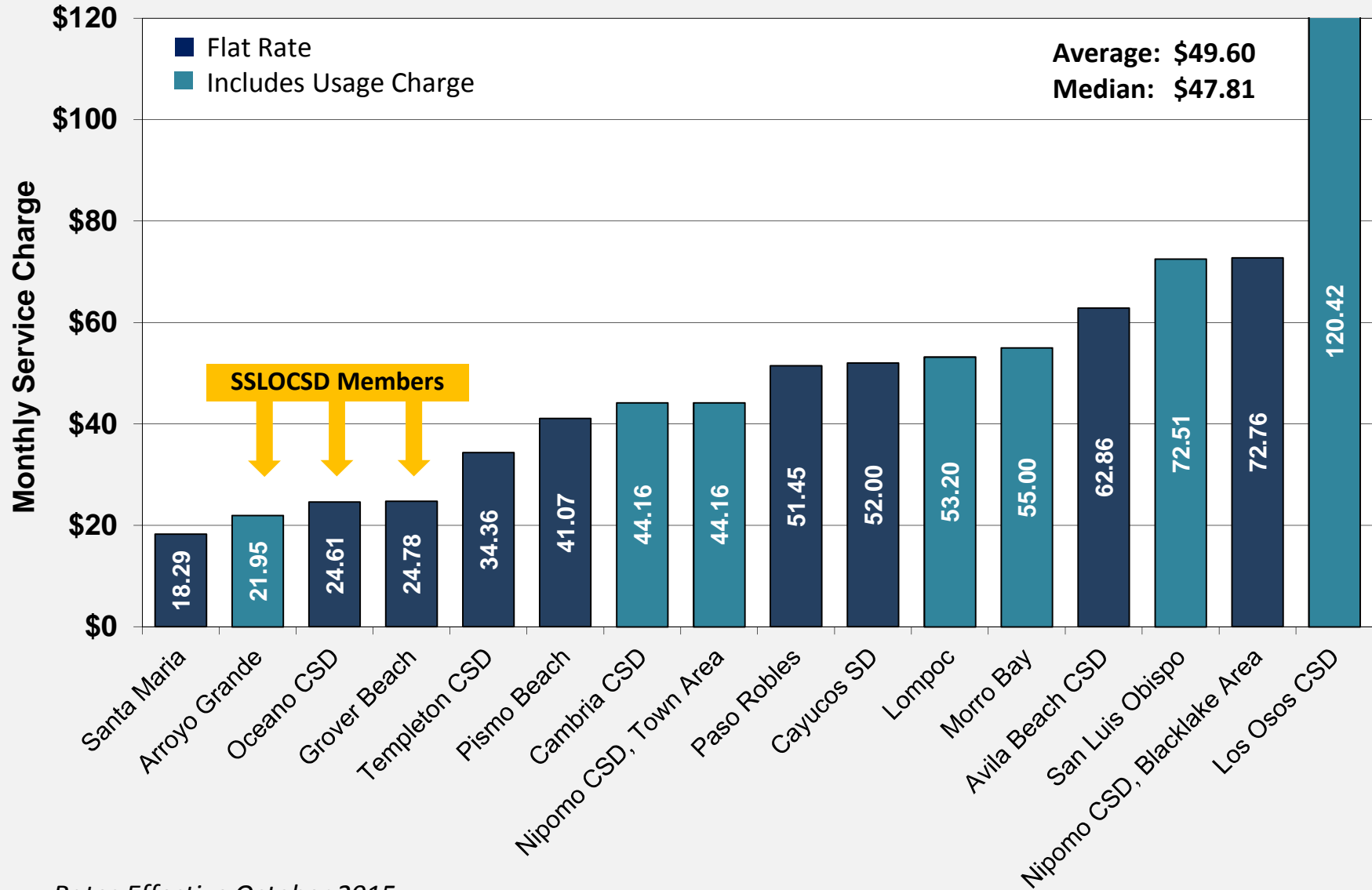
## Historical Wastewater Rates

*No rate increases since May 2010*

	Prior Rates	Jan 1 2007	May 1 2007	May 1 2008	May 1 2009	May 1 2010
a. Residences & Apartments	\$6.50	\$8.93	\$10.70	\$12.31	\$13.52	\$14.86
b. Hotel Units with Kitchens	5.20	9.41	11.29	12.98	14.28	15.71
c. Hotel Units without Kitchens	4.40	6.02	7.22	8.30	9.12	10.02
d. Hotel Room	4.55	6.22	7.46	8.58	9.42	10.36
e. Commercial Establishments	6.73	4.59	5.51	6.26	6.97	7.65
Each additional employee above 5	0.44	0.92	1.10	1.25	1.39	1.53
f. Beauty Shops	8.66	8.49	10.19	11.60	12.73	13.97
Each additional operator above 5	0.86	1.41	1.70	1.93	2.12	2.33
g. Eating Establishments w/o Grinders	9.31	9.11	10.92	12.56	13.79	15.16
Each additional 5 seats above 30	1.01	1.52	1.82	2.09	2.30	2.53
h. Restaurants (w/Grinders) less than 30 seats	14.78	17.30	20.67	24.31	28.12	31.07
Restaurants (w/Grinders) over 30 seats	18.29	22.18	26.51	31.17	36.06	39.84
i. Laundromats - per washing machine	2.96	5.83	7.01	7.98	8.85	9.71
Minimum Charge	8.71	17.50	21.03	23.93	26.54	29.14
j. Service Stations - no wash/rack	7.86	23.26	27.91	31.84	34.11	37.41
Service Stations - with wash/rack	12.47	34.18	41.06	46.56	49.65	54.40
k. Factories	12.47	13.34	16.02	18.30	20.08	22.05
Each additional employee above 20	0.38	0.66	0.80	0.91	1.00	1.10
l. Churches	6.71	7.57	9.10	10.34	11.44	12.56
Per ADA with elementary school	0.21	0.21	0.25	0.28	0.31	0.34
Per ADA with other school	0.30	0.30	0.36	0.42	0.46	0.51
m. Bottling Plants	12.47	13.34	16.02	18.30	20.08	22.05
n. Schools (Non-boarding)	3.25	4.27	5.13	5.83	6.44	7.07
Per ADA with elementary school	0.21	0.20	0.24	0.27	0.30	0.33
Per ADA with other school	0.30	0.31	0.36	0.43	0.47	0.52
o. Schools (Boarding)	3.25	4.27	5.13	5.83	6.44	7.07
Per ADA with elementary school	0.38	0.43	0.51	0.59	0.65	0.71
Per ADA with other school	0.48	0.57	0.68	0.78	0.86	0.95
p. Trailer/Mobile Home Space	6.50	2.52	3.02	3.47	3.81	4.19
q. RV Dump Stations - Less than 50 services	21.00	25.22	30.15	35.20	38.75	42.69
r. Brine (per gallon)	0.1125	0.1125	0.1125	0.1125	0.1125	0.1125

# Monthly Single Family Residential Sewer Rate Survey

Based on Flat Rate or 7 hcf Winter Water Use



Rates Effective October 2015

Table 2  
 South San Luis Obispo County Sanitation District  
 Wastewater Rate Study  
 Current Connection Fees

Category	Prior Fees	Fees Effective 01/28/07	Ratio to Single Family
Single Family Dwelling Unit	\$2,000	\$2,475	1.00
Apartment Complex (Bachelor, 1 or 2 bedrooms)	1,500	1,856	0.75
Apartment Complex (3 or more bedrooms)	2,000	2,475	1.00
Motel/Hotel (per room)	1,000	1,237	0.50
Hybrid Use	1,500	1,856	0.75
Condominium (per unit)	2,000	2,475	1.00
Mobile Home Park (per space)	2,000	2,475	1.00
Travel Trailer (per space)	1,000	1,237	0.50
5/8 inch meter	2,000	2,475	1.00
3/4 inch meter	2,800	3,712	1.50
1 inch meter	4,900	6,187	2.50
1 1/2 inch meter	11,000	13,612	5.50
2 inch meter	19,500	24,131	9.75
3 inch meter	44,000	54,450	22.00

Table 3  
 South San Luis Obispo County Sanitation District  
 Wastewater Rate Study  
 Fund Reserve Balances (All Funds Combined)

	06/30/10	06/30/11	06/30/12	06/30/13	06/30/14	06/30/15
Fund Balances (Cash in Reserves)	\$5,287,869	\$4,583,236	\$3,977,525	\$3,918,083	\$4,560,030	\$5,545,655

Source: SSLOCSD Balance Sheets as of July 1 each year.

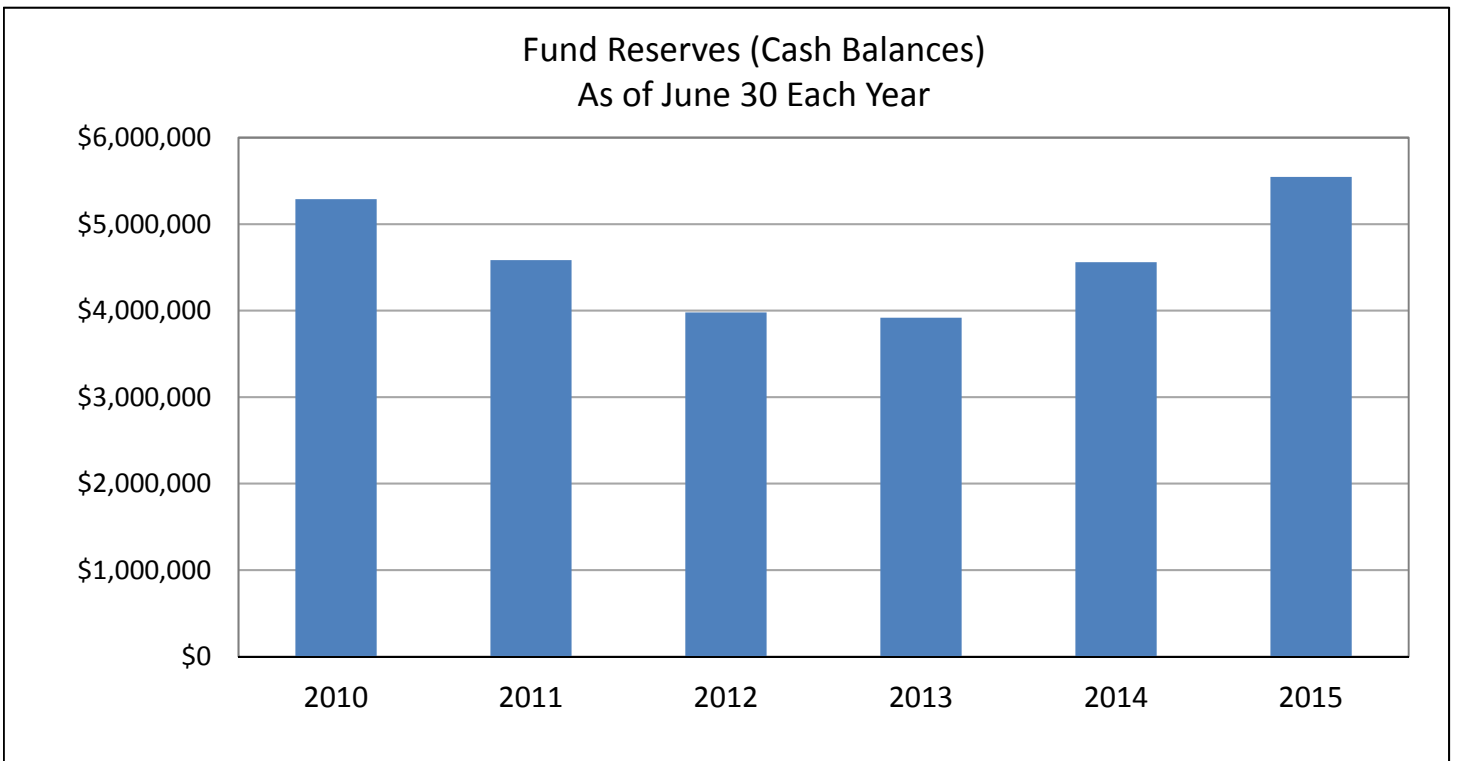


Table 4  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Historical & Budgeted Revenues

	Actual 2011/12	Actual 2012/13	Estimated 2013/14	Budget 2014/15	Budget 2015/16
<b>SERVICE CHARGES &amp; FEES</b>					
Arroyo Grande	\$1,456,784	\$1,473,586	\$1,440,500	\$1,440,500	\$1,440,500
Grover Beach	1,064,832	1,048,549	1,050,000	1,050,000	1,050,000
OCSD	484,431	502,939	500,000	500,000	500,000
Schools	25,479	28,711	23,000	23,000	23,000
Subtotal	3,031,526	3,053,785	3,013,500	3,013,500	3,013,500
<b>OTHER REVENUES</b>					
Interest: Fund 19 Operating Fund	1,270	1,017	2,000	500	7,600
Pismo Beach Reimbursement	0	0	18,600	0	0
Brine Disposal Service	7,630	17,504	79,000	80,000	190,000
Lease (AT&T)	22,571	23,558	22,525	22,525	22,525
Other Reimbursements	300	3,365	0	0	0
FEMA Funding	73,504	35,777	0	0	0
WDR Reimbursments (MAs)	7,342	3,579	10,498	10,300	0
FOG Reimbursement	24,810	29,356	11,823	30,900	0
Other Sales					4,788
IRWM Funding					1,400
Subtotal	137,427	114,156	144,446	144,225	226,313
<b>CONNECTION FEES</b>					
Arroyo Grande	29,700	149,727	43,874	45,000	80,000
Grover Beach	9,900	2,475	28,349	30,000	30,000
OCSD	4,950	0	10,800	10,000	10,000
Subtotal	44,550	152,202	83,023	85,000	120,000
<b>OTHER REVENUES</b>					
Interest Earnings: Fund 20	10,333	6,994	5,325	5,200	5,200
Interest Earnings: Fund 26	3,799	2,571	0	0	0
SGIP Rebate: Fund 20	150,000	0	0	0	0
Subtotal	164,132	9,565	5,325	5,200	5,200
<b>TOTAL REVENUES</b>	<b>3,377,635</b>	<b>3,329,708</b>	<b>3,246,294</b>	<b>3,247,925</b>	<b>3,365,013</b>

Source: South San Luis Obispo County Sanitation District Budgets.

Note: Excludes interfund transfers.

Table 5  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Historical & Budgeted Expenses

	Actual 2011/12	Actual 2012/13	Estimated 2013/14	Budget 2014/15	Budget 2015/16
<b>OPERATING EXPENSES</b>					
Salaries & Wages	500,520	499,952	547,426	650,276	658,752
Benefits & Other Personnel Costs	360,461	557,039	393,377	509,728	575,300
Permits, Fees, & Licenses	40,841	30,932	35,991	45,100	42,700
Communications	10,682	8,038	10,257	10,700	12,300
Computer Support	9,699	11,788	11,000	11,330	5,000
Administrative Costs	863,277	954,477	553,992	692,600	624,800
Disposal Services	50,177	69,237	40,441	95,000	65,000
Utilities	140,833	183,332	194,830	196,300	193,300
Maintenance, Tools, & Replacements	248,775	281,132	213,363	241,400	281,000
Materials, Services, & Supplies	458,419	438,638	255,912	289,500	250,500
Training, Education, & Memberships	24,585	7,971	20,000	25,000	25,000
Other Charges	125,269	53,215	24,655	46,200	0
Capital Outlay	24,259	0	15,000	15,000	15,000
Subtotal	2,857,797	3,095,751	2,316,244	2,828,134	2,748,652
<b>CAPITAL &amp; DEBT SERVICE EXPENSES</b>					
Fund 20: Expansion Fund Capital	140,008	0	76,707	150,000	255,000
Fund 20: Expansion Fund Debt Service	0	0	76,000	76,000	76,000
Fund 26: Replacement Fund Capital	409,429	443,171	70,150	621,879	500,000
Subtotal	549,437	443,171	222,857	847,879	831,000
<b>TOTAL EXPENSES</b>	3,407,234	3,538,922	2,539,101	3,676,013	3,579,652

Source: South San Luis Obispo County Sanitation District Budgets.

Note: Excludes interfund transfers.

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Table 6  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Redundancy Project Cost Estimates

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**Project Cost Estimates**

Construction Cost		\$9,940,000
Deep Foundation Allowance		1,400,000
Floodproofing Allowance		500,000
Critical Pipe Repair/Replacement Allowance		<u>500,000</u>
Subtotal		12,340,000
Construction Cost Contingency	30%	<u>2,982,000</u>
Construction Cost with Contingency		15,322,000

**Other Project Costs:** *Estimated as a % of Base Construction Costs + Allowances*

Design	12%	1,490,000
Permitting	1%	120,000
Engineering During Construction	3%	380,000
Construction Management	10%	1,234,000
Project Management/Administration	<u>4%</u>	<u>494,000</u>
Subtotal	30%	3,718,000

**Total Project Costs** **19,040,000**

**Annual O&M Cost Estimate** **425,000**

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Based on Technical Memorandum from Michael Nunley dated September 11, 2015;  
SSLOCS D Work Plan for Redundancy Project.

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Table 7  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Capital Improvement Program

	Budget	Projected									10-Year
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Total
<b>CAPITAL IMPROVEMENT COST ESTIMATES (CURRENT \$)</b>											
<b>Redundancy Project</b>											
Design & Permitting	-	610,000	1,000,000	-	-	-	-	-	-	-	1,610,000
Construction (w/ allowances & contingency)	-	-	-	7,661,000	7,661,000	-	-	-	-	-	15,322,000
Project & Construction Management	-	-	-	1,054,000	1,054,000	-	-	-	-	-	2,108,000
Subtotal	-	610,000	1,000,000	8,715,000	8,715,000	-	-	-	-	-	19,040,000
<b>Ongoing Capital Improvement Program</b>											
Improvements & Repairs/Replacements	622,000	820,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,442,000
Expansion Fund Projects	150,000	255,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,005,000
Subtotal	772,000	1,075,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	7,447,000
<b>CAPITAL IMPROVEMENT COST ESTIMATES (FUTURE \$)</b>											
<b>Projected Construction Cost Escalation</b>											
Annual Cost Escalation			3%	3%	3%	3%	3%	3%	3%	3%	
Cost Escalator	1.000	1.000	1.030	1.061	1.093	1.126	1.159	1.194	1.230	1.267	
<b>Redundancy Project</b>											
Design & Permitting	-	610,000	1,030,000	-	-	-	-	-	-	-	1,640,000
Project Construction	-	-	-	8,128,000	8,371,000	-	-	-	-	-	16,499,000
Project/Construction Management	-	-	-	1,118,000	1,152,000	-	-	-	-	-	2,270,000
Subtotal	-	610,000	1,030,000	9,246,000	9,523,000	-	-	-	-	-	20,409,000
<b>Ongoing Capital Improvement Program</b>											
Repair/Rehab/Replacement Projects	622,000	820,000	515,000	530,000	546,000	563,000	580,000	597,000	615,000	633,000	6,021,000
Expansion Fund Projects	150,000	255,000	206,000	212,000	219,000	225,000	232,000	239,000	246,000	253,000	2,237,000
Subtotal	772,000	1,075,000	721,000	742,000	765,000	788,000	812,000	836,000	861,000	886,000	8,258,000

Table 8  
 South San Luis Obispo County Sanitation District  
 Wastewater Rate Study  
 SRF Loan Debt Service Estimates

Per \$10 Million of Project Funding

	Future SRF Est. at 3.0%
<b>Funding Target</b>	\$10,000,000
<b>SRF Loan Amount</b>	
Eligible Project Costs <sup>1</sup>	10,000,000
Accrued Interest During Construction <sup>2</sup>	<u>300,000</u>
Total Loan Amount	10,300,000
<b>Loan Terms</b>	
Term (years)	30
Interest Rate <sup>3</sup>	3.00%
<b>Annual Loan Payment<sup>4</sup></b>	525,000
<b>Reserve Fund Requirement<sup>5</sup></b>	
Equal to Annual Debt Service	525,000

1 Some costs may not be eligible for SRF Loan funding & would require another funding source.

2 Assumes steady gradual drawdown of loan funds over two years.

3 Total net interest rate estimated for financial planning purposes; actual rate may vary.

4 First debt service payment due one year following completion of project.

5 Agencies must set aside funds to meet the SRF Reserve Requirement at least 90 days prior to project completion date.

Table 9  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Bond Debt Service Estimates

Per \$10 Million of Project Funding

	Assumptions	25-Year Bonds	30-Year Bonds
<b>Funding Target</b>		\$10,000,000	\$10,000,000
<b>Total Debt Issue</b>		\$11,050,000	\$11,025,000
<b>Proceeds</b>		\$10,000,000	\$10,000,000
<b>Issuance Costs &amp; Reserve Requirement</b>			
Underwriter Discount	1.00%	\$110,500	\$110,300
Issuance Costs		150,000	150,000
Debt Service Reserve Fund		784,000	758,600
Bond Insurance	none	0	0
Reserve Surety Bond <i>optional</i>	none	0	0
Contingency/Rounding		<u>5,500</u>	<u>6,100</u>
Total		1,050,000	1,025,000
<b>Financing Terms</b>			
Term (Years)		25	30
Est. Future Interest Rate		5.00%	5.50%
<b>DEBT SERVICE</b>			
Annual Debt Service		784,000	758,600
Less Interest on Reserve Fund	2.50%	<u>(19,600)</u>	<u>(19,000)</u>
Net Annual Debt Service		764,400	739,600

Table 10 - South San Luis Obispo CSD Wastewater Cash Flow Projections (SRF)					Years 1 - 5
	2014/15	2015/16	2016/17	2017/18	2018/19
Effective Date		Jan-1	July-1	July-1	July-1
Monthly Residential Sewer Charge	\$14.86	\$18.00	\$20.00	\$22.00	\$24.00
Monthly Increase		\$3.14	\$2.00	\$2.00	\$2.00
Residential Connection Fee (+3%)	\$2,475	\$2,549	\$2,625	\$2,704	\$2,785
Beginning ERUs	17,315	17,315	17,335	17,355	17,375
Growth (ERUs)	-	20	20	20	20
District Cost Escalation	-	4%	4%	4%	4%
SRF Debt Svc per \$1M	-	-	\$53,000	\$53,000	\$53,000
Bond Debt Svc per \$1M	-	-	\$76,000	\$76,000	\$76,000
Interest Earnings Rate	0.25%	0.30%	0.5%	1.0%	1.0%
<b>Beginning Fund Reserves</b>	\$5,546,000	\$5,227,000	\$3,243,000	\$4,324,000	\$5,246,000
<b>REVENUES</b>	<u>BWA est</u>				
Arroyo Grande (8,340 ERUs est.)	1,487,000	1,647,000	2,007,000	2,210,000	2,414,000
Grover Beach (6,200 ERUs)	1,106,000	1,224,000	1,492,000	1,643,000	1,794,000
Oceano CSD Services (2,775 ERUs)	495,000	548,000	668,000	736,000	803,000
School Services	25,000	28,000	34,000	37,000	40,000
<i>Subtotal Service Charges</i>	<i>3,113,000</i>	<i>3,447,000</i>	<i>4,201,000</i>	<i>4,626,000</i>	<i>5,051,000</i>
Connection Fees	85,000	51,000	53,000	54,000	56,000
Investment Earnings (All Funds)	14,000	16,000	16,000	43,000	52,000
Other Revenues	144,000	226,000	150,000	150,000	150,000
<b>Total Revenues</b>	<b>3,356,000</b>	<b>3,740,000</b>	<b>4,420,000</b>	<b>4,873,000</b>	<b>5,309,000</b>
Debt Proceeds: SRF Loan				9,246,000	9,523,000
SRF Reimbursement for Design/Permitting			1,500,000		
<b>EXPENSES</b>					
<b><u>Operating &amp; Maintenance</u></b>					
Salaries & Wages	650,000	734,000	841,000	875,000	910,000
Benefits & Other Personnel Costs	510,000	615,000	676,000	703,000	731,000
Administrative Costs	693,000	625,000	570,000	593,000	617,000
Utilities	196,000	193,000	201,000	209,000	217,000
Maintenance, Tools & Replacements	241,000	281,000	292,000	304,000	316,000
Materials, Services & Supplies	290,000	251,000	261,000	271,000	282,000
Other Operating Expenses	248,000	165,000	172,000	179,000	186,000
New Redundancy Project Operations	-	-	-	-	-
<b>Subtotal</b>	<b>2,828,000</b>	<b>2,864,000</b>	<b>3,013,000</b>	<b>3,134,000</b>	<b>3,259,000</b>
<b><u>Debt Service</u></b>					
Projected Debt Service, SRF Loan	-	-	-	-	-
<b><u>Capital &amp; Other Non-Operating</u></b>					
Redundancy Project:					
Design & Permitting	-	610,000	1,030,000	-	-
Construction & Management	-	-	-	9,246,000	9,523,000
Ongoing CIP/Repairs/Rehab/Repl	772,000	1,075,000	721,000	742,000	765,000
RWQCB Fine Repayment	-	1,100,000	-	-	-
2009 Equip Lease (Muni Finance Loan)	75,000	75,000	75,000	75,000	37,000
<b>Subtotal</b>	<b>847,000</b>	<b>2,860,000</b>	<b>1,826,000</b>	<b>10,063,000</b>	<b>10,325,000</b>
<b>Total Expenses</b>	<b>3,675,000</b>	<b>5,724,000</b>	<b>4,839,000</b>	<b>13,197,000</b>	<b>13,584,000</b>
<b>Revenues Less Expenses</b>	<b>(319,000)</b>	<b>(1,984,000)</b>	<b>1,081,000</b>	<b>922,000</b>	<b>1,248,000</b>
Transfer for SRF Reserve Requirement	-	-	-	-	(995,000)
<b>Ending Fund Reserves</b>	<b>5,227,000</b>	<b>3,243,000</b>	<b>4,324,000</b>	<b>5,246,000</b>	<b>5,499,000</b>
SRF Reserve Fund	-	-	-	0	995,000
Min Fund Rsrv Target: 50% O&M + \$1M	2,414,000	2,432,000	2,507,000	2,567,000	2,630,000
Debt Service Coverage	-	-	-	-	-

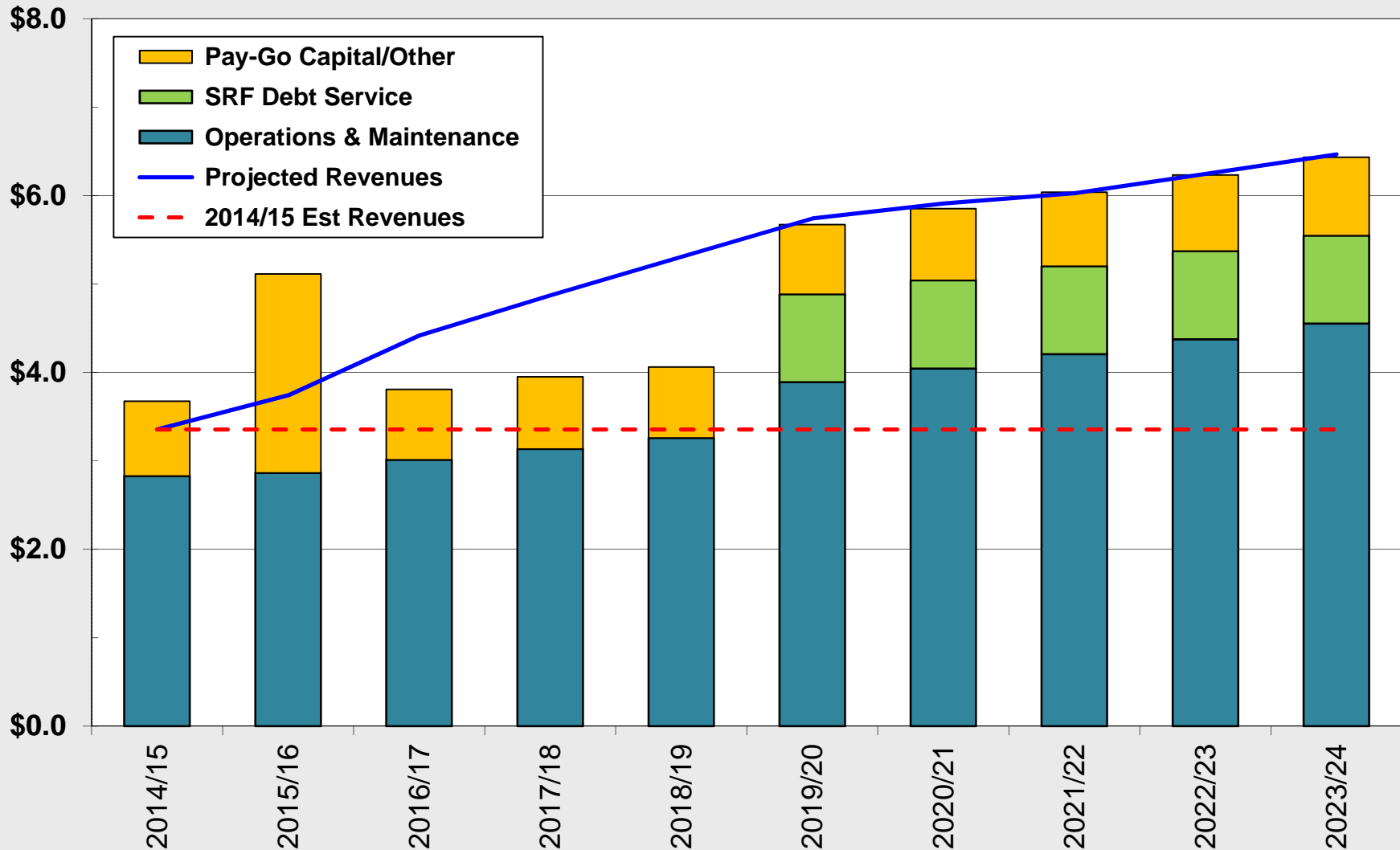
Table 10 - South San Luis Obispo CSD Wastewater Cash Flow Projections (SRF)

Years 6 - 10

	2019/20	2020/21	2021/22	2022/23	2023/24
Effective Date	July-1	July-1	July-1	July-1	July-1
Residential Sewer Charge	\$26.00	\$26.50	\$27.00	\$28.00	\$29.00
Monthly Increase	\$2.00	\$0.50	\$0.50	\$1.00	\$1.00
Residential Connection Fee (+3%)	\$2,869	\$2,955	\$3,044	\$3,135	\$3,229
Beginning ERUs	17,395	17,415	17,435	17,455	17,475
Growth (ERUs)	20	20	20	20	20
City Cost Escalation	4%	4%	4%	4%	4%
SRF Debt Svc per \$1M	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000
Bond Debt Svc per \$1M	\$76,000	\$76,000	\$76,000	\$76,000	\$76,000
Interest Earnings Rate	1.0%	2.0%	2.0%	2.0%	2.0%
<b>Beginning Fund Reserves</b>	\$5,499,000	\$5,567,000	\$5,625,000	\$5,613,000	\$5,626,000
<b>REVENUES</b>					
Arroyo Grande Services	2,618,000	2,672,000	2,725,000	2,830,000	2,934,000
Grover Beach Services	1,946,000	1,985,000	2,025,000	2,102,000	2,180,000
OCSD Services	871,000	889,000	907,000	941,000	976,000
School Services	43,000	44,000	45,000	47,000	49,000
Subtotal Service Charges & Fees	5,478,000	5,590,000	5,702,000	5,920,000	6,139,000
Connection Fees	57,000	59,000	61,000	63,000	65,000
Investment Earnings	55,000	111,000	113,000	112,000	113,000
Other Revenues	150,000	150,000	150,000	150,000	150,000
Total Revenues	5,740,000	5,910,000	6,026,000	6,245,000	6,467,000
Debt Proceeds					
<b>EXPENSES</b>					
<b><u>Operating &amp; Maintenance</u></b>					
Salaries & Wages	946,000	984,000	1,023,000	1,064,000	1,107,000
Benefits & Other Personnel Costs	760,000	790,000	822,000	855,000	889,000
Administrative Costs	642,000	668,000	695,000	723,000	752,000
Utilities	226,000	235,000	244,000	254,000	264,000
Maintenance, Tools & Replacements	329,000	342,000	356,000	370,000	385,000
Materials, Services & Supplies	293,000	305,000	317,000	330,000	343,000
Other Operating Expenses	193,000	201,000	209,000	217,000	226,000
New Redundancy Project Operations	500,000	520,000	541,000	563,000	586,000
Subtotal	3,889,000	4,045,000	4,207,000	4,376,000	4,552,000
<b><u>Debt Service</u></b>					
Projected Debt Service, SRF Loan	995,000	995,000	995,000	995,000	995,000
<b><u>Capital &amp; Other Non-Operating</u></b>					
Redundancy Project:					
Design & Preliminary Costs	-	-	-	-	-
Construction & Const Mgmt	-	-	-	-	-
Ongoing CIP/Repairs/Rehab/Repl	788,000	812,000	836,000	861,000	886,000
RWQCB Fine Repayment	-	-	-	-	-
2009 Equip Lease (Muni Finance Loan)	-	-	-	-	-
Subtotal	788,000	812,000	836,000	861,000	886,000
Total Expenses	5,672,000	5,852,000	6,038,000	6,232,000	6,433,000
<b>Revenues Less Expenses</b>	68,000	58,000	(12,000)	13,000	34,000
Transfer for SRF Reserve Requirement	-	-	-	-	-
<b>Ending Fund Reserves</b>	5,567,000	5,625,000	5,613,000	5,626,000	5,660,000
SRF Reserve Fund	995,000	995,000	995,000	995,000	995,000
Min Fund Rsrv Target: 50% O&M + \$1M	2,945,000	3,023,000	3,104,000	3,188,000	3,276,000
Debt Service Coverage	1.86	1.87	1.83	1.88	1.92

## South San Luis Obispo County Sanitation District

### 10-Year Revenue & Expense Projections with SRF Loans (\$ Millions)



Excludes capital improvements funded by debt, but includes the associated debt service.

Excludes interfund transfers that are not expenditures.

# South San Luis Obispo County Sanitation District Historical & Projected Monthly Residential Sewer Rates

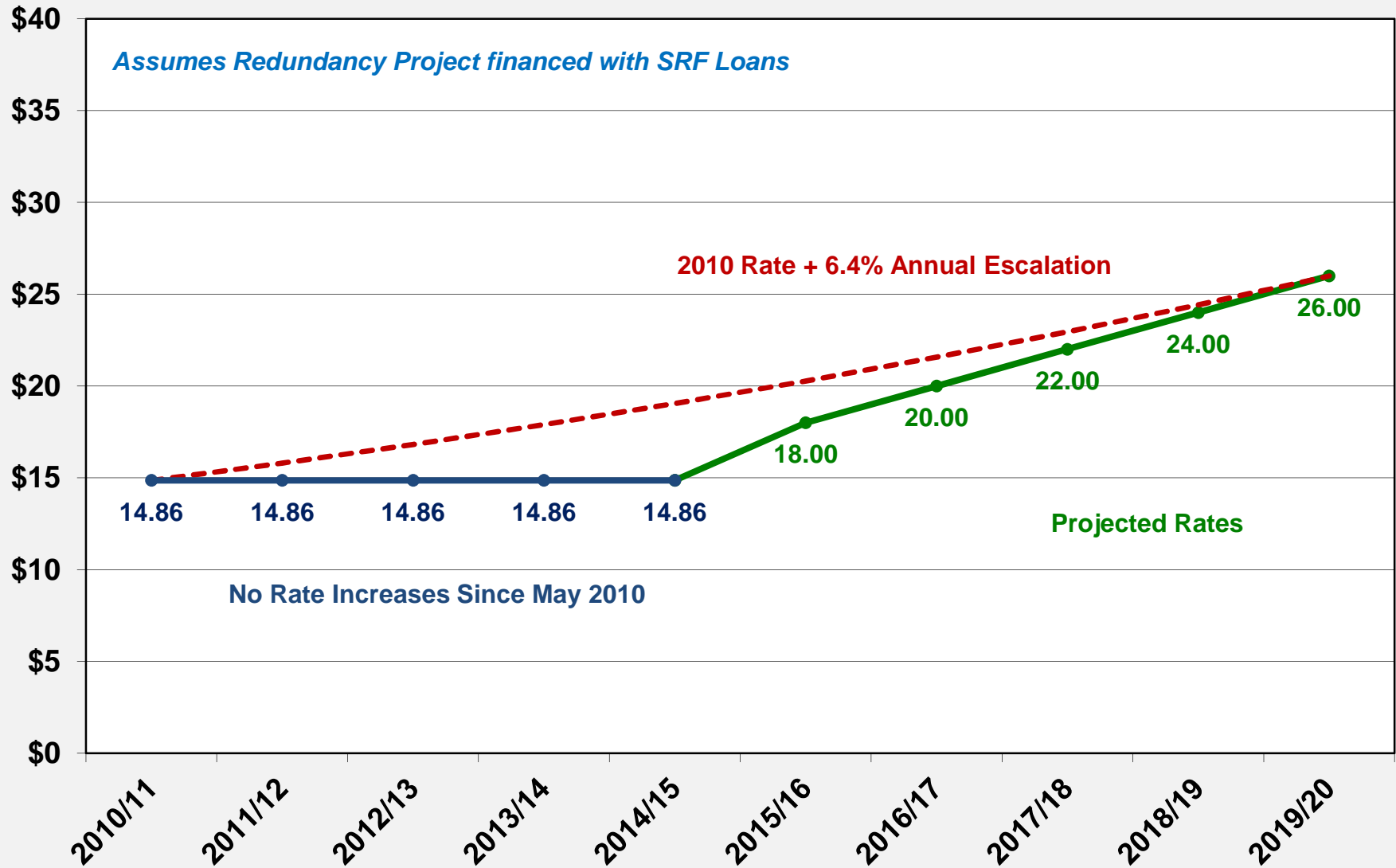


Table 11  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Projected Rates with Across-the-Board Increases

Assumes no rate structure modifications  
With SRF Financing

	Current Rates	Projected Rates with Across-the-Board Increases				
		2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	\$18.00	\$20.00	\$22.00	\$24.00	\$26.00
b. Hotel Units with Kitchens	15.71	19.03	21.14	23.25	25.36	27.47
c. Hotel Units without Kitchens	10.02	12.14	13.49	14.84	16.19	17.54
d. Hotel Room	10.36	12.55	13.94	15.33	16.72	18.11
e. Commercial Establishments	7.65	9.27	10.30	11.33	12.36	13.39
Each additional employee above 5	1.53	1.85	2.06	2.27	2.48	2.69
f. Beauty Shops	13.97	16.92	18.80	20.68	22.56	24.44
Each additional operator above 5	2.33	2.82	3.13	3.44	3.75	4.06
g. Eating Establishments w/o Grinders	15.16	18.36	20.40	22.44	24.48	26.52
Each additional 5 seats above 30	2.53	3.06	3.40	3.74	4.08	4.42
h. Restaurants (w/Grinders) <30 seats	31.07	37.64	41.82	46.00	50.18	54.36
Restaurants (w/Grinders) over 30 seats	39.84	48.26	53.62	58.98	64.34	69.70
i. Laundromats - per washing maching	9.71	11.76	13.07	14.38	15.69	17.00
Minimum Charge	29.14	35.30	39.22	43.14	47.06	50.98
j. Service Stations - no wash/rack	37.41	45.31	50.34	55.37	60.40	65.43
Service Stations - with wash/rack	54.40	65.90	73.22	80.54	87.86	95.18
k. Factories	22.05	26.71	29.68	32.65	35.62	38.59
Each additional employee above 20	1.10	1.33	1.48	1.63	1.78	1.93
l. Churches	12.56	15.21	16.90	18.59	20.28	21.97
Per ADA with elementary school	0.34	0.41	0.46	0.51	0.56	0.61
Per ADA with other school	0.51	0.62	0.69	0.76	0.83	0.90
m. Bottling Plants	22.05	26.71	29.68	32.65	35.62	38.59
n. Schools (Non-boarding)	7.07	8.56	9.51	10.46	11.41	12.36
Per ADA with elementary school	0.33	0.40	0.44	0.48	0.52	0.56
Per ADA with other school	0.52	0.63	0.70	0.77	0.84	0.91
o. Schools (Boarding)	7.07	8.56	9.51	10.46	11.41	12.36
Per ADA with elementary school	0.71	0.86	0.96	1.06	1.16	1.26
Per ADA with other school	0.95	1.15	1.28	1.41	1.54	1.67
p. Trailer/Mobile Home Space	4.19	5.08	5.64	6.20	6.76	7.32
q. RV Dump Stations - Less than 50 svcs	42.69	51.71	57.46	63.21	68.96	74.71

Table 10B - South San Luis Obispo CSD Wastewater Cash Flow Projections (Bonds)					Years 1 - 5
	2014/15	2015/16	2016/17	2017/18	2018/19
Effective Date		Jan-1	July-1	July-1	July-1
Monthly Residential Sewer Charge	\$14.86	\$18.00	\$20.00	\$22.00	\$25.50
Monthly Increase		\$3.14	\$2.00	\$2.00	\$3.50
Residential Connection Fee (+3%)	\$2,475	\$2,549	\$2,625	\$2,704	\$2,785
Beginning ERUs	17,315	17,315	17,335	17,355	17,375
Growth (ERUs)	-	20	20	20	20
District Cost Escalation	-	4%	4%	4%	4%
SRF Debt Svc per \$1M	-	-	\$53,000	\$53,000	\$53,000
Bond Debt Svc per \$1M	-	-	\$76,000	\$76,000	\$76,000
Interest Earnings Rate	0.25%	0.30%	0.5%	1.0%	1.0%
<b>Beginning Fund Reserves</b>	\$5,546,000	\$5,227,000	\$3,243,000	\$2,824,000	\$4,211,000
<b>REVENUES</b>	<u>BWA est</u>				
Arroyo Grande (8,340 ERUs est.)	1,487,000	1,647,000	2,007,000	2,210,000	2,565,000
Grover Beach (6,200 ERUs)	1,106,000	1,224,000	1,492,000	1,643,000	1,906,000
Oceano CSD Services (2,775 ERUs)	495,000	548,000	668,000	736,000	853,000
School Services	25,000	28,000	34,000	37,000	43,000
Subtotal Service Charges	3,113,000	3,447,000	4,201,000	4,626,000	5,367,000
Connection Fees	85,000	51,000	53,000	54,000	56,000
Investment Earnings (All Funds)	14,000	16,000	16,000	28,000	42,000
Other Revenues	144,000	226,000	150,000	150,000	150,000
Total Revenues	3,356,000	3,740,000	4,420,000	4,858,000	5,615,000
Bond Proceeds				10,846,000	9,523,000
				Issuance Year	
<b>EXPENSES</b>					
<b><u>Operating &amp; Maintenance</u></b>					
Salaries & Wages	650,000	734,000	841,000	875,000	910,000
Benefits & Other Personnel Costs	510,000	615,000	676,000	703,000	731,000
Administrative Costs	693,000	625,000	570,000	593,000	617,000
Utilities	196,000	193,000	201,000	209,000	217,000
Maintenance, Tools & Replacements	241,000	281,000	292,000	304,000	316,000
Materials, Services & Supplies	290,000	251,000	261,000	271,000	282,000
Other Operating Expenses	248,000	165,000	172,000	179,000	186,000
New Redundancy Project Operations	-	-	-	-	-
Subtotal	2,828,000	2,864,000	3,013,000	3,134,000	3,259,000
<b><u>Debt Service</u></b>					
Projected Debt Service, Bonds	-	-	-	1,120,000	1,548,000
				Interest Only 1st Year	
<b><u>Capital &amp; Other Non-Operating</u></b>					
Redundancy Project:					
Design & Permitting	-	610,000	1,030,000	-	-
Construction & Management	-	-	-	9,246,000	9,523,000
Ongoing CIP/Repairs/Rehab/Repl	772,000	1,075,000	721,000	742,000	765,000
RWQCB Fine Repayment	-	1,100,000	-	-	-
2009 Equip Lease (Muni Finance Loan)	75,000	75,000	75,000	75,000	37,000
Subtotal	847,000	2,860,000	1,826,000	10,063,000	10,325,000
Total Expenses	3,675,000	5,724,000	4,839,000	14,317,000	15,132,000
<b>Revenues Less Expenses</b>	(319,000)	(1,984,000)	(419,000)	1,387,000	6,000
<b>Ending Fund Reserves</b>	5,227,000	3,243,000	2,824,000	4,211,000	4,217,000
Min Fund Rsrv Target: 50% O&M + \$1M	2,414,000	2,432,000	2,507,000	2,567,000	2,630,000
Debt Service Coverage	-	-	-	1.54	1.52

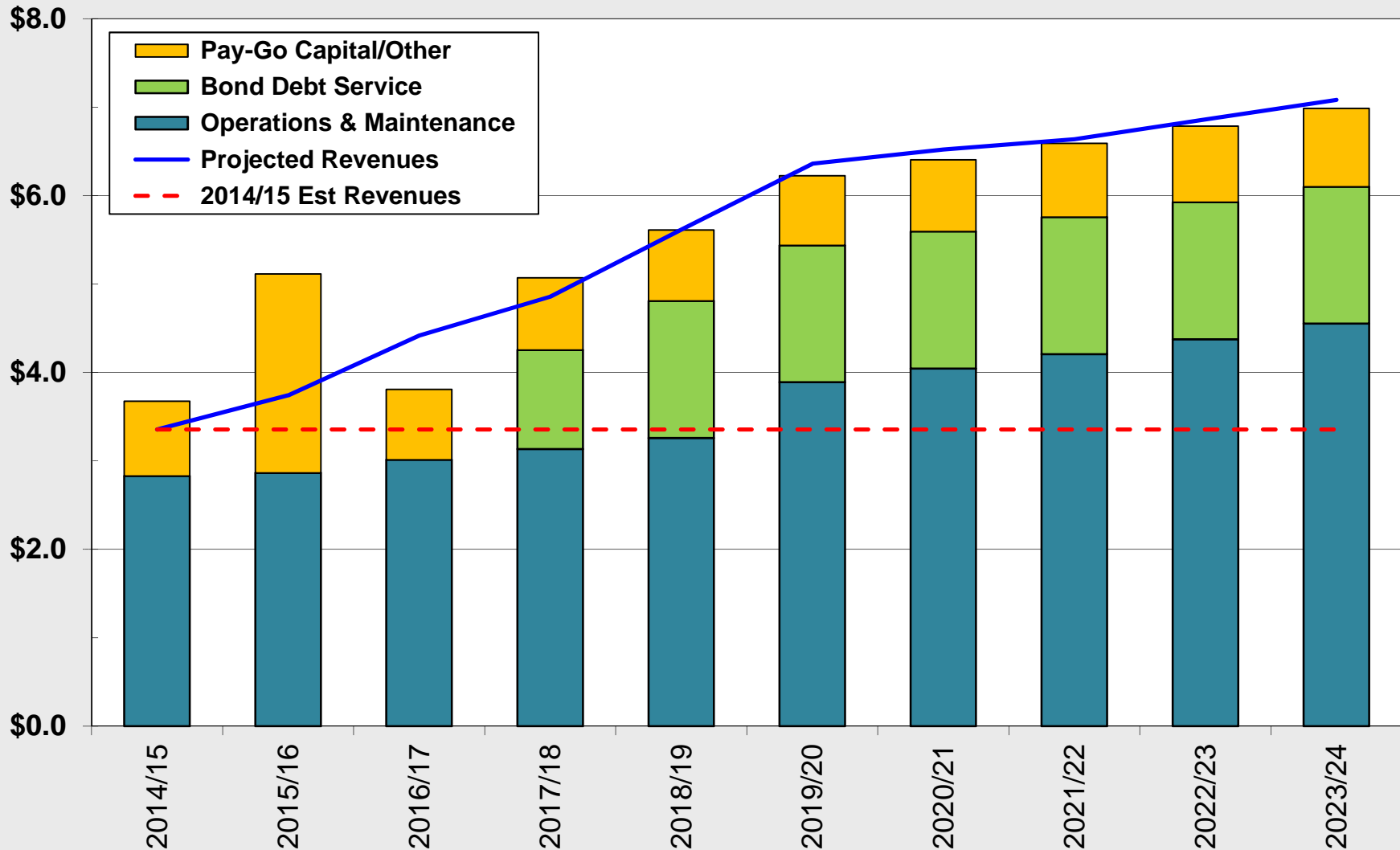
Table 10B - South San Luis Obispo CSD Wastewater Cash Flow Projections (Bonds)

Years 6 - 10

	2019/20	2020/21	2021/22	2022/23	2023/24
Effective Date	July-1	July-1	July-1	July-1	July-1
Residential Sewer Charge	\$29.00	\$29.50	\$30.00	\$31.00	\$32.00
Monthly Increase	\$3.50	\$0.50	\$0.50	\$1.00	\$1.00
Residential Connection Fee (+3%)	\$2,869	\$2,955	\$3,044	\$3,135	\$3,229
Beginning ERUs	17,395	17,415	17,435	17,455	17,475
Growth (ERUs)	20	20	20	20	20
City Cost Escalation	4%	4%	4%	4%	4%
SRF Debt Svc per \$1M	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000
Bond Debt Svc per \$1M	\$76,000	\$76,000	\$76,000	\$76,000	\$76,000
Interest Earnings Rate	1.0%	2.0%	2.0%	2.0%	2.0%
<b>Beginning Fund Reserves</b>	\$4,217,000	\$4,352,000	\$4,466,000	\$4,511,000	\$4,585,000
<b>REVENUES</b>					
Arroyo Grande Services	2,920,000	2,974,000	3,028,000	3,133,000	3,238,000
Grover Beach Services	2,170,000	2,210,000	2,250,000	2,328,000	2,405,000
OCSO Services	972,000	989,000	1,007,000	1,042,000	1,077,000
School Services	49,000	50,000	51,000	53,000	55,000
Subtotal Service Charges & Fees	6,111,000	6,223,000	6,336,000	6,556,000	6,775,000
Connection Fees	57,000	59,000	61,000	63,000	65,000
Investment Earnings	42,000	87,000	89,000	90,000	92,000
Other Revenues	150,000	150,000	150,000	150,000	150,000
Total Revenues	6,360,000	6,519,000	6,636,000	6,859,000	7,082,000
Debt Proceeds					
<b>EXPENSES</b>					
<b><u>Operating &amp; Maintenance</u></b>					
Salaries & Wages	946,000	984,000	1,023,000	1,064,000	1,107,000
Benefits & Other Personnel Costs	760,000	790,000	822,000	855,000	889,000
Administrative Costs	642,000	668,000	695,000	723,000	752,000
Utilities	226,000	235,000	244,000	254,000	264,000
Maintenance, Tools & Replacements	329,000	342,000	356,000	370,000	385,000
Materials, Services & Supplies	293,000	305,000	317,000	330,000	343,000
Other Operating Expenses	193,000	201,000	209,000	217,000	226,000
New Redundancy Project Operations	500,000	520,000	541,000	563,000	586,000
Subtotal	3,889,000	4,045,000	4,207,000	4,376,000	4,552,000
<b><u>Debt Service</u></b>					
Projected Debt Service, Bonds	1,548,000	1,548,000	1,548,000	1,548,000	1,548,000
<b><u>Capital &amp; Other Non-Operating</u></b>					
Redundancy Project:					
Design & Preliminary Costs	-	-	-	-	-
Construction & Const Mgmt	-	-	-	-	-
Ongoing CIP/Repairs/Rehab/Repl	788,000	812,000	836,000	861,000	886,000
RWQCB Fine Repayment	-	-	-	-	-
2009 Equip Lease (Muni Finance Loan)	-	-	-	-	-
Subtotal	788,000	812,000	836,000	861,000	886,000
Total Expenses	6,225,000	6,405,000	6,591,000	6,785,000	6,986,000
<b>Revenues Less Expenses</b>	135,000	114,000	45,000	74,000	96,000
<b>Ending Fund Reserves</b>	4,352,000	4,466,000	4,511,000	4,585,000	4,681,000
Min Fund Rsrv Target: 50% O&M + \$1M	2,945,000	3,023,000	3,104,000	3,188,000	3,276,000
Debt Service Coverage	1.60	1.60	1.57	1.60	1.63

## South San Luis Obispo County Sanitation District

### 10-Year Revenue & Expense Projections with Bonds (\$ Millions)



Excludes capital improvements funded by debt, but includes the associated debt service.

Excludes interfund transfers that are not expenditures.

# South San Luis Obispo County Sanitation District Historical & Projected Monthly Residential Sewer Rates

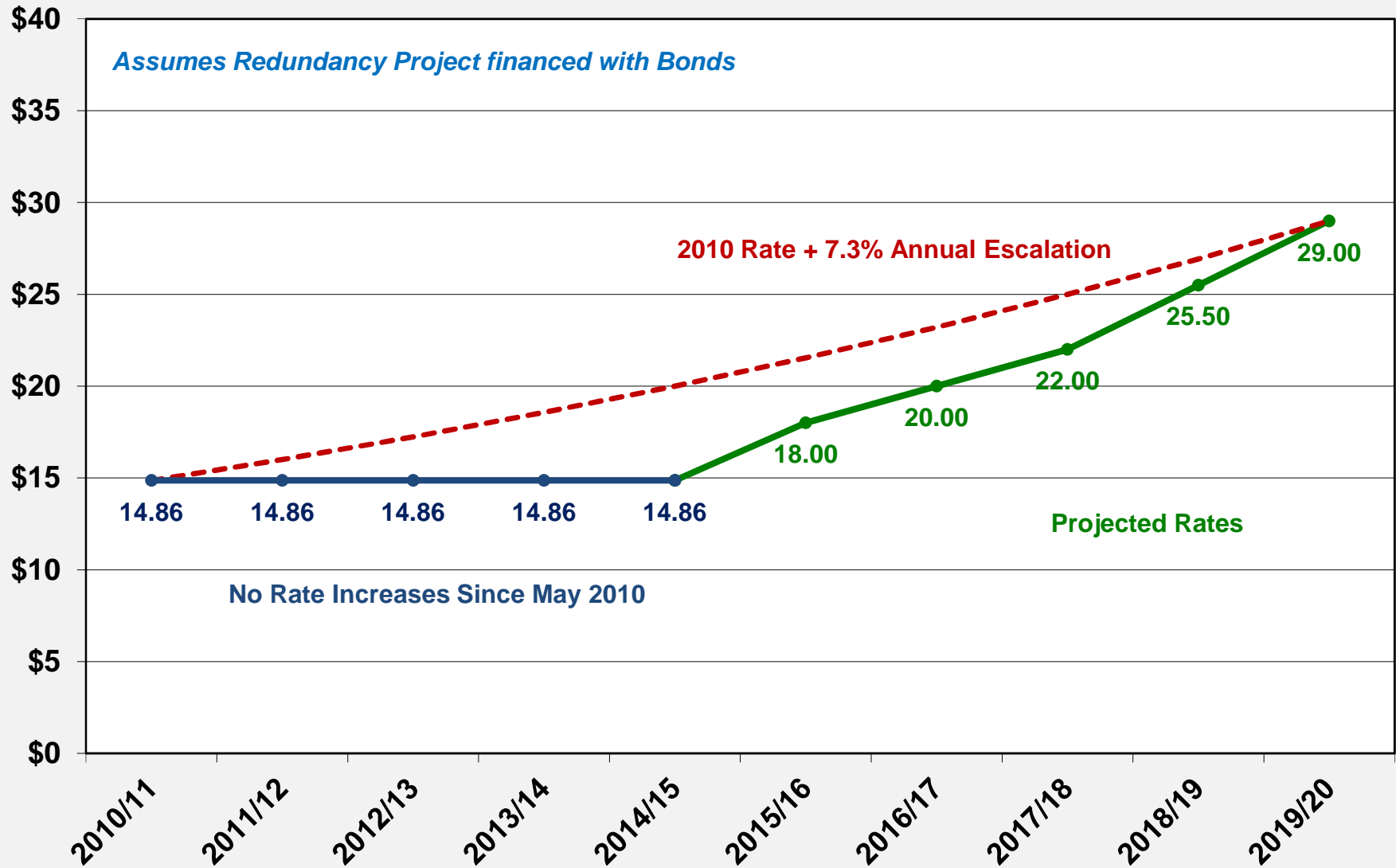


Table 11B  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Projected Rates with Across-the-Board Increases

Assumes no rate structure modifications  
*With Bond Financing*

		Projected Rates with Across-the-Board Increases					
		Current Rates	2015/16	2016/17	2017/18	2018/19	2019/20
			Jan-1	July-1	July-1	July-1	July-1
a.	Residences & Apartments	\$14.86	\$18.00	\$20.00	\$22.00	\$25.50	\$29.00
b.	Hotel Units with Kitchens	15.71	19.03	21.14	23.25	26.95	30.65
c.	Hotel Units without Kitchens	10.02	12.14	13.49	14.84	17.20	19.56
d.	Hotel Room	10.36	12.55	13.94	15.33	17.77	20.21
e.	Commercial Establishments	7.65	9.27	10.30	11.33	13.13	14.93
	Each additional employee above 5	1.53	1.85	2.06	2.27	2.63	2.99
f.	Beauty Shops	13.97	16.92	18.80	20.68	23.97	27.26
	Each additional operator above 5	2.33	2.82	3.13	3.44	3.99	4.54
g.	Eating Establishments w/o Grinders	15.16	18.36	20.40	22.44	26.01	29.58
	Each additional 5 seats above 30	2.53	3.06	3.40	3.74	4.34	4.94
h.	Restaurants (w/Grinders) <30 seats	31.07	37.64	41.82	46.00	53.32	60.64
	Restaurants (w/Grinders) over 30 seats	39.84	48.26	53.62	58.98	68.36	77.74
i.	Laundromats - per washing maching	9.71	11.76	13.07	14.38	16.67	18.96
	Minimum Charge	29.14	35.30	39.22	43.14	50.00	56.86
j.	Service Stations - no wash/rack	37.41	45.31	50.34	55.37	64.18	72.99
	Service Stations - with wash/rack	54.40	65.90	73.22	80.54	93.35	106.16
k.	Factories	22.05	26.71	29.68	32.65	37.84	43.03
	Each additional employee above 20	1.10	1.33	1.48	1.63	1.89	2.15
l.	Churches	12.56	15.21	16.90	18.59	21.55	24.51
	Per ADA with elementary school	0.34	0.41	0.46	0.51	0.59	0.67
	Per ADA with other school	0.51	0.62	0.69	0.76	0.88	1.00
m.	Bottling Plants	22.05	26.71	29.68	32.65	37.84	43.03
n.	Schools (Non-boarding)	7.07	8.56	9.51	10.46	12.12	13.78
	Per ADA with elementary school	0.33	0.40	0.44	0.48	0.56	0.64
	Per ADA with other school	0.52	0.63	0.70	0.77	0.89	1.01
o.	Schools (Boarding)	7.07	8.56	9.51	10.46	12.12	13.78
	Per ADA with elementary school	0.71	0.86	0.96	1.06	1.23	1.40
	Per ADA with other school	0.95	1.15	1.28	1.41	1.63	1.85
p.	Trailer/Mobile Home Space	4.19	5.08	5.64	6.20	7.19	8.18
q.	RV Dump Stations - Less than 50 svcs	42.69	51.71	57.46	63.21	73.27	83.33

Table 12  
South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Total Member Agency Billing Units & ERUs

SSLOCS Customer Class	Current Monthly Rate	Monthly Billing Units				Estimated Gross Revenues				Estimated ERUs			
		Oceano CSD	Grover Beach	Arroyo Grande	Total	Oceano CSD	Grover Beach	Arroyo Grande	Total	Oceano CSD	Grover Beach	Arroyo Grande	Total
a. Residences & Apartments	\$14.86	2,373.8	5,631.0	7,090.0	15,094.8	423,287	1,004,126	1,264,289	2,691,702	2,373.8	5,631.0	7,090.00	15,094.8
b. Hotel Units with Kitchens	15.71	56.0	-	-	56.0	10,557	-	-	10,557	59.2	-	-	59.2
c. Hotel Units without Kitchens	10.02	19.0	128.0	418.0	565.0	2,285	15,391	50,260	67,936	12.8	86.3	281.85	381.0
d. Hotel Room	10.36	-	-	-	-	-	-	-	-	-	-	-	-
e. Commercial Establishments	7.65	66.8	368.1	745.0	1,179.9	6,132	33,791	68,391	108,314	34.4	189.5	383.53	607.4
Each additional employee above 5	1.53	-	512.8	2,599.0	3,111.8	-	9,415	47,718	57,133	-	52.8	267.60	320.4
f. Beauty Shops	13.97	-	18.5	10.0	28.5	-	3,099	1,676	4,775	-	17.4	9.40	26.8
Each additional operator above 5	2.33	-	5.0	-	5.0	-	140	-	140	-	0.8	-	0.8
g. Eating Establishments w/o Grinders	15.16	19.7	33.0	25.0	77.7	3,581	6,003	4,548	14,132	20.1	33.7	25.50	79.3
Each additional 5 seats above 30	2.53	-	24.0	168.0	192.0	-	729	5,100	5,829	-	4.1	28.60	32.7
h. Restaurants (w/Grinders) <30 seats	31.07	2.6	1.0	-	3.6	956	373	-	1,329	5.4	2.1	-	7.5
Restaurants (w/Grinders) over 30 seats	39.84	-	3.0	4.0	7.0	-	1,434	1,912	3,347	-	8.0	10.72	18.8
i. Laundromats - per washing machine	9.71	29.0	116.0	34.0	179.0	3,379	13,516	3,962	20,857	19.0	75.8	22.22	117.0
Minimum Charge	29.14	-	-	-	-	-	-	-	-	-	-	-	-
j. Service Stations - no wash/rack	37.41	-	-	8.0	8.0	-	-	3,591	3,591	-	-	20.14	20.1
Service Stations - with wash/rack	54.40	0.7	2.9	3.0	6.6	449	1,899	1,958	4,306	2.5	10.6	10.98	24.1
k. Factories	22.05	10.0	23.0	-	33.0	2,645	6,092	-	8,737	14.8	34.2	-	49.0
Each additional employee above 20	1.10	-	5.5	-	5.5	-	73	-	73	-	0.4	-	0.4
l. Churches	12.56	6.0	9.0	16.0	31.0	910	1,356	2,412	4,678	5.1	7.6	13.52	26.2
Per ADA with elementary school	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Per ADA with other school	0.51	-	-	-	-	-	-	-	-	-	-	-	-
m. Bottling Plants	22.05	-	-	-	-	-	-	-	-	-	-	-	-
n. Schools (Non-boarding)	7.07	-	-	13.0	-	-	-	1,103	1,103	-	-	6.19	6.2
Per ADA with elementary school	0.33	-	-	84.0	-	-	-	333	333	-	-	1.87	1.9
Per ADA with other school	0.52	-	-	-	-	-	-	-	-	-	-	-	-
o. Schools (Boarding)	7.07	-	-	-	-	-	-	-	-	-	-	-	-
Per ADA with elementary school	0.71	-	-	-	-	-	-	-	-	-	-	-	-
Per ADA with other school	0.95	-	-	-	-	-	-	-	-	-	-	-	-
p. Trailer/Mobile Home Space	4.19	808.3	158.7	628.0	1,595.0	40,639	7,982	31,576	80,196	227.9	44.8	177.07	449.7
q. RV Dump Stations - Less than 50 svcs	42.69	-	2.0	-	2.0	-	85	-	85	-	5.7	-	5.7
<b>Total</b>						<b>494,820</b>	<b>1,105,503</b>	<b>1,488,829</b>	<b>3,089,153</b>	<b>2,774.9</b>	<b>6,204.8</b>	<b>8,349.2</b>	<b>17,328.9</b>

Table 13

South San Luis Obispo County Sanitation District  
Customer Categories & ERU/Rate Assignments

Cost Recovery Allocation		
Flow	BOD	SS
60%	20%	20%

	CURRENT		REVISED							IMPACTS	
	Sewer Rates	ERUs	Wastewater Flow		Wastewater Strength			Proposed ERUs	Revised Rates	% Rate Change	\$ Rate Change
			Flow (gpd)	Flow Factor	BOD mg/l	SS mg/l	Strength Factor	Flow Factor x Strength Factor	Revenue-Neutral Modifications		
a. Residences & Apartments	\$14.86	1.00	200	1.00	200	200	1.0	<b>1.00</b>	<b>\$14.56</b>	-2%	(\$0.30)
b. Hotel Units with Kitchens	15.71	1.06	175	0.88	200	200	1.0	<b>0.88</b>	<b>12.74</b>	-19%	(2.97)
c. Motel Units without Kitchens	10.02	0.67	125	0.63	150	150	0.9	<b>0.56</b>	<b>8.19</b>	-18%	(1.83)
d. Hotel Room	10.36	0.70	125	0.63	150	150	0.9	<b>0.56</b>	<b>8.19</b>	-21%	(2.17)
e. Commercial Establishments	7.65	0.51	100	0.50	150	150	0.9	<b>0.45</b>	<b>6.55</b>	-14%	(1.10)
Each additional employee above 5	1.53	0.10	20	0.10	150	150	0.9	<b>0.09</b>	<b>1.31</b>	-14%	(0.22)
f. Beauty Shops	13.97	0.94	200	1.00	150	150	0.9	<b>0.90</b>	<b>13.10</b>	-6%	(0.87)
Each additional operator above 5	2.33	0.16	30	0.15	150	150	0.9	<b>0.14</b>	<b>1.97</b>	-15%	(0.36)
g. Eating Establishments w/o Grinders	15.16	1.02	200	1.00	400	400	1.4	<b>1.40</b>	<b>20.38</b>	34%	5.22
Each additional 5 seats above 30	2.53	0.17	30	0.15	400	400	1.4	<b>0.21</b>	<b>3.06</b>	21%	0.53
h. Restaurants (w/Grinders) less than 30 seats	31.07	2.09	250	1.25	700	500	1.8	<b>2.25</b>	<b>32.76</b>	5%	1.69
Restaurants (w/Grinders) over 30 seats	39.84	2.68	350	1.75	700	500	1.8	<b>3.15</b>	<b>45.86</b>	15%	6.02
i. Laundromats - per washing machine	9.71	0.65	150	0.75	150	110	0.9	<b>0.65</b>	<b>9.39</b>	-3%	(0.32)
Minimum Charge	29.14	1.96	450	2.25	150	110	0.9	<b>1.94</b>	<b>28.17</b>	-3%	(0.97)
j. Service Stations - no wash/rack	37.41	2.52	500	2.50	180	280	1.1	<b>2.65</b>	<b>38.58</b>	3%	1.17
Service Stations - with wash/rack	54.40	3.66	800	4.00	150	200	1.0	<b>3.80</b>	<b>55.33</b>	2%	0.93
k. Factories	22.05	1.48	300	1.50	200	200	1.0	<b>1.50</b>	<b>21.84</b>	-1%	(0.21)
Each additional employee above 20	1.10	0.07	15	0.08	200	200	1.0	<b>0.08</b>	<b>1.09</b>	-1%	(0.01)
l. Churches	12.56	0.85	200	1.00	130	100	0.8	<b>0.83</b>	<b>12.08</b>	-4%	(0.48)
Per ADA with elementary school	0.34	0.02	6	0.03	130	100	0.8	<b>0.02</b>	<b>0.36</b>	6%	0.02
Per ADA with other school	0.51	0.03	9	0.05	130	100	0.8	<b>0.04</b>	<b>0.54</b>	6%	0.03
m. Bottling Plants	22.05	1.48	400	2.00	150	150	0.9	<b>1.80</b>	<b>26.21</b>	19%	4.16
n. Schools (Non-boarding)	7.07	0.48	120	0.60	130	100	0.8	<b>0.50</b>	<b>7.25</b>	3%	0.18
Per ADA with elementary school	0.33	0.02	6	0.03	130	100	0.8	<b>0.02</b>	<b>0.36</b>	9%	0.03
Per ADA with other school	0.52	0.03	9	0.05	130	100	0.8	<b>0.04</b>	<b>0.54</b>	4%	0.02
o. Schools (Boarding)	7.07	0.48	100	0.50	200	200	1.0	<b>0.50</b>	<b>7.28</b>	3%	0.21
Per ADA with elementary school	0.71	0.05	10	0.05	200	200	1.0	<b>0.05</b>	<b>0.73</b>	3%	0.02
Per ADA with other school	0.95	0.06	14	0.07	200	200	1.0	<b>0.07</b>	<b>1.02</b>	7%	0.07
p. Trailer/Mobile Home Space	4.19	0.28	120	0.60	200	200	1.0	<b>0.60</b>	<b>8.74</b>	109%	4.55
q. RV Dump Stations - Less than 50 services	42.69	2.87	100	0.50	2,700	6,000	9.3	<b>4.65</b>	<b>67.70</b>	59%	25.01

Table 14

## South San Luis Obispo County Sanitation District

## Rates &amp; Revenue-Neutral Impacts with Updated Flow &amp; Strength Assignments

Sewer Customer Class	Billing Units	Current ERUs	Current Rates	Current ERU Factor	Revised ERU Factor	Revised ERUs	Rates with Revised ERUs	Revenue Neutral Impact	
								\$ Change	% Change
a. Residences & Apartments	15,094.8	15,094.8	\$14.86	1.00	1.00	15,094.8	\$14.56	(\$0.30)	-2.0%
b. Hotel Units with Kitchens	56.0	59.2	15.71	1.06	0.88	49.0	12.74	(2.97)	-18.9%
c. Motel Units without Kitchens	565.0	381.0	10.02	0.67	0.56	317.8	8.19	(1.83)	-18.3%
d. Hotel Room	-	-	10.36	0.70	0.56	-	8.19	(2.17)	-20.9%
e. Commercial Establishments	1,179.9	607.4	7.65	0.51	0.45	531.0	6.55	(1.10)	-14.4%
Each additional employee above 5	3,111.8	320.4	1.53	0.10	0.09	280.1	1.31	(0.22)	-14.4%
f. Beauty Shops	28.5	26.8	13.97	0.94	0.90	25.6	13.10	(0.87)	-6.2%
Each additional operator above 5	5.0	0.8	2.33	0.16	0.14	0.7	1.97	(0.36)	-15.5%
g. Eating Establishments w/o Grinders	77.7	79.3	15.16	1.02	1.40	108.8	20.38	5.22	34.4%
Each additional 5 seats above 30	192.0	32.7	2.53	0.17	0.21	40.3	3.06	0.53	20.9%
h. Restaurants (w/Grinders) less than 30 seats	3.6	7.5	31.07	2.09	2.25	8.0	32.76	1.69	5.4%
Restaurants (w/Grinders) over 30 seats	7.0	18.8	39.84	2.68	3.15	22.1	45.86	6.02	15.1%
i. Laundromats - per washing machine	179.0	117.0	9.71	0.65	0.65	115.5	9.39	(0.32)	-3.3%
Minimum Charge	-	-	29.14	1.96	1.94	-	28.17	(0.97)	-3.3%
j. Service Stations - no wash/rack	8.0	20.1	37.41	2.52	2.65	21.2	38.58	1.17	3.1%
Service Stations - with wash/rack	6.6	24.1	54.40	3.66	3.80	25.1	55.33	0.93	1.7%
k. Factories	33.0	49.0	22.05	1.48	1.50	49.5	21.84	(0.21)	-1.0%
Each additional employee above 20	5.5	0.4	1.10	0.07	0.08	0.4	1.09	(0.01)	-0.9%
l. Churches	31.0	26.2	12.56	0.85	0.83	25.8	12.08	(0.48)	-3.8%
Per ADA with elementary school	-	-	0.34	0.02	0.02	-	0.36	0.02	5.9%
Per ADA with other school	-	-	0.51	0.03	0.04	-	0.54	0.03	5.9%
m. Bottling Plants	-	-	22.05	1.48	1.80	-	26.21	4.16	18.9%
n. Schools (Non-boarding)	-	6.2	7.07	0.48	0.50	-	7.25	0.18	2.5%
Per ADA with elementary school	-	1.9	0.33	0.02	0.02	-	0.36	0.03	9.1%
Per ADA with other school	-	-	0.52	0.03	0.04	-	0.54	0.02	3.8%
o. Schools (Boarding)	-	-	7.07	0.48	0.50	-	7.28	0.21	3.0%
Per ADA with elementary school	-	-	0.71	0.05	0.05	-	0.73	0.02	2.8%
Per ADA with other school	-	-	0.95	0.06	0.07	-	1.02	0.07	7.4%
p. Trailer/Mobile Home Space	1,595.0	449.7	4.19	0.28	0.60	957.0	8.74	4.55	108.6%
q. RV Dump Stations - Less than 50 services	2.0	5.7	42.69	2.87	4.65	9.3	67.70	25.01	58.6%
<b>Total</b>		<b>17,328.9</b>				<b>17,681.8</b>			
<b>Rate per ERU</b>		<b>\$14.86</b>				<b>\$14.56</b>			
<b>Est. Annual Revenues</b>		<b>\$3,090,092</b>				<b>\$3,089,362</b>		(730)	-0.02%

Table 15

South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Projected Rates with Rate Structure Modifications

With Rate Structure Modifications  
*With SRF Financing*

	Current	Revised Rates	Projected Rates with Rate Structure Modifications				
		Rev-Neutral	2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	14.56	\$17.64	\$19.60	\$21.56	\$23.52	\$25.48
b. Hotel Units with Kitchens	15.71	12.74	15.43	17.14	18.85	20.56	22.27
c. Hotel Units without Kitchens	10.02	8.19	9.92	11.02	12.12	13.22	14.32
d. Hotel Room	10.36	8.19	9.92	11.02	12.12	13.22	14.32
e. Commercial Establishments	7.65	6.55	7.93	8.81	9.69	10.57	11.45
Each additional employee above 5	1.53	1.31	1.59	1.77	1.95	2.13	2.31
f. Beauty Shops	13.97	13.10	15.87	17.63	19.39	21.15	22.91
Each additional operator above 5	2.33	1.97	2.39	2.66	2.93	3.20	3.47
g. Eating Establishments w/o Grinders	15.16	20.38	24.69	27.43	30.17	32.91	35.65
Each additional 5 seats above 30	2.53	3.06	3.71	4.12	4.53	4.94	5.35
h. Restaurants (w/Grinders) <30 seats	31.07	32.76	39.68	44.09	48.50	52.91	57.32
Restaurants (w/Grinders) over 30 seats	39.84	45.86	55.55	61.72	67.89	74.06	80.23
i. Laundromats - per washing maching	9.71	9.39	11.37	12.63	13.89	15.15	16.41
Minimum Charge	29.14	28.17	34.12	37.91	41.70	45.49	49.28
j. Service Stations - no wash/rack	37.41	38.58	46.73	51.92	57.11	62.30	67.49
Service Stations - with wash/rack	54.40	55.33	67.02	74.47	81.92	89.37	96.82
k. Factories	22.05	21.84	26.45	29.39	32.33	35.27	38.21
Each additional employee above 20	1.10	1.09	1.32	1.47	1.62	1.77	1.92
l. Churches	12.56	12.08	14.63	16.26	17.89	19.52	21.15
Per ADA with elementary school	0.34	0.36	0.44	0.49	0.54	0.59	0.64
Per ADA with other school	0.51	0.54	0.65	0.72	0.79	0.86	0.93
m. Bottling Plants	22.05	26.21	31.75	35.28	38.81	42.34	45.87
n. Schools (Non-boarding)	7.07	7.25	8.78	9.76	10.74	11.72	12.70
Per ADA with elementary school	0.33	0.36	0.44	0.49	0.54	0.59	0.64
Per ADA with other school	0.52	0.54	0.65	0.72	0.79	0.86	0.93
o. Schools (Boarding)	7.07	7.28	8.82	9.80	10.78	11.76	12.74
Per ADA with elementary school	0.71	0.73	0.88	0.98	1.08	1.18	1.28
Per ADA with other school	0.95	1.02	1.24	1.38	1.52	1.66	1.80
p. Trailer/Mobile Home Space	4.19	8.74	10.59	11.77	12.95	14.13	15.31
q. RV Dump Stations - Less than 50 svcs	42.69	67.70	82.01	91.12	100.23	109.34	118.45

# South San Luis Obispo County Sanitation District Historical & Projected Monthly Residential Sewer Rates

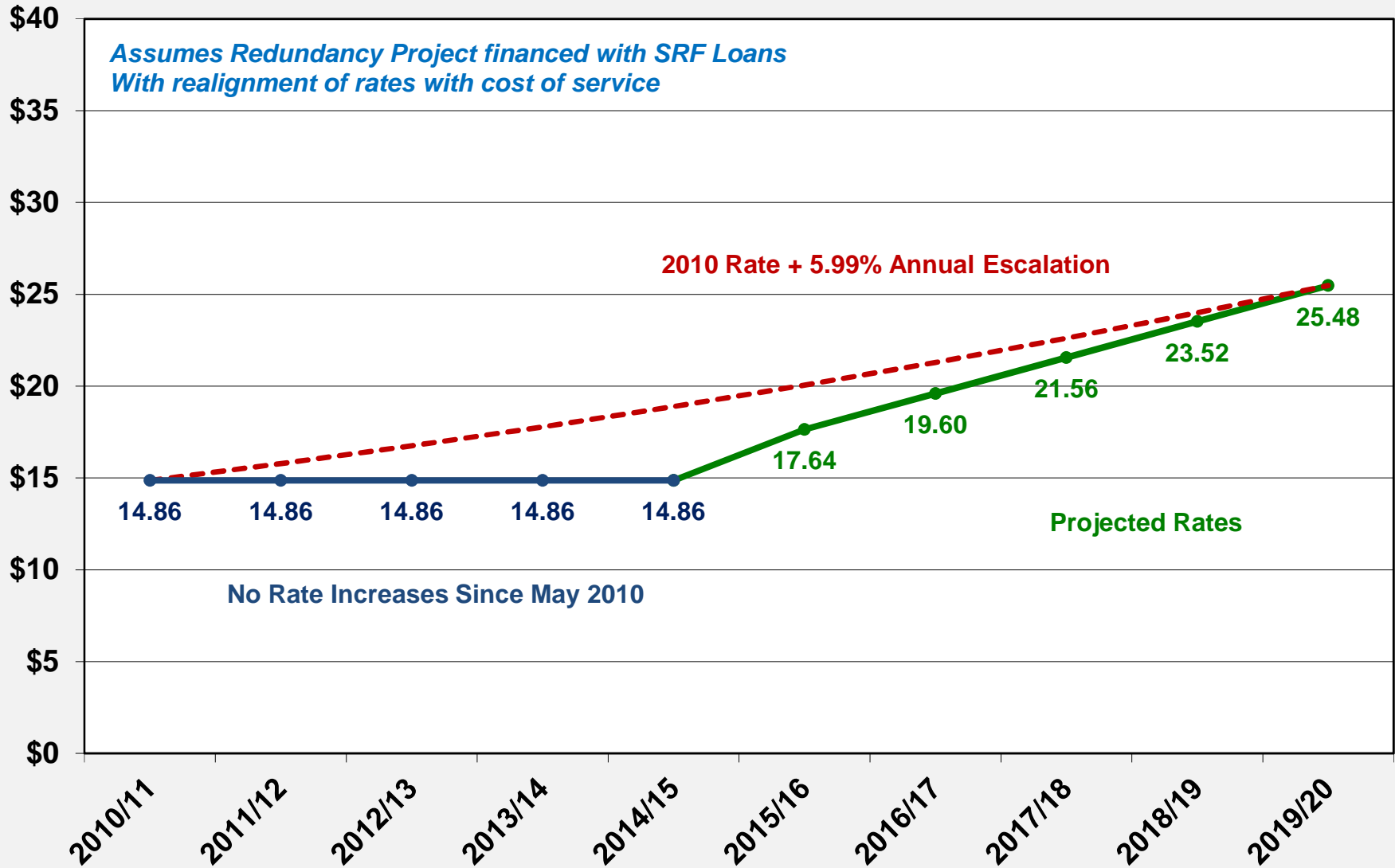


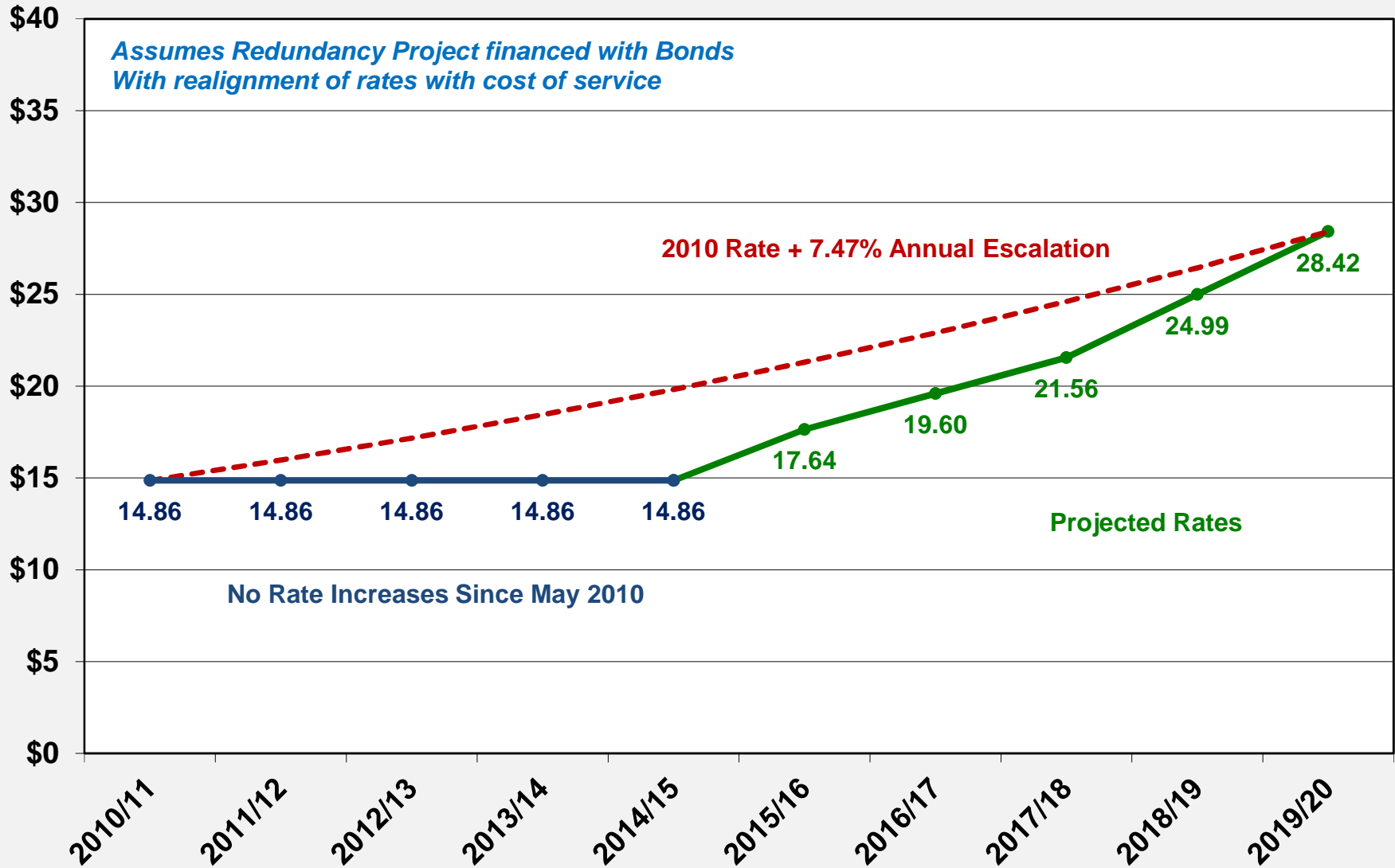
Table 15B

South San Luis Obispo County Sanitation District  
Wastewater Rate Study  
Projected Rates with Rate Structure Modifications

With Rate Structure Modifications  
With Bond Financing

	Current	Revised Rates Rev-Neutral	Projected Rates with Rate Structure Modifications				
			2015/16 Jan-1	2016/17 July-1	2017/18 July-1	2018/19 July-1	2019/20 July-1
a. Residences & Apartments	\$14.86	14.56	\$17.64	\$19.60	\$21.56	\$24.99	\$28.42
b. Hotel Units with Kitchens	15.71	12.74	15.43	17.14	18.85	21.85	24.85
c. Hotel Units without Kitchens	10.02	8.19	9.92	11.02	12.12	14.05	15.98
d. Hotel Room	10.36	8.19	9.92	11.02	12.12	14.05	15.98
e. Commercial Establishments	7.65	6.55	7.93	8.81	9.69	11.23	12.77
Each additional employee above 5	1.53	1.31	1.59	1.77	1.95	2.26	2.57
f. Beauty Shops	13.97	13.10	15.87	17.63	19.39	22.47	25.55
Each additional operator above 5	2.33	1.97	2.39	2.66	2.93	3.40	3.87
g. Eating Establishments w/o Grinders	15.16	20.38	24.69	27.43	30.17	34.97	39.77
Each additional 5 seats above 30	2.53	3.06	3.71	4.12	4.53	5.25	5.97
h. Restaurants (w/Grinders) <30 seats	31.07	32.76	39.68	44.09	48.50	56.22	63.94
Restaurants (w/Grinders) over 30 seats	39.84	45.86	55.55	61.72	67.89	78.69	89.49
i. Laundromats - per washing maching	9.71	9.39	11.37	12.63	13.89	16.10	18.31
Minimum Charge	29.14	28.17	34.12	37.91	41.70	48.33	54.96
j. Service Stations - no wash/rack	37.41	38.58	46.73	51.92	57.11	66.20	75.29
Service Stations - with wash/rack	54.40	55.33	67.02	74.47	81.92	94.95	107.98
k. Factories	22.05	21.84	26.45	29.39	32.33	37.47	42.61
Each additional employee above 20	1.10	1.09	1.32	1.47	1.62	1.88	2.14
l. Churches	12.56	12.08	14.63	16.26	17.89	20.74	23.59
Per ADA with elementary school	0.34	0.36	0.44	0.49	0.54	0.63	0.72
Per ADA with other school	0.51	0.54	0.65	0.72	0.79	0.92	1.05
m. Bottling Plants	22.05	26.21	31.75	35.28	38.81	44.98	51.15
n. Schools (Non-boarding)	7.07	7.25	8.78	9.76	10.74	12.45	14.16
Per ADA with elementary school	0.33	0.36	0.44	0.49	0.54	0.63	0.72
Per ADA with other school	0.52	0.54	0.65	0.72	0.79	0.92	1.05
o. Schools (Boarding)	7.07	7.28	8.82	9.80	10.78	12.50	14.22
Per ADA with elementary school	0.71	0.73	0.88	0.98	1.08	1.25	1.42
Per ADA with other school	0.95	1.02	1.24	1.38	1.52	1.76	2.00
p. Trailer/Mobile Home Space	4.19	8.74	10.59	11.77	12.95	15.01	17.07
q. RV Dump Stations - Less than 50 svcs	42.69	67.70	82.01	91.12	100.23	116.18	132.13

# South San Luis Obispo County Sanitation District Historical & Projected Monthly Residential Sewer Rates



# **Appendix B**

## **Proposition 218 Notice of Public Hearing**



# NOTICE OF PUBLIC HEARING – PROPOSED WASTEWATER TREATMENT RATE INCREASES (PROPOSITION 218 NOTIFICATION)

December 30, 2015

South San Luis Obispo County Sanitation District provides wastewater treatment services to Arroyo Grande, Grover Beach and Oceano Community Services District. This notice explains wastewater treatment rate increases the District proposes to charge over the next five years. The District will hold a public hearing to discuss the proposed rate increases on February 17, 2016, at 6:00 p.m. in the Arroyo Grande City Council Chambers, 215 East Branch Street, Arroyo Grande.

**BASIS AND REASON FOR THE PROPOSED RATE INCREASES:** The District has not increased its wastewater treatment charges in over five years. The proposed rate increases are needed to a) provide adequate funding for the costs of operating and maintaining the District's regional wastewater treatment facilities, b) fund major new facility upgrades needed to comply with state and federal laws and regulations, and c) provide funding for repair and replacement of aging facilities. The proposed rates are based on a Wastewater Financial Plan and Rate Study prepared by Bartle Wells Associates, an independent utility rate consulting firm.

**PROPOSED WASTEWATER TREATMENT RATES:** The District proposes to phase in a series of rate increases as shown in the table below. The proposed rates are designed to recover the District's cost of service and align rates with the cost of providing wastewater treatment services to individual parcels. With the proposed rates, residential users would continue to pay a flat monthly charge per dwelling unit, and nonresidential users would pay fixed monthly charges that vary by factors including customer type, number or employees, number of restaurant seats, number of students, and other factors as shown below.

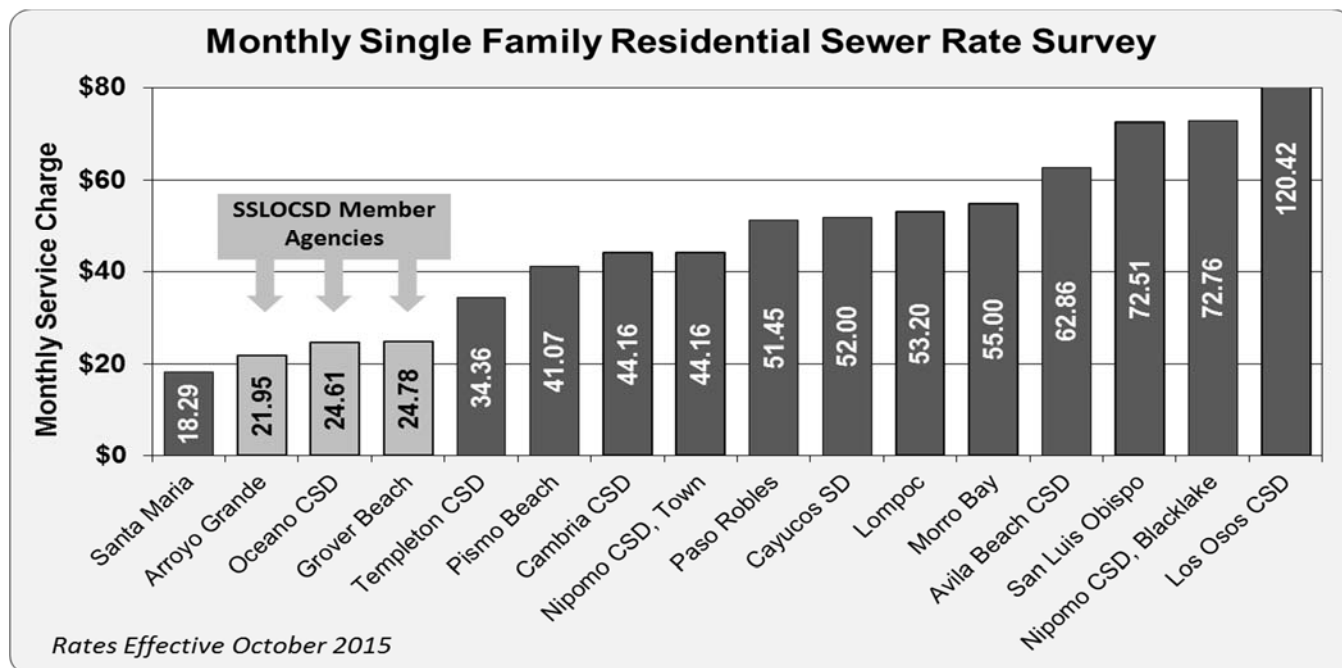
	Current	Proposed Monthly Service Charges Effective On or After:				
		March 1* 2016	July 1 2016	July 1 2017	July 1 2018	July 1 2019
a. Residences & Apartments	\$14.86	\$17.64	\$19.60	\$21.56	\$23.52	\$25.48
b. Hotel Units with Kitchens	15.71	15.43	17.14	18.85	20.56	22.27
c. Hotel Units without Kitchens	10.02	9.92	11.02	12.12	13.22	14.32
d. Hotel Room	10.36	9.92	11.02	12.12	13.22	14.32
e. Commercial Establishments	7.65	7.93	8.81	9.69	10.57	11.45
Each additional employee above 5	1.53	1.59	1.77	1.95	2.13	2.31
f. Beauty Shops	13.97	15.87	17.63	19.39	21.15	22.91
Each additional operator above 5	2.33	2.39	2.66	2.93	3.20	3.47
g. Eating Establishments w/o Grinders	15.16	24.69	27.43	30.17	32.91	35.65
Each additional 5 seats above 30	2.53	3.71	4.12	4.53	4.94	5.35
h. Restaurants (w/Grinders) <30 seats	31.07	39.68	44.09	48.50	52.91	57.32
Restaurants (w/Grinders) over 30 seats	39.84	55.55	61.72	67.89	74.06	80.23
i. Laundromats - per washing machine	9.71	11.37	12.63	13.89	15.15	16.41
Minimum Charge	29.14	34.12	37.91	41.70	45.49	49.28
j. Service Stations - no wash/rack	37.41	46.73	51.92	57.11	62.30	67.49
Service Stations - with wash/rack	54.40	67.02	74.47	81.92	89.37	96.82
k. Factories	22.05	26.45	29.39	32.33	35.27	38.21
Each additional employee above 20	1.10	1.32	1.47	1.62	1.77	1.92
l. Churches	12.56	14.63	16.26	17.89	19.52	21.15
Per ADA with elementary school	0.34	0.44	0.49	0.54	0.59	0.64
Per ADA with other school	0.51	0.65	0.72	0.79	0.86	0.93
m. Bottling Plants	22.05	31.75	35.28	38.81	42.34	45.87
n. Schools (Non-boarding)	7.07	8.78	9.76	10.74	11.72	12.70
Per ADA with elementary school	0.33	0.44	0.49	0.54	0.59	0.64
Per ADA with other school	0.52	0.65	0.72	0.79	0.86	0.93
o. Schools (Boarding)	7.07	8.82	9.80	10.78	11.76	12.74
Per ADA with elementary school	0.71	0.88	0.98	1.08	1.18	1.28
Per ADA with other school	0.95	1.24	1.38	1.52	1.66	1.80
p. Trailer/Mobile Home Space	4.19	10.59	11.77	12.95	14.13	15.31
q. RV Dump Stations - Less than 50 svcs	42.69	82.01	91.12	100.23	109.34	118.45

\* Proposed rate increases for the current fiscal year – which began July 1, 2015 – have been deferred until March 1, 2016; hence the first rate increase will only impact customers for the last four months of the current fiscal year.

**HOW TO SUBMIT A WRITTEN PROTEST:** Written protests must be submitted before the public hearing closes. They may be submitted in person at the public hearing or mailed to South San Luis Obispo County Sanitation District, P.O. Box 339, Oceano, CA 93475. Any written protest must a) include the name and signature of the property owner or customer submitting the protest; b) identify the affected property(ies) by address or Assessor's Parcel Number; c) state opposition to the increase. Only one protest will be counted per identified parcel.

### **THE DISTRICT'S RATES ARE PROJECTED TO REMAIN LOW COMPARED TO OTHER REGIONAL AGENCIES.**

The District's rates are very low compared to other statewide and regional agencies. The total monthly sewer bills paid by residents of Arroyo Grande, Grover Beach, and Oceano are among the lowest in the region as shown on the following survey. These charges include both the District's charge for wastewater treatment as well each local agency's charge for sewer collection services. With the proposed rate increases, charges are projected to remain low compared to other statewide and regional agencies.



### **WHY ARE RATE INCREASES NEEDED?**

The proposed rate adjustments are needed to fund a major upgrade to the District's regional wastewater treatment plant and keep revenues aligned with the cost of providing service. Key factors driving the need for the rate increases include:

- **State-Mandated Wastewater Treatment Plant Upgrades** – The District needs to fund a major upgrade to the regional wastewater treatment plant in order to meet regulatory requirements mandated by the Regional Water Quality Control Board and improve reliability of service. Based on updated engineering estimates, the project is estimated to cost approximately \$19 million. The upgrade will also result in over \$400,000 of new operating costs. The District anticipates pursuing low-interest-rate financing from California's State Revolving Fund Financing Program to help minimize annual debt service for the project.
- **Repair & Replacement of Aging Wastewater Treatment Facilities** – The District's regional treatment plant was originally constructed almost 50 years ago in 1966 and has subsequently been upgraded and expanded to its current configuration. Due to the age and condition of various components of its facilities, the District will need to make ongoing investments to keep its aging facilities in good operating condition and ensure continued compliance with stringent environmental regulatory requirements.
- **Ongoing Cost Inflation** – Small annual rate increases are also needed to keep revenues in line with ongoing operating cost inflation. The District anticipates facing annual increases in costs for staffing, electricity, chemicals, insurance, and other operating expenses.

The District has implemented a number of cost-cutting measures in recent years and remains committed to providing high-quality service as cost-efficiently as possible. *For more information about the District and the proposed rate increases, please visit our website at [www.sslocsd.org](http://www.sslocsd.org) or contact us at (805) 489-6666.*

# **Appendix C**

## **California Sewer Rate Structures**



## California Sewer Rate Structures

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California wastewater agencies use a variety of rate structures to recover the costs of providing service. Bartle Wells Associates believes that a wide range of rate structures can be appropriate, equitable, and legally defensible, while reflecting the policy preferences of each agency. This memo summarizes common types of residential and commercial wastewater rate structures used in California and provides brief background on some general issues regarding wastewater rates. Estimates of the percentage or proportion of agencies that use different types of rate structures are based on a) Bartle Wells Associate's experience with hundreds of California wastewater agencies and b) the State Water Resources Control Board's *Wastewater User Charge Survey and Report*, a survey of over 400 California wastewater agencies.

### Residential Sewer Rate Structures

- Roughly 65% to 75% of agencies throughout California levy fixed residential sewer service charges. The charge is generally based on a reasonable estimate of average wastewater discharge per residential dwelling unit. Of these agencies, roughly 50% to 60% levy the same standard charge on all residential units, while the others levy reduced charges on multi-family dwelling units that typically in the range of 70% to 90% of the charge for single family homes.
- Roughly 25% to 35% of California agencies have sewer rates that include a variable rate component. Many of these agencies have both a fixed and variable, usage based charge. The variable rate component is typically based on winter water use as a proxy for sewer discharge since there is minimal outdoor irrigation during winter months. Some agencies with variable rates subject the charges to a minimum and/or maximum charge. A minimum charge ensures that even customers with very low levels of water use pays at least a minimum amount towards the fixed costs of service. A maximum charge helps ensure that customers are not overbilled, such as due to water use for landscape irrigation.
- A small number of agencies levy residential sewer rates that vary based on other factors such as number of bedrooms or plumbing fixture units as proxies for wastewater demand.

### Commercial Sewer Rate Structures

- Roughly half of California agencies have fixed commercial sewer rate structures, with commercial rates based on estimates of wastewater capacity needs, flow, and/or strength for different customer types or classes. These agencies use a wide range of approaches to reasonably estimate commercial wastewater capacity needs, flow, and strength, and determine reasonable rates. These approaches include:
  - Square footage of building area for different types of commercial uses

- Number of plumbing fixture units
  - Fixed charge based on water meter size
  - Estimates of monthly water use and/or winter water use
  - Other factors such as average daily attendance (ADA) of students, number of seats in a restaurant, number of washing machines in a laundromat, etc.
- The other half of California agencies bill commercial accounts based on metered water consumption. These charges are typically based on all monthly use throughout the year, but some agencies only bill based on winter water use. These agencies sometimes have rates that include both a fixed and variable rate component. Some agencies have numerous customer classes that apply to specific types of businesses (e.g. restaurant, retail store, professional office, auto service station, etc.) while others have a relatively small number of generic customer classes based on wastewater strength (e.g. low strength, moderate strength, mod-high strength, high strength, etc.)

### **Fixed & Variable Rates**

Fixed and variable rate structures can both be appropriate and equitable methods for cost recovery. Bartle Wells Associates believes agencies may legitimately opt to use different types of rate structures depending on their policy preferences provided they can provide justification that their rates reasonably reflect the costs of providing service. For example, the policy preferences of one agency may be to recover fixed residential charges (e.g. \$50 per month), another similar agency can opt to recover variable residential charges based on metered water use (e.g. \$6.50 per hundred cubic feet of metered winter water use), while a third similar agency may opt for some combination of fixed and variable charges (e.g. \$20 per month plus \$3.75 per hcf of metered water use).

- Fixed rates are widely used as most of the costs of providing wastewater service – often in excess of 90% of expenses – are typically fixed costs that do not vary with changes in the volume of wastewater flow. For example, most of the costs of operating, maintaining, and administering the wastewater system, need to be incurred so the system is both ready to serve customers and capable of processing their wastewater at all times while meeting a range regulatory requirements. This does not imply that all costs should be equally divided by all accounts. Rather it implies that fixed charges can equitably reflect the cost of service provided the costs are reasonably allocated to customers based on their proportional share of wastewater system capacity needs.
- Variable charges can also be an equitable method of cost recovery, even for agencies with a high level of fixed costs. Even though a high percentage costs may be fixed expenses, many agencies find it fair and appropriate to recover those costs proportionally based on the capacity needs and/or estimated wastewater characteristics of different customer types. What is important is not whether an expense is fixed or variable, but revenue recovery

## Wastewater Flow & Strength Estimates

Unlike water consumption, which can be reasonably accurately measured by water meters, the volume of wastewater discharge cannot easily or cost-effectively be metered. Likewise, it is extremely impractical and cost-prohibitive to physically sample and analyze every customer's wastewater to determine their wastewater strength concentrations or loadings, and wastewater sampling data can fluctuate widely based on range of factors rendering the data subject to interpretation. Due to these limitations, California agencies have used a range of alternative approaches to reasonably estimate the wastewater capacity needs, flow and strength of different customers and/or classes. These estimates provide an underlying basis for apportioning costs and determining equitable rates for a range of customer classes.

- The volume of wastewater flow generated from different types of customers is commonly estimated based on approaches including: a) all metered water use, b) a discounted percentage of water use (e.g. 85%) to account for water that is not discharged into the sewer system, such as water for landscape irrigation, c) water use during the wetter winter months, which may more accurately represent the actual wastewater discharge of some types of connections since winter use typically excludes outdoor irrigation, or d) estimates of the typical volume of wastewater discharge and/or system capacity requirements for different types of connections.
- Wastewater strength is often measured based on the concentration levels of Biological Oxygen Demand (BOD) and Suspended Solids (SS). However, a small number of agencies use Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC) instead of BOD, or in some cases also use Ammonia Nitrogen as an additional measure of wastewater strength. Wastewater strength is most commonly estimated based on engineering and/or industry standards, but is sometimes based on actual sampling data. Bartle Wells Associates believes a range of wastewater strength estimates can be used provided they are supported by actual data or fall within a reasonable range of estimates. For example, residential wastewater strength is generally estimated to range from 175 to 250 mg/l for both BOD and SS, while the wastewater strength of restaurants commonly ranges from 600 – 1200 mg/l for BOD and 400 – 800 mg/l for SS.