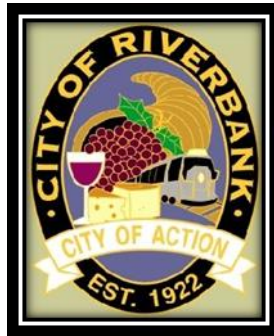
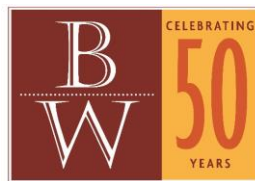


# City of Riverbank



## Sewer Rate Study

June 18, 2015



Bartle Wells Associates  
Independent Public Finance Consultants  
1889 Alcatraz Avenue  
Berkeley, California 94703  
[www.bartlewells.com](http://www.bartlewells.com)  
Tel: 510-653-3399

**FINAL**

## Historical & Current Sewer Service Rates

The City of Riverbank has not raised sewer rates since 2008. The City had a cost of service study performed in 2009 by ECO:LOGIC consultants which recommended rate increases from FY 2010 to FY 2012, however the increases were never implemented. The historical and current (2008) sewer rates are shown in **Table 1**.

Table 1: Historical Wastewater Service Charges  
City of Riverbank  
Water and Wastewater Rate Study

Sewer Rates (Monthly)	2004	2005	2006	2007	2008
Residential in Riverbank	14.91	18.72	19.13	19.59	20.15
Commercial in Riverbank (plus volume charge for use over 1,000 cf)	14.91	18.72	19.13	19.59	20.15
Year-to-year Change		20.4%	2.1%	2.3%	2.8%
Residential Outside of Riverbank	15.93	19.76	20.19	20.67	21.26
Commercial Outside of Riverbank	15.93	19.76	20.19	20.67	21.26
Year-to-year change		19.4%	2.1%	2.3%	2.8%

Rates per CF for usage exceeding 1,000 cubic feet per month [1]	
Commercial	0.01492
Hospitals	0.01492
Extended Care Facilities	0.01492
Markets (Without Delicatessens)	0.01492
Automobile Service Facilities	0.01492
Commercial Laundromats	0.01492
Offices	0.01325
Restaurants	0.01624
Short Order Facilities	0.01624
Markets (With Delicatessens)	0.01624
Restaurants (With Full Kitchens)	0.02353

Total Annual Charges [2]	
Industrial Rate	C=96.209V + 10B
Riverbank Unified	C=.34749P
School District [3]	C=1.30891P

[1] Per cubic foot

[2] C=Annual Operation and Maintenance Costs, V=Annual Volume (MG), B = Annual BOD Loading (lbs.), P= student and staff pop.

[3] .34749 is for facilities without a cafeteria. 1.30891 is for facilities with a cafeteria

Sewer charges are shown monthly and annually, however bills are sent out on a bimonthly schedule.

### Residential & Commercial Rates

The rate for churches, single-family dwellings, each unit in a duplex, triplex or multiple-family units, each space in a mobile home park located inside the City, and hotels and motels is **\$20.15** per month per church, dwelling unit, rental room or space. For customers located outside of the City, the rate is **\$21.26** per month.

In addition to the monthly charge, commercial customers pay an amount based on customer classification for each cubic foot of water they consume over 1,000 cubic feet per month.

**Special Rates – Industrial & Schools**

Industrial customer service charges are calculated based on a formula which takes into account biochemical oxygen demand (BOD) and million gallons (MG) of water used in one year. Industrial charges may be adjusted up or down at the end of the fiscal year according to actual costs, flows, and BODs for that year as calculated by the Public Works Department.

Schools pay a separate charge based on student and staff population and whether or not they have a cafeteria.

## Recommended Sewer Service Rates

BWA recommends the City divide the volumetric charges into four categories based on strength factors to ensure rate equity between customers. These strength classifications were developed based on State Water Resources Control Board recommended flow factors and a standard strength factor formula. A strength factor of 1 is used for domestic use (200 BOD/MGL and 200 SS/MGL) which is the estimated residential strength.

The four recommended categories include: Low, Domestic, Medium, and High. Schools without cafeterias are recommended to be billed in the Low classification, and schools with cafeterias are recommended to be billed in the Medium category. **Table 2** shows the recommended structure (without taking into account required rate increases).

Table 2: Variable Charge Cost Attribution  
City of Riverbank  
Water and Wastewater Rate Study

Cost Recovery Attribution		
Flow	BOD	SS
50%	20%	30%

Commercial Grouping	Class	GPD	BOD/MGL	SS/MGL	Strength Factor	Old Rate	New Rate*	% Change
<i>Group 1</i>	Low	250	130	80	0.75			
Schools w/o Cafeteria						-	0.01119	
Offices						0.01325	0.01119	-16%
<i>Group 2</i>	Domestic	250	200	200	1.00			
Commercial						0.01492	0.01492	0%
Hospitals						0.01492	0.01492	0%
Extended Care Facilities						0.01492	0.01492	0%
Markets (Without Delicatessens)						0.01492	0.01492	0%
Automobile Service Facilities						0.01492	0.01492	0%
Commercial Laundromats						0.01492	0.01492	0%
<i>Group 3</i>	Medium	250	400	300	1.35			
Schools w/ Cafeteria						-	0.02014	
Restaurants						0.01624	0.02014	24%
Short Order Facilities						0.01624	0.02014	24%
Markets (With Delicatessens)						0.01624	0.02014	24%
<i>Group 4</i>	High	250	800	600	2.20			
Restaurants (With Full Kitchens)						0.02353	0.03282	39%

### Commercial Rates

\*Rates per CF for usage exceeding 1,000 cubic feet per month

Source: Strength factors based on guidelines from the State Water Resources Control Board

Strength Factor =  $[0.5 + (0.2) \text{ BOD (mg/l)/200} + (0.3) \text{ SS (mg/l)/200}]$

Industrial customers are billed based on annual flow and BOD

BWA analyzed the sewer billing data provided by the City. There are currently a total of approximately 6,375 sewer accounts and 7,074 billing units, as shown in **Table 3**. Under current rates, annual cost recovery from fixed charges alone account for an estimated \$1,710,500 per year.

Commercial customers are estimated to use 11,127,000 cubic feet of water annually above the 1,000 CF threshold, translating into approximately \$167,000 per year in volumetric charges.

Table 3: Estimated Wastewater Service Charges  
 City of Riverbank  
 Water and Wastewater Rate Study

**Customer Type**

<b>Residential</b>	<b># of Accounts</b>	<b># of Billing Units</b>	<b>Annual Base Rate</b>	<b>Annual Cost Recovery</b>
Single Family Residential (inside City)	6,031	6,031	\$242	\$1,458,296
Single Family Residential (outside City)	2	2	255	510
Multi-Family Residential	108	482	242	116,548
Mobile Home Parks	<u>6</u>	<u>263</u>	242	<u>63,593</u>
<b>Subtotal Residential</b>	<b>6,147</b>	<b>6,778</b>		<b>1,638,947</b>
<b>Commercial</b>				
Hotels/Motel	1	8	242	1,934
Commercial Boarding Houses	0	0	242	0
Commercial Retail, Hospitals, auto shops, etc	154	210	242	50,778
Offices	15	15	242	3,627
Small Restaurants & Markets w/ Delicatessens	12	15	242	3,627
Restaurants with Full Kitchens	23	25	242	6,045
Governmental	9	9	242	2,176
Industrial	9	9	242	2,176
Schools	<u>5</u>	<u>5</u>	242	<u>1,209</u>
<b>Subtotal Commercial</b>	<b>228</b>	<b>296</b>		<b>71,573</b>
<b>Total</b>	<b>6,375</b>	<b>7,074</b>		<b>1,710,520</b>
<b>Estimated Annual Commercial Use (Above 1,000 CF)</b>				<b>11,127,000</b>
<b>Estimated Commercial Revenue</b>				<b>\$166,905</b>
<b>Total Estimated Service Charges</b>				<b>\$1,877,425</b>

Source: City of Riverbank, 2009; Customer Usage Data 2013

## **Sewer Enterprise Funds**

The sewer enterprise controls four funds, which combined hold a total of \$5.2 million as of July 1, 2014.

1. **Fund 106: Sewer Fund:** Net revenues from operations are deposited into this fund.
2. **Fund 107: Debt Service Fund:** The debt service fund is used to pay semi-annual debt payments and provides a cushion in case of emergency.
3. **Fund 108: Capital Improvement Fund:** Provides funds for capital improvements.
4. **Fund 158: Sewer Connection Fund:** Connection fees are deposited into this fund.

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Table 4: Wastewater Fund Balances FY 2014/15  
City of Riverbank  
Water and Wastewater Rate Study

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<b><u>Reserve</u></b>	<b><u>Amount</u></b>
Fund 106: Sewer Fund	\$318,694
Fund 107: Sewer Debt Service	924,834
Fund 108: Sewer Capital Improvement Fund [1]	3,788,173
<u>Fund 158: Sewer Connection</u>	<u>240,128</u>
Total Reserves	\$5,271,829

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Note: Fund balances as of July 1, 2014

[1] Includes Emergency Reserves and Schneider Electric Reserve

Source: City of Riverbank Annual Operating Budget, FY 2014/15

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## Capital Improvement Program

The City has identified a five-year capital improvement program to be funded by the rates proposed in this study. The capital program is shown below in **Table 5**.

Major projects include a Biolac System for the Wastewater Treatment Plant (WWTP) funded in FY 2015, a sewer line improvement and cross connection reduction program to be completed from FY 2016 to FY 2020, and an SS lift station electrical pane upgrade in FY 2020.

Table 5: Sewer Enterprise Capital Projects  
City of Riverbank  
Water and Wastewater Rate Study

Sanitary Sewer Utility	Project #	0	1	2	3	4	5	Total Projected Capital Cost FY 2011-2020
		FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	
<b>Project Name</b>								
<b>High Priority Projects</b>								
Utility Service Separation	SS-013	36,000						36,000
Cross Connection Reduction	SS-012		200,000	200,000	200,000	200,000		800,000
Biolac System	WWTP-020	3,549,843						3,549,843
Equipment Protection -Overhead Structure	WWTP-023		10,000					10,000
Resurface Entry Road to WWTP (Demo, prep, resurface) [1]			110,000					110,000
Finish Pond 9 at WWTP [2]				98,000				98,000
<b>Total High Priority Projected Capital Cost</b>		<b>3,585,843</b>	<b>320,000</b>	<b>298,000</b>	<b>200,000</b>	<b>200,000</b>		<b>4,603,843</b>
<b>Additional CIP</b>								
6" SS, Stanislaus - Sierra Alley from 1st to 3rd			75,000					75,000
6" SS, Sierra - Patterson Alley from 1st to 8th			275,000					275,000
6" SS, Topeka - 108 Alley 4th to 5th			50,000					50,000
6" SS, Topeka - Santa Fe Alley 7th to 8th			50,000					50,000
6" SS, Santa Fe - Stanislaus Alley 7th to 8th			50,000					50,000
6" SS, Terminal from Kentucky to Castle Park Drive				85,000				85,000
6" SS, Texas - Kansas Alley from 8th to Chief Tucker				80,000				80,000
8" SS, Galaxy to Jackson Ave.					50,000			50,000
6" & 8" SS, 7 State Streets from Terminal to 8th						1,000,000		1,000,000
8" SS, Oakdale Road from Patterson to Cedarwood						150,000		150,000
6" SS in Cedarwood from Oakdale Road to Wood Haven						125,000		125,000
6" SS, Orange Ave from Bruneyville to 2nd St.							1,000,000	1,000,000
Crawford Lift Station project upgrades and force main							250,000	250,000
CCTV all sanitary sewer lines city wide							250,000	250,000
Upgrade all electrical panes on SS lift stations							1,000,000	1,000,000
Survey all lift stations							50,000	50,000
<b>Total Additional CIP</b>			<b>500,000</b>	<b>165,000</b>	<b>50,000</b>	<b>1,275,000</b>	<b>2,550,000</b>	<b>4,540,000</b>
<b>Total Capital Projects</b>		<b>3,585,843</b>	<b>820,000</b>	<b>463,000</b>	<b>250,000</b>	<b>1,475,000</b>	<b>2,550,000</b>	<b>9,143,843</b>

Source: City of Riverbank 2014-2019 Capital Improvement Plan

[1] E-mail from Staff, 5-19-15

[2] E-mail from Staff, 10.6.2014

## Debt Service Schedule

The Sewer Enterprise currently has five separate outstanding obligations: two 2014 loans which refinanced a \$1.71 million outstanding 2005 Sewer Bond and provided \$4 million for a Waste Water Treatment Plant Upgrade. A 2001 interfund loan with a balance of \$289,614, a 2001 CSWRCB loan with a balance of \$355,912, and a 2002 CSWRCB loan with a balance of \$111,710.

Table 6: Wastewater Enterprise Debt Service  
City of Riverbank  
Water and Wastewater Rate Study

Long-Term Debt: Wastewater	Budget	Five Year Projection (Prop 218)				
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
2014 Loans [1]	643,000	643,000	643,000	643,000	643,000	643,000
2001 Interfund Loan [2]	75,000	75,000	75,000	4,000		
2001-2 CSWRCB Loans [3]	66,000	66,000	66,000	66,000	66,000	66,000
<b>Total Annual Wastewater Debt Service</b>	<b>\$784,000</b>	<b>\$784,000</b>	<b>\$784,000</b>	<b>\$713,000</b>	<b>\$709,000</b>	<b>\$709,000</b>

Source: City of Riverbank Audit for FYE 2011, FYE 2012, and FYE 2013; City of Riverbank Budget FY2014/15

Note: Payments for FY 2014-2024 are based on the debt schedules found in the City Audit and on assumption that there is no new debt issued and no debt refinanced.

[1] \$1.71 million refinancing loan for 2005 Sewer Bonds and \$4 million loan for a Waste Water Treatment Plant upgrade.

[2] As of June 30, 2014, the balance payable was \$289,614 with an interest rate of 2.00%. The final maturity date is June 30, 2018.

[3] As of June 30, 2014, the balance payable for the 2001 CSWRCB Loan was \$355,912 with an interest rate of 2.6% and a final maturity date of October 25, 2021. The balance payable for the 2002 CSWRCB Loan is \$111,710 with an interest rate of 2.7% and a final maturity date of October 25, 2021.



## Scenario Summary

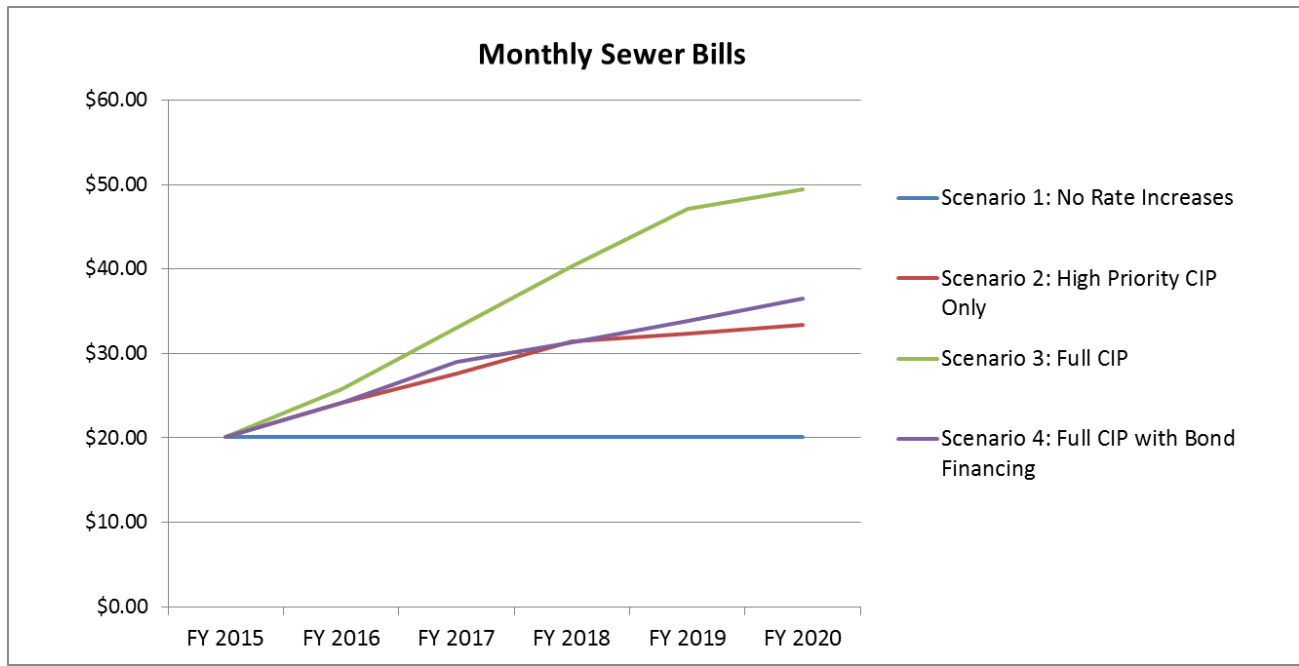
BWA analyzed four scenarios for City consideration:

**Scenario 1: No Rate Increase** – Shows the Sewer Enterprise financial condition under a no increase “status quo” scenario with only high priority capital projects initiated. (**Not Recommended**).

**Scenario 2: High Priority CIP Only** – Funds high priority capital projects only for the next five years. Funds all Sewer Enterprise costs from rate increases only.

**Scenario 3: Full CIP** – Funds all capital projects for the next five years. Funds all Sewer Enterprise costs from rate increases only.

**Scenario 4: Full CIP with Bond Financing** – Funds all capital projects for the next five years. Funds Sewer Enterprise costs from a combination of bond issues and rate increases.



Scenario Description	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	5-Yr Bill Increase
Scenario 1: No Rate Increases <i>Monthly Bill</i>	\$20.15	\$20.15	\$20.15	\$20.15	\$20.15	\$20.15	\$0.00
Scenario 2: High Priority CIP Only <i>Monthly Bill</i>	\$20.15	\$24.18	\$27.57	\$31.42	\$32.37	\$33.34	\$13.19
Scenario 3: Full CIP <i>Monthly Bill</i>	\$20.15	\$25.79	\$33.01	\$40.28	\$47.12	\$49.48	\$29.33
Scenario 4: Full CIP with Bond Financing <i>Monthly Bill</i>	\$20.15	\$24.18	\$29.02	\$31.34	\$33.84	\$36.55	\$16.40

## Scenario 1: No Rate Increases

Figure 1 and Table 7 show the Sewer Enterprise’s financial position under a No Rate Increase scenario. Under current rates, the Sewer Enterprise is projected to deplete all fund balances in FY 2017. By FY 2020, the Sewer enterprise would build up a deficit of approximately \$2.5 million.

The Sewer Enterprise is projected to have a debt service coverage ratio of .4 in FY 2015. Debt service coverage is calculated as Operating Revenues less Operating Expenses divided by total debt service payments. BWA typically recommends agencies maintain a debt service coverage ratio of at least 1.15.

Additionally, BWA recommends the Sewer Enterprise maintain a total fund balance of at least 50% of annual O&M and \$1,000,000 for capital projects as a buffer in case of emergency and to maintain creditworthiness.

Figure 1

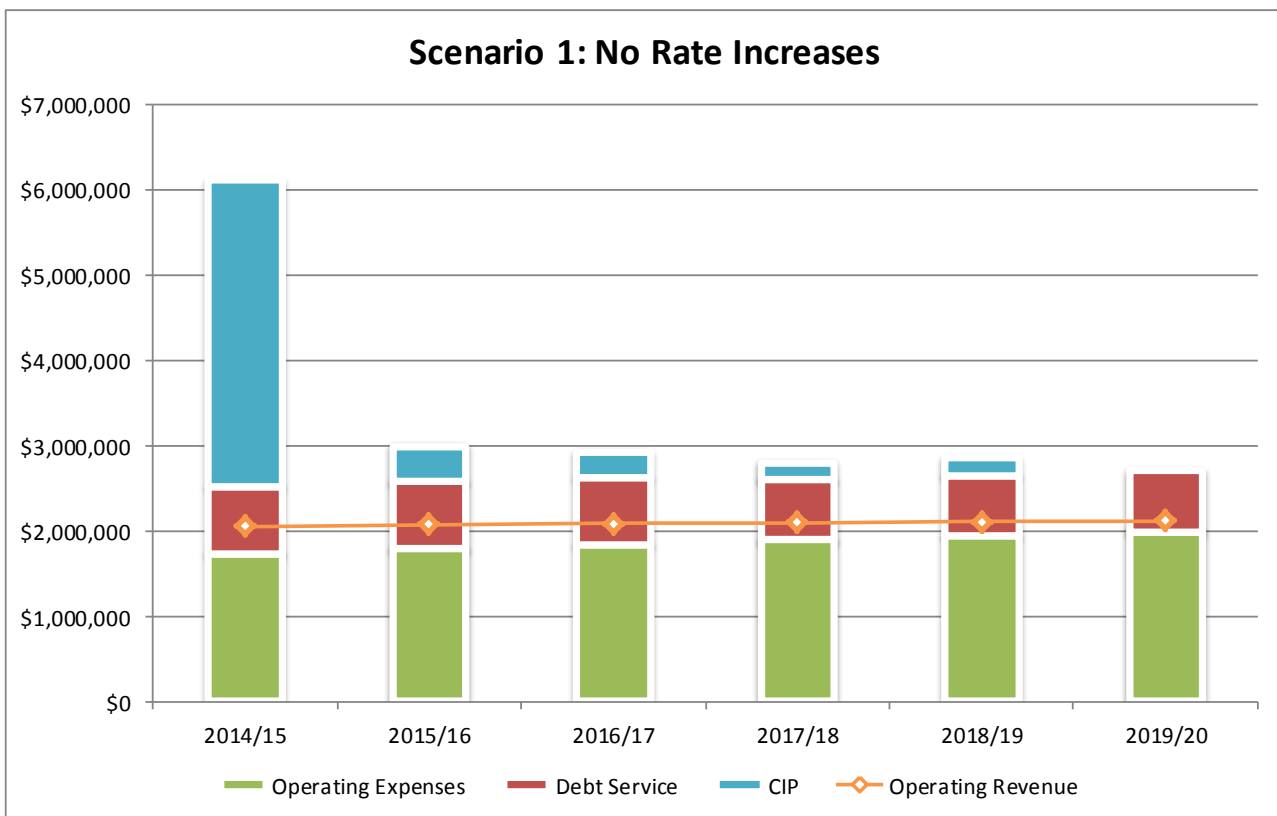


Table 7: Scenario 1: No Rate Increases  
 City of Riverbank  
 Water and Wastewater Rate Study

	Budget	Annual % Increase	Five Year Projection (Prop 218)				
	2014/15		2015/16	2016/17	2017/18	2018/19	2019/20
<b>BEGINNING BALANCE</b>							
Fund 106 (Operations)	\$318,694		\$634,000	\$910,000	\$1,150,100	\$1,352,601	\$1,515,127
Fund 107 (Debt)	924,834		141,000	(643,000)	(1,427,000)	(2,140,000)	(2,849,000)
Fund 108 (Projects)	3,788,173		202,000	(218,000)	(516,000)	(716,000)	(916,000)
Fund 158 (Connection)	<u>240,128</u>		<u>270,000</u>	<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>
Wastewater Fund Total	5,271,829		1,247,000	334,000	(492,900)	(1,188,399)	(1,919,873)
Monthly Service Charge	20.15		20.15	20.15	20.15	20.15	20.15
<b>Revenues</b>							
Sewer Service Charges	1,871,900	0.5%	1,881,000	1,890,000	1,899,000	1,908,000	1,918,000
Fines, Forfeitures, Penalties	34,500	1.0%	35,000	35,000	35,000	35,000	35,000
Interest Income [1]	3,000		6,000	9,100	11,501	13,526	15,151
Industrial Permits	34,300	1.0%	35,000	35,000	35,000	35,000	35,000
Misc. Revenues	250		1,000	1,000	1,000	1,000	1,000
Transfers In	<u>117,700</u>		<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>
<b>Total Revenues</b>	<b>\$2,061,650</b>		<b>\$2,078,000</b>	<b>\$2,090,100</b>	<b>\$2,101,501</b>	<b>\$2,112,526</b>	<b>\$2,124,151</b>
<b>Expenses</b>							
<i>Wastewater Collection</i>							
Employee Compensation	\$147,500	3.0%	\$152,000	\$157,000	\$162,000	\$167,000	\$172,000
Supplies and Materials	9,250	3.0%	10,000	10,000	10,000	10,000	10,000
Utilities	25,000	5.0%	26,000	27,000	28,000	29,000	30,000
Services	85,000	3.0%	88,000	91,000	94,000	97,000	100,000
Communications	2,000		2,000	2,000	2,000	2,000	2,000
Misc. Expenses and Allowances	14,550	4.0%	15,000	16,000	17,000	18,000	19,000
Transfers Out Management Fee	<u>539,900</u>		<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>
<i>Total Wastewater Collection</i>	<u>\$823,200</u>		<u>\$843,000</u>	<u>\$853,000</u>	<u>\$863,000</u>	<u>\$873,000</u>	<u>\$883,000</u>
<i>Wastewater Treatment</i>							
Employee Salaries	201,900	3.0%	208,000	214,000	220,000	227,000	234,000
Employee Benefits	118,900	3.0%	122,000	126,000	130,000	134,000	138,000
Supplies and Materials	6,500		7,000	7,000	7,000	7,000	7,000
Utilities	400,000	5.0%	420,000	441,000	463,000	486,000	510,000
Communications	850		1,000	1,000	1,000	1,000	1,000
Services	132,500	3.0%	136,000	140,000	144,000	148,000	152,000
Misc. Expenses and Allowances	<u>62,550</u>	4.0%	<u>65,000</u>	<u>68,000</u>	<u>71,000</u>	<u>74,000</u>	<u>77,000</u>
<i>Total Wastewater Treatment</i>	<u>\$923,200</u>		<u>\$959,000</u>	<u>\$997,000</u>	<u>\$1,036,000</u>	<u>\$1,077,000</u>	<u>\$1,119,000</u>
<b>Total Wastewater Operations</b>	<b>\$1,746,400</b>		<b>\$1,802,000</b>	<b>\$1,850,000</b>	<b>\$1,899,000</b>	<b>\$1,950,000</b>	<b>\$2,002,000</b>
<b>Net Operating Revenues</b>	<b>\$315,250</b>		<b>\$276,000</b>	<b>\$240,100</b>	<b>\$202,501</b>	<b>\$162,526</b>	<b>\$122,151</b>
<b>Wastewater Debt Service</b>							
Existing Long-Term Debt	\$784,000		\$784,000	\$784,000	\$713,000	\$709,000	\$709,000
<b>Total Annual Debt Service</b>	<b>\$784,000</b>		<b>\$784,000</b>	<b>\$784,000</b>	<b>\$713,000</b>	<b>\$709,000</b>	<b>\$709,000</b>
<b>Debt Service Coverage</b>	<b>0.40</b>		<b>0.35</b>	<b>0.31</b>	<b>0.28</b>	<b>0.23</b>	<b>0.17</b>
<b>Wastewater Capital</b>							
Wastewater	<u>\$3,585,843</u>		<u>\$420,000</u>	<u>\$298,000</u>	<u>\$200,000</u>	<u>\$200,000</u>	<u>\$0</u>
<b>Total Capital Expenditures</b>	<b>\$3,585,843</b>		<b>\$420,000</b>	<b>\$298,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$0</b>
<b>ENDING BALANCE</b>							
Fund 106 [2]	\$633,944		910,000	1,150,100	1,352,601	1,515,127	1,637,278
Fund 107 [3]	140,834		(643,000)	(1,427,000)	(2,140,000)	(2,849,000)	(3,558,000)
Fund 108 [4]	202,330		(218,000)	(516,000)	(716,000)	(916,000)	(916,000)
Fund 158 [5]	<u>270,128</u>		<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>	<u>345,000</u>
Wastewater Fund Total	1,247,236		334,000	(492,900)	(1,188,399)	(1,919,873)	(2,491,722)
<i>Change from prior fund balance</i>			<i>(913,236)</i>	<i>(826,900)</i>	<i>(695,499)</i>	<i>(731,474)</i>	<i>(571,849)</i>
<b>Target Balance [6]</b>	1,873,000		1,901,000	1,925,000	1,950,000	1,975,000	2,001,000
	no		no	no	no	no	no

Source: Budget FY2014/15, Audit FYE 2013, and Capital Improvement Program FY2011/12-FY2020/21

[1] Interest Income is 1% of the Beginning Fund 106 Balance if fund balance is positive.

[2] Fund 106 Ending Balance equals Beginning Balance plus Total Operating Revenues less Total Wastewater Operations

[3] Fund 107 Ending Balance equals Beginning Balance plus Total Fund 107 (Debt) Revenue less Total Annual Debt Service

[4] Fund 108 Ending Balance equals Beginning Balance less Total Capital Expenditures

[5] Fund 158 Ending Balance assumes \$30,000 in revenues from Sewer Connection Fees in FY2014/15 and \$15,000 for each subsequent fiscal

[6] Reserve Fund targets are 50% of O&M and \$1,000,000 for capital projects

## Scenario 2: High Priority CIP Only

Figure 2 and Table 8 show the Sewer Enterprise’s financial position under a High Priority CIP Only scenario. Recommended rate increases under Scenario 2 are: **20%** in FY 2016, **14%** in FY 2017, **14%** in FY 2018 and **3%** adjustments thereafter.

Under Scenario 2, Sewer Service Charges would be increased from \$1.9 million in FY 2015 to about \$3 million by FY 2018. The Sewer Enterprise would build up funds to meet target reserves in FY 2020. Debt service coverage would meet BWA’s recommended 1.15x debt service in FY 2017.

### Scenario Advantages

1. Results in the lowest possible rate increases of all the scenarios.
2. Does not require the Sewer Enterprise to take on additional debt, thereby reducing the burden on future users.

### Scenario Disadvantages

1. Does not fully fund the Sewer Enterprise’s capital needs.
2. Existing rate payers take on the burden of paying for needed capital improvements from rate revenues.
3. Fund balances are built up over the 5-year period and are project to dip to a low of \$580,000 in FY 2017.

Figure 2

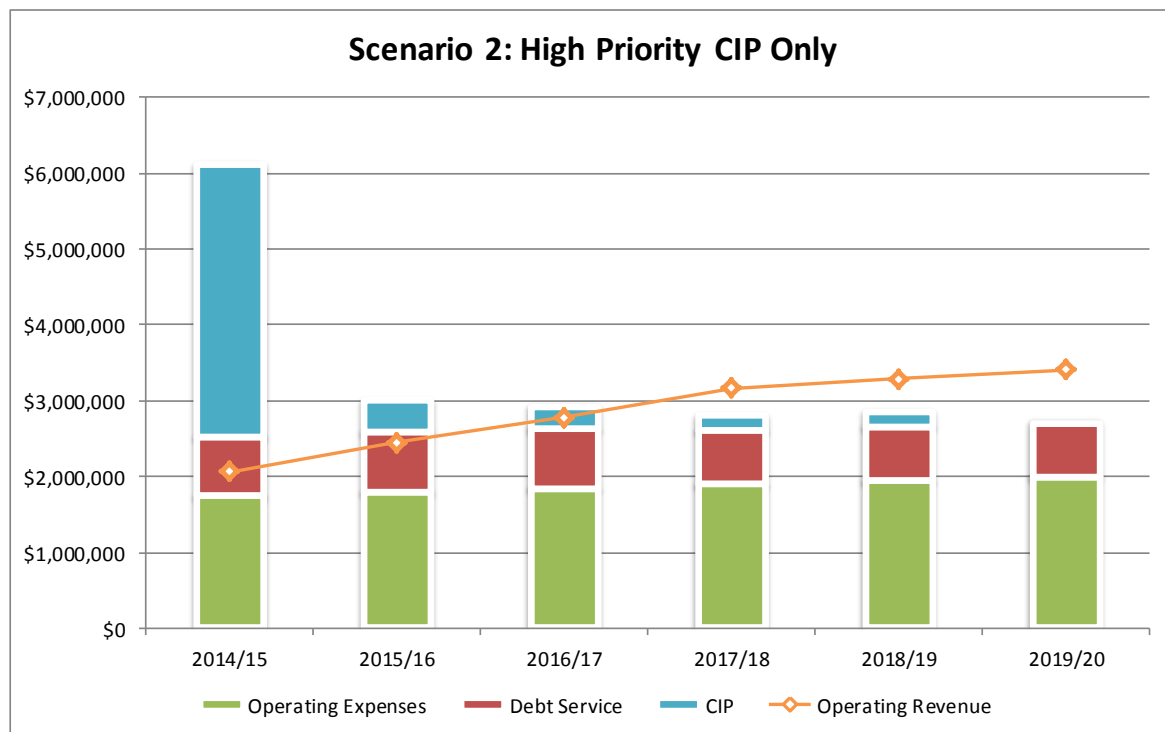


Table 8: Scenario 2: High Priority CIP Only  
City of Riverbank  
Water and Wastewater Rate Study

	Budget	Annual % Increase	Five Year Projection (Prop 218)				
	2014/15		2015/16	2016/17	2017/18	2018/19	2019/20
<b>BEGINNING BALANCES</b>							
Fund 106 (Operations)	\$318,694		\$634,000	\$1,285,000	\$2,222,000	\$3,494,000	\$4,832,000
Fund 107 (Debt)	924,834		141,000	(643,000)	(1,427,000)	(2,140,000)	(2,849,000)
Fund 108 (Projects)	3,788,173		202,000	(218,000)	(516,000)	(716,000)	(916,000)
Fund 158 (Connection)	<u>240,128</u>		<u>270,000</u>	<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>
Wastewater Fund Total	5,271,829		1,247,000	709,000	579,000	953,000	1,397,000
Monthly Service Charge	20.15		24.18	27.57	31.42	32.37	33.34
% Change			20%	14%	14%	3%	3%
<b>Revenues</b>							
Sewer Service Charges	1,871,900	0.5%	2,256,000	2,583,000	2,958,000	3,062,000	3,169,000
Fines, Forfeitures, Penalties	34,500	1.0%	35,000	35,000	35,000	35,000	35,000
Interest Income [1]	3,000		6,000	13,000	22,000	35,000	48,000
Industrial Permits	34,300	1.0%	35,000	35,000	35,000	35,000	35,000
Misc. Revenues	250		1,000	1,000	1,000	1,000	1,000
Transfers In	<u>117,700</u>		<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>
<b>Total Revenues</b>	<b>\$2,061,650</b>		<b>\$2,453,000</b>	<b>\$2,787,000</b>	<b>\$3,171,000</b>	<b>\$3,288,000</b>	<b>\$3,408,000</b>
<b>Expenses</b>							
<i>Wastewater Collection</i>							
Employee Compensation	\$147,500	3.0%	\$152,000	\$157,000	\$162,000	\$167,000	\$172,000
Supplies and Materials	9,250	3.0%	10,000	10,000	10,000	10,000	10,000
Utilities	25,000	5.0%	26,000	27,000	28,000	29,000	30,000
Services	85,000	3.0%	88,000	91,000	94,000	97,000	100,000
Communications	2,000		2,000	2,000	2,000	2,000	2,000
Misc. Expenses and Allowances	14,550	4.0%	15,000	16,000	17,000	18,000	19,000
Transfers Out Management Fee	<u>539,900</u>		<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>
<b>Total Wastewater Collection</b>	<b>\$823,200</b>		<b>\$843,000</b>	<b>\$853,000</b>	<b>\$863,000</b>	<b>\$873,000</b>	<b>\$883,000</b>
<i>Wastewater Treatment</i>							
Employee Salaries	201,900	3.0%	208,000	214,000	220,000	227,000	234,000
Employee Benefits	118,900	3.0%	122,000	126,000	130,000	134,000	138,000
Supplies and Materials	6,500		7,000	7,000	7,000	7,000	7,000
Utilities	400,000	5.0%	420,000	441,000	463,000	486,000	510,000
Communications	850		1,000	1,000	1,000	1,000	1,000
Services	132,500	3.0%	136,000	140,000	144,000	148,000	152,000
Misc. Expenses and Allowances	<u>62,550</u>	4.0%	<u>65,000</u>	<u>68,000</u>	<u>71,000</u>	<u>74,000</u>	<u>77,000</u>
<b>Total Wastewater Treatment</b>	<b>\$923,200</b>		<b>\$959,000</b>	<b>\$997,000</b>	<b>\$1,036,000</b>	<b>\$1,077,000</b>	<b>\$1,119,000</b>
<b>Total Wastewater Operations</b>	<b>\$1,746,400</b>		<b>\$1,802,000</b>	<b>\$1,850,000</b>	<b>\$1,899,000</b>	<b>\$1,950,000</b>	<b>\$2,002,000</b>
<b>Net Operating Revenues</b>	<b>\$315,250</b>		<b>\$651,000</b>	<b>\$937,000</b>	<b>\$1,272,000</b>	<b>\$1,338,000</b>	<b>\$1,406,000</b>
<b>Wastewater Debt Service</b>							
Existing Long-Term Debt	<u>\$784,000</u>		<u>\$784,000</u>	<u>\$784,000</u>	<u>\$713,000</u>	<u>\$709,000</u>	<u>\$709,000</u>
<b>Total Annual Debt Service</b>	<b>\$784,000</b>		<b>\$784,000</b>	<b>\$784,000</b>	<b>\$713,000</b>	<b>\$709,000</b>	<b>\$709,000</b>
<b>Debt Service Coverage</b>	<b>0.40</b>		<b>0.83</b>	<b>1.20</b>	<b>1.78</b>	<b>1.89</b>	<b>1.98</b>
<b>Wastewater Capital [2]</b>							
Wastewater	<u>\$3,585,843</u>		<u>\$420,000</u>	<u>\$298,000</u>	<u>\$200,000</u>	<u>\$200,000</u>	<u>\$0</u>
<b>Total Capital Expenditures</b>	<b>\$3,585,843</b>		<b>\$420,000</b>	<b>\$298,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$0</b>
<b>ENDING BALANCES</b>							
Fund 106 [3]	\$633,944		1,285,000	2,222,000	3,494,000	4,832,000	6,238,000
Fund 107 [4]	140,834		(643,000)	(1,427,000)	(2,140,000)	(2,849,000)	(3,558,000)
Fund 108 [5]	202,330		(218,000)	(516,000)	(716,000)	(916,000)	(916,000)
Fund 158 [6]	<u>270,128</u>		<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>	<u>345,000</u>
Wastewater Fund Total	1,247,236		709,000	579,000	579,000	953,000	2,109,000
Change from prior fund balance			(538,236)	(130,000)	374,000	444,000	712,000
<b>Target Balance [7]</b>	<b>1,873,000</b>		<b>1,901,000</b>	<b>1,925,000</b>	<b>1,950,000</b>	<b>1,975,000</b>	<b>2,001,000</b>
	no		no	no	no	no	yes

Source: Budget FY2014/15, Audit FYE 2013, and Capital Improvement Program FY2011/12-FY2020/21

[1] Interest Income is 1% of the Beginning Fund 106 Balance if fund balance is positive.

[2] Assumes that the City will only complete Pay-As-You-Go Sewer Projects

[3] Fund 106 Ending Balance equals Beginning Balance plus Total Operating Revenues less Total Wastewater Operations

[4] Fund 107 Ending Balance equals Beginning Balance plus Total Fund 107 (Debt) Revenue less Total Annual Debt Service

[5] Fund 108 Ending Balance equals Beginning Balance less Total Capital Expenditures

[6] Fund 158 Ending Balance assumes \$30,000 in revenues from Sewer Connection Fees in FY2014/15 and \$15,000 for each subsequent fiscal year.

[7] Reserve Fund targets are 50% of O&M and \$1,000,000 for capital projects

## Scenario 3: Full CIP

Figure 3 and Table 9 show the Sewer Enterprise’s financial position under a Full CIP scenario. Recommended rate increases under this scenario are: **28%** in FY 2016, **28%** in FY 2017, **22%** in FY 2018, **17%** in FY 2019 and **5%** in FY2020 adjustments thereafter.

Under Scenario 3, Sewer Service Charges would be increased from \$1.9 million in FY 2015 to about \$4.5 million by FY 2020. The Sewer Enterprise would build up funds to meet target reserves in FY 2019. Debt service coverage would meet BWA’s recommended 1.15x debt service by FY 2017.

### Scenario Advantages

1. Does not require the Sewer Enterprise to take on additional debt, thereby reducing the burden on future rate payers.
2. Fully funds the Sewer Enterprise’s capital needs.
3. Provides a high level of net operating revenue to fund continuing capital needs beyond the projection period.

### Scenario Disadvantages

1. Results in the highest rate increases of all scenarios.
2. Existing rate payers take on the burden of paying for needed capital improvements from rate revenues.
3. The high level of revenues may not be needed should the Sewer Enterprise not have a high level of continuing capital needs beyond the five year projection period.

Figure 3

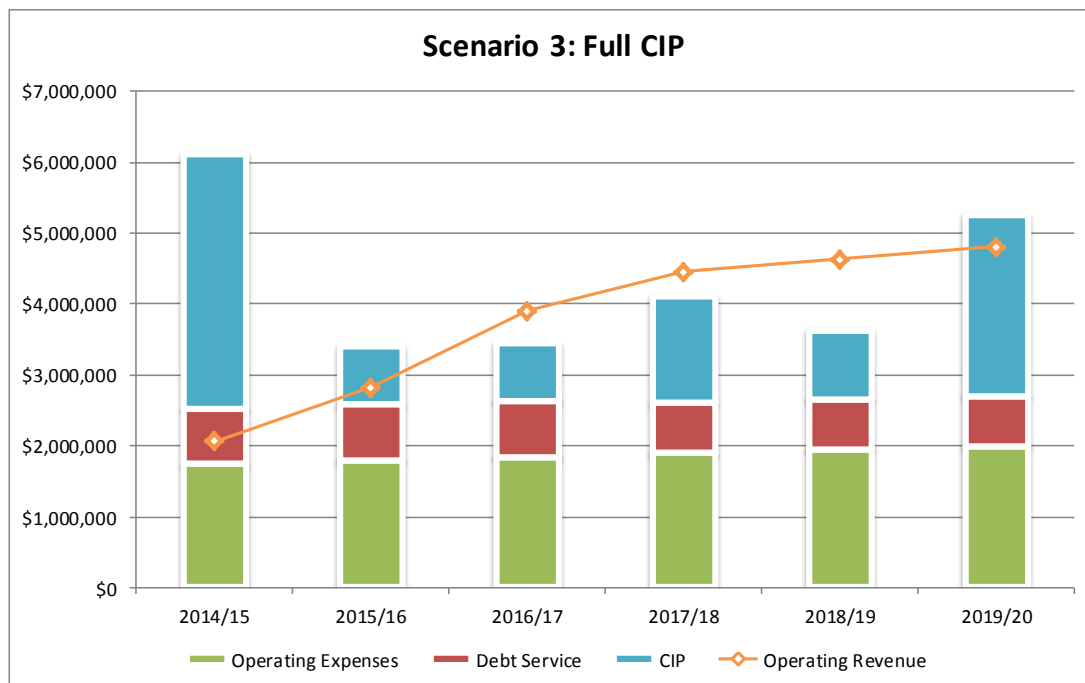


Table 9: Scenario 3: Full CIP  
City of Riverbank  
Water and Wastewater Rate Study

	Budget	Annual % Increase	Five Year Projection (Prop 218)				
	2014/15		2015/16	2016/17	2017/18	2018/19	2019/20
<b>BEGINNING BALANCE</b>							
Fund 106 (Operations)	\$318,694		\$634,000	\$1,434,000	\$2,879,000	\$4,985,000	\$7,723,000
Fund 107 (Debt)	924,834		141,000	(643,000)	(1,427,000)	(2,140,000)	(2,849,000)
Fund 108 (Projects)	3,788,173		202,000	(618,000)	(1,081,000)	(1,331,000)	(2,806,000)
Fund 158 (Connection)	<u>240,128</u>		<u>270,000</u>	<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>
Wastewater Fund Total	5,271,829		1,247,000	458,000	671,000	1,829,000	2,398,000
Monthly Service Charge	20.15		25.79	33.01	40.28	47.12	49.48
% Change			28%	28%	22%	17%	5%
<b>Revenues</b>							
Sewer Service Charges	1,871,900	0.5%	2,405,000	3,090,000	3,785,000	4,447,000	4,692,000
Fines, Forfeitures, Penalties	34,500	1.0%	35,000	35,000	35,000	35,000	35,000
Interest Income [1]	3,000		6,000	14,000	29,000	50,000	77,000
Industrial Permits	34,300	1.0%	35,000	35,000	35,000	35,000	35,000
Misc. Revenues	250		1,000	1,000	1,000	1,000	1,000
Transfers In	117,700		120,000	120,000	120,000	120,000	120,000
<b>Total Revenues</b>	<b>\$2,061,650</b>		<b>\$2,602,000</b>	<b>\$3,295,000</b>	<b>\$4,005,000</b>	<b>\$4,688,000</b>	<b>\$4,960,000</b>
<b>Expenses</b>							
<i>Wastewater Collection</i>							
Employee Compensation	\$147,500	3.0%	\$152,000	\$157,000	\$162,000	\$167,000	\$172,000
Supplies and Materials	9,250	3.0%	10,000	10,000	10,000	10,000	10,000
Utilities	25,000	5.0%	26,000	27,000	28,000	29,000	30,000
Services	85,000	3.0%	88,000	91,000	94,000	97,000	100,000
Communications	2,000		2,000	2,000	2,000	2,000	2,000
Misc. Expenses and Allowances	14,550	4.0%	15,000	16,000	17,000	18,000	19,000
Transfers Out Management Fee	<u>539,900</u>		<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>
<i>Total Wastewater Collection</i>	<i>\$823,200</i>		<i>\$843,000</i>	<i>\$853,000</i>	<i>\$863,000</i>	<i>\$873,000</i>	<i>\$883,000</i>
<i>Wastewater Treatment</i>							
Employee Salaries	201,900	3.0%	208,000	214,000	220,000	227,000	234,000
Employee Benefits	118,900	3.0%	122,000	126,000	130,000	134,000	138,000
Supplies and Materials	6,500		7,000	7,000	7,000	7,000	7,000
Utilities	400,000	5.0%	420,000	441,000	463,000	486,000	510,000
Communications	850		1,000	1,000	1,000	1,000	1,000
Services	132,500	3.0%	136,000	140,000	144,000	148,000	152,000
Misc. Expenses and Allowances	<u>62,550</u>	4.0%	<u>65,000</u>	<u>68,000</u>	<u>71,000</u>	<u>74,000</u>	<u>77,000</u>
<i>Total Wastewater Treatment</i>	<i>\$923,200</i>		<i>\$959,000</i>	<i>\$997,000</i>	<i>\$1,036,000</i>	<i>\$1,077,000</i>	<i>\$1,119,000</i>
<b>Total Wastewater Operations</b>	<b>\$1,746,400</b>		<b>\$1,802,000</b>	<b>\$1,850,000</b>	<b>\$1,899,000</b>	<b>\$1,950,000</b>	<b>\$2,002,000</b>
<b>Net Operating Revenues</b>	<b>\$315,250</b>		<b>\$800,000</b>	<b>\$1,445,000</b>	<b>\$2,106,000</b>	<b>\$2,738,000</b>	<b>\$2,958,000</b>
<b>Wastewater Debt Service</b>							
Existing Long-Term Debt	<u>\$784,000</u>		<u>\$784,000</u>	<u>\$784,000</u>	<u>\$713,000</u>	<u>\$709,000</u>	<u>\$709,000</u>
<b>Total Annual Debt Service</b>	<b>\$784,000</b>		<b>\$784,000</b>	<b>\$784,000</b>	<b>\$713,000</b>	<b>\$709,000</b>	<b>\$709,000</b>
<b>Debt Service Coverage</b>	<b>0.40</b>		<b>1.02</b>	<b>1.84</b>	<b>2.95</b>	<b>3.86</b>	<b>4.17</b>
<b>Wastewater Capital [2]</b>							
Wastewater	\$3,585,843		\$320,000	\$298,000	\$200,000	\$200,000	\$0
Sewer Division CIP	0		<u>500,000</u>	<u>165,000</u>	<u>50,000</u>	<u>1,275,000</u>	<u>2,550,000</u>
<b>Total Capital Expenditures</b>	<b>\$3,585,843</b>		<b>\$820,000</b>	<b>\$463,000</b>	<b>\$250,000</b>	<b>\$1,475,000</b>	<b>\$2,550,000</b>
<b>ENDING BALANCE</b>							
Fund 106 [3]	\$633,944		1,434,000	2,879,000	4,985,000	7,723,000	10,681,000
Fund 107 [4]	140,834		(643,000)	(1,427,000)	(2,140,000)	(2,849,000)	(3,558,000)
Fund 108 [5]	202,330		(618,000)	(1,081,000)	(1,331,000)	(2,806,000)	(5,356,000)
Fund 158 [6]	<u>270,128</u>		<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>	<u>345,000</u>
Wastewater Fund Total	1,247,236		458,000	671,000	1,829,000	2,398,000	2,112,000
<i>Change from prior fund balance</i>			<i>(789,236)</i>	<i>213,000</i>	<i>1,158,000</i>	<i>569,000</i>	<i>(286,000)</i>
<b>Target Balance [7]</b>	<b>1,873,000</b>		<b>1,901,000</b>	<b>1,925,000</b>	<b>1,950,000</b>	<b>1,975,000</b>	<b>2,001,000</b>
	no		no	no	no	yes	yes

Source: Budget FY2014/15, Audit FYE 2013, and Capital Improvement Program FY2011/12-FY2020/21

[1] Interest Income is 1% of the Beginning Fund 106 Balance if fund balance is positive.

[2] Assumes that the City will complete all Sewer projects

[3] Fund 106 Ending Balance equals Beginning Balance plus Total Operating Revenues less Total Wastewater Operations

[4] Fund 107 Ending Balance equals Beginning Balance plus Total Fund 107 (Debt) Revenue less Total Annual Debt Service

[5] Fund 108 Ending Balance equals Beginning Balance less Total Capital Expenditures

[6] Fund 158 Ending Balance assumes \$30,000 in revenues from Sewer Connection Fees in FY2014/15 and \$15,000 for each subsequent fiscal year.

[7] Reserve Fund targets are 50% of O&M and \$1,000,000 for capital projects

## Scenario 4: Full CIP with Bond Financing

Figure 4 and Table 10 show the Sewer Enterprise’s financial position under a Full CIP Bond Financing scenario. Recommended rate increases under this scenario are: **20%** in FY 2016, **20%** in FY 2017, and **8%** in FY 2018, FY 2019, and FY 2020.

Under Scenario 4, Sewer Service Charges would be increased from \$1.9 million in FY 2015 to about \$3 million by FY 2018 and \$3.5 million by FY 2020. BWA recommends a bond Issue of \$2.4 million in FY 2016 to fund three years of capital improvements from FY 2016 to FY 2018 and a bond issue of \$3.5 million in FY 2019 to fund two years of capital improvements in FY 2019 and FY 2020.

The Sewer Enterprise would immediately meet fund reserve targets for all years with the exception of FY 2018, where they would be spent down to \$1 million. Debt service coverage would meet BWA’s recommended 1.15x debt service in FY 2017.

### Scenario Advantages

1. Spreads required rate increases across the five year period.
2. Fully funds the Sewer Enterprise’s capital needs.
3. Meets reserve targets immediately rather than building them up over time.
4. Results in lower rates than fully funding capital projects through rate revenue.

### Scenario Disadvantages

1. Future rate payers take on the burden of paying for needed capital improvements due to continuing debt service (est. to be an additional \$380,000 per year for 30 years.)

Figure 4

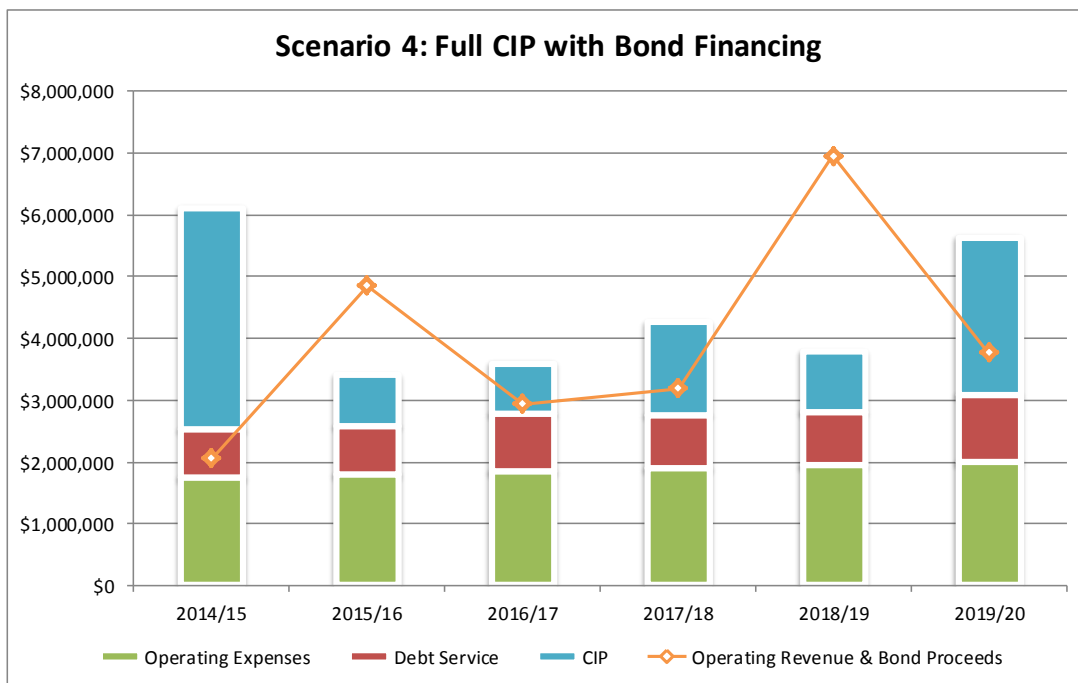




Table 10: Scenario 4: Full CIP with Bond Financing  
 City of Riverbank  
 Water and Wastewater Rate Study

	Budget	Annual % Increase	Five Year Projection (Prop 218)				
	2014/15		2015/16	2016/17	2017/18	2018/19	2019/20
<b>BEGINNING BALANCES</b>							
Fund 106 (Operations)	\$318,694		\$634,000	\$3,685,000	\$4,781,000	\$6,070,000	\$11,072,000
Fund 107 (Debt)	924,834		141,000	(643,000)	(1,582,000)	(2,450,000)	(3,314,000)
Fund 108 (Projects)	3,788,173		202,000	(618,000)	(1,431,000)	(2,931,000)	(3,906,000)
Fund 158 (Connection)	<u>240,128</u>		<u>270,000</u>	<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>
Wastewater Fund Total	5,271,829		1,247,000	2,709,000	2,068,000	1,004,000	4,182,000
Monthly Service Charge	20.15		24.18	29.02	31.34	33.84	36.55
% Change			20.0%	20.0%	8.0%	8.0%	8.0%
<b>Revenues</b>							
Sewer Service Charges	1,871,900	0.5%	2,256,000	2,718,000	2,949,000	3,200,000	3,472,000
Fines, Forfeitures, Penalties	34,500	1.0%	35,000	35,000	35,000	35,000	35,000
Interest Income [1]	3,000		6,000	37,000	48,000	61,000	111,000
Industrial Permits	34,300	1.0%	35,000	35,000	35,000	35,000	35,000
Misc. Revenues	250		1,000	1,000	1,000	1,000	1,000
Transfers In	<u>117,700</u>		<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>	<u>120,000</u>
Total Operating Revenues	2,061,650		2,453,000	2,946,000	3,188,000	3,452,000	3,774,000
<b>Debt Proceeds</b>							
Bond Issue FY2016	0		2,400,000	0	0	0	0
Bond Issue FY2019	<u>0</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>3,500,000</u>	<u>0</u>
Total Financing Revenue	0		2,400,000	0	0	3,500,000	0
<b>Total Revenues</b>	<b>\$2,061,650</b>		<b>\$4,853,000</b>	<b>\$2,946,000</b>	<b>\$3,188,000</b>	<b>\$6,952,000</b>	<b>\$3,774,000</b>
<b>Expenses</b>							
<i>Wastewater Collection</i>							
Employee Compensation	\$147,500	3.0%	\$152,000	\$157,000	\$162,000	\$167,000	\$172,000
Supplies and Materials	9,250	3.0%	10,000	10,000	10,000	10,000	10,000
Utilities	25,000	5.0%	26,000	27,000	28,000	29,000	30,000
Services	85,000	3.0%	88,000	91,000	94,000	97,000	100,000
Communications	2,000		2,000	2,000	2,000	2,000	2,000
Misc. Expenses and Allowances	14,550	4.0%	15,000	16,000	17,000	18,000	19,000
Transfers Out Management Fee	<u>539,900</u>		<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>	<u>550,000</u>
Total Wastewater Collection	\$823,200		\$843,000	\$853,000	\$863,000	\$873,000	\$883,000
<i>Wastewater Treatment</i>							
Employee Salaries	201,900	3.0%	208,000	214,000	220,000	227,000	234,000
Employee Benefits	118,900	3.0%	122,000	126,000	130,000	134,000	138,000
Supplies and Materials	6,500		7,000	7,000	7,000	7,000	7,000
Utilities	400,000	5.0%	420,000	441,000	463,000	486,000	510,000
Communications	850		1,000	1,000	1,000	1,000	1,000
Services	132,500	3.0%	136,000	140,000	144,000	148,000	152,000
Misc. Expenses and Allowances	<u>62,550</u>	4.0%	<u>65,000</u>	<u>68,000</u>	<u>71,000</u>	<u>74,000</u>	<u>77,000</u>
Total Wastewater Treatment	\$923,200		\$959,000	\$997,000	\$1,036,000	\$1,077,000	\$1,119,000
<b>Total Wastewater Operations</b>	<b>\$1,746,400</b>		<b>\$1,802,000</b>	<b>\$1,850,000</b>	<b>\$1,899,000</b>	<b>\$1,950,000</b>	<b>\$2,002,000</b>
<b>Net Operating Revenues</b>	<b>\$315,250</b>		<b>\$3,051,000</b>	<b>\$1,096,000</b>	<b>\$1,289,000</b>	<b>\$5,002,000</b>	<b>\$1,772,000</b>
<b>Wastewater Debt Service</b>							
Existing Long-Term Debt	\$784,000		\$784,000	\$784,000	\$713,000	\$709,000	\$709,000
Bond Issue FY2016 [2]	0		0	155,000	155,000	155,000	155,000
Bond Issue FY2019 [3]	<u>0</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>226,000</u>
Total Annual Debt Service	\$784,000		\$784,000	\$939,000	\$868,000	\$864,000	\$1,090,000
<b>Debt Service Coverage</b>	<b>0.40</b>		<b>0.83</b>	<b>1.17</b>	<b>1.49</b>	<b>1.74</b>	<b>1.63</b>
<b>Wastewater Capital [4]</b>							
Wastewater	\$3,585,843		\$420,000	\$298,000	\$200,000	\$200,000	\$0
Sewer Division CIP	<u>0</u>		<u>400,000</u>	<u>515,000</u>	<u>1,300,000</u>	<u>775,000</u>	<u>2,550,000</u>
Total Capital Expenditures	<b>\$3,585,843</b>		<b>\$820,000</b>	<b>\$813,000</b>	<b>\$1,500,000</b>	<b>\$975,000</b>	<b>\$2,550,000</b>
<b>ENDING BALANCE</b>							
Fund 106 [5]	\$633,944		3,685,000	4,781,000	6,070,000	11,072,000	12,844,000
Fund 107 [6]	140,834		(643,000)	(1,582,000)	(2,450,000)	(3,314,000)	(4,404,000)
Fund 108 [7]	202,330		(618,000)	(1,431,000)	(2,931,000)	(3,906,000)	(6,456,000)
Fund 158 [8]	<u>270,128</u>		<u>285,000</u>	<u>300,000</u>	<u>315,000</u>	<u>330,000</u>	<u>345,000</u>
Wastewater Fund Total	1,247,236		2,709,000	2,068,000	1,004,000	4,182,000	2,329,000
Change from prior fund balance			1,461,764	(641,000)	(1,064,000)	3,178,000	(1,853,000)
<b>Target Balance [9]</b>	<b>1,873,000</b>		<b>1,901,000</b>	<b>1,925,000</b>	<b>1,950,000</b>	<b>1,975,000</b>	<b>2,001,000</b>
	no		yes	yes	no	yes	yes

Source: Budget FY2014/15, Audit FYE 2013, and Capital Improvement Program FY2011/12-FY2020/21

[1] Interest Income is 1% of the Beginning Fund 106 Balance if fund balance is positive.

[2] \$2,400,000, 30-year bond with semi-annual payments and an interest rate of 5%. Funds all capital projects from FY2016 to FY2018.

[3] \$3,500,000, 30-year bond with semi-annual payments and an interest rate of 5%. Funds all capital projects for FY2019 & FY2020.

[4] Assumes that the City will complete all Sewer Projects

[5] Fund 106 Ending Balance equals Beginning Balance plus Total Operating Revenues less Total Wastewater Operations

[6] Fund 107 Ending Balance equals Beginning Balance plus Total Fund 107 (Debt) Revenue less Total Annual Debt Service

[7] Fund 108 Ending Balance equals Beginning Balance less Total Capital Expenditures

[8] Fund 158 Ending Balance assumes \$30,000 in revenues from Sewer Connection Fees in FY2014/15 and \$15,000 for each subsequent fiscal year.

[9] Reserve Fund targets are 50% of O&M and \$1,000,000 for capital projects

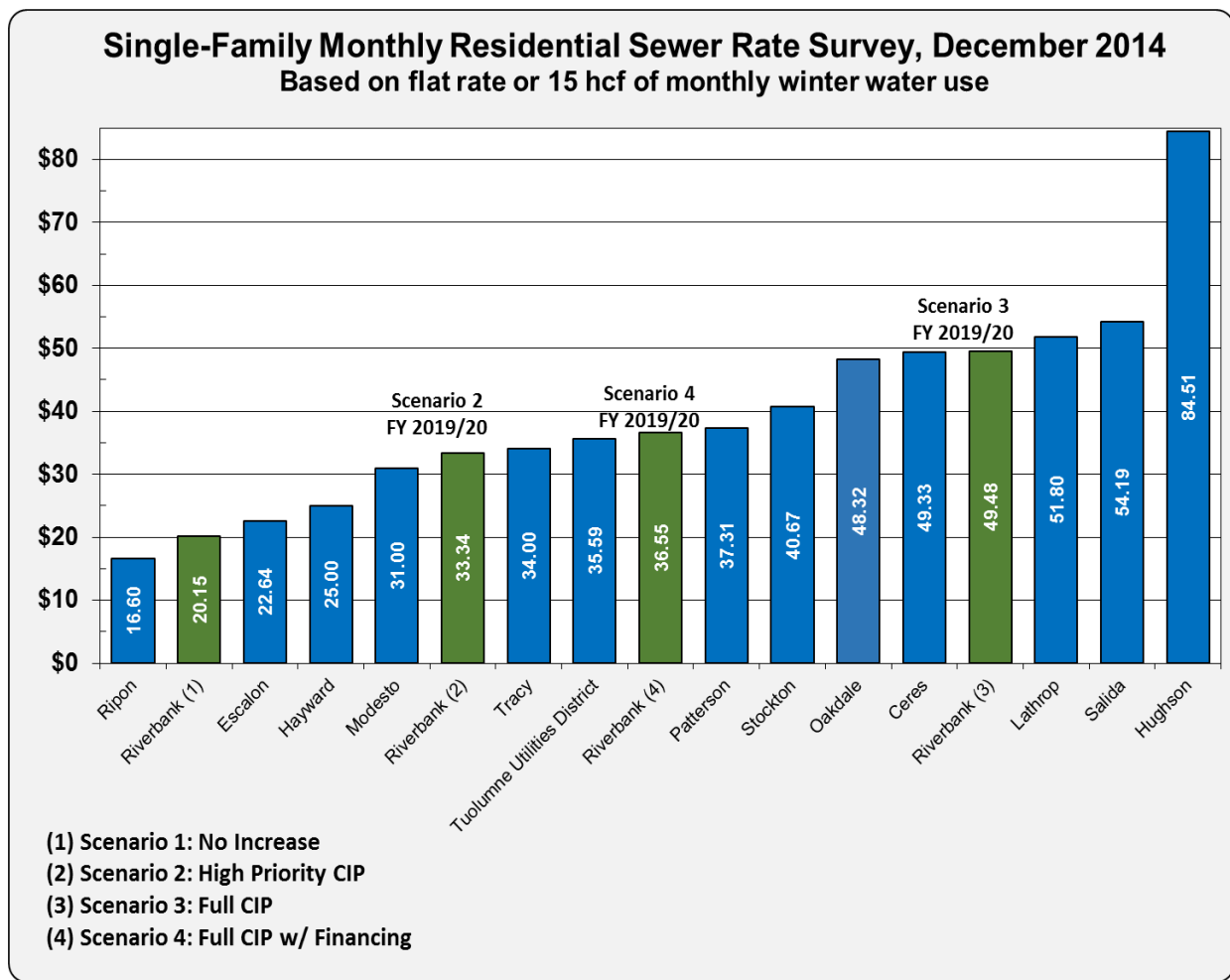
## Summary and Recommendations

BWA recommends the wastewater enterprise raise rates in order to complete its scheduled capital projects and maintain financial health. As shown below, the city currently has one of the lowest rates in the area and has not increases rates since 2009.

After much deliberation with city council and staff, the city has elected to pursue scenario 3: Full CIP. This scenario will raise rates enough to cover all planned capital projects in the five year projection and provide financial health within the enterprise.

## Sewer Rate Survey

Figure 5



## Appendix A: Commercial & Industrial Rate Increase Schedules

Table 1: Scenario 1: Commercial Charges  
 City of Riverbank  
 Water and Wastewater Rate Study

Commercial Grouping	Old Rate*	New Rate**	FY 2016**	FY 2017**	FY 2018**	FY 2019**	FY 2020**
<i>Group 1</i>							
Schools w/o Cafeteria	-	0.01119	0.01119	0.01119	0.01119	0.01119	0.01119
Offices	0.01325	0.01119	0.01119	0.01119	0.01119	0.01119	0.01119
<b>% Change</b>		<b>-16%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<i>Group 2</i>							
Commercial	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
Hospitals	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
Extended Care Facilities	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
Markets (Without Delicatessens)	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
Automobile Service Facilities	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
Commercial Laundromats	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492	0.01492
<b>% Change</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<i>Group 3</i>							
Schools w/ Cafeteria	-	0.02014	0.02014	0.02014	0.02014	0.02014	0.02014
Restaurants	0.01624	0.02014	0.02014	0.02014	0.02014	0.02014	0.02014
Short Order Facilities	0.01624	0.02014	0.02014	0.02014	0.02014	0.02014	0.02014
Markets (With Delicatessens)	0.01624	0.02014	0.02014	0.02014	0.02014	0.02014	0.02014
<b>% Change</b>		<b>24%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<i>Group 4</i>							
Restaurants (With Full Kitchens)	0.02353	0.03282	0.03282	0.03282	0.03282	0.03282	0.03282
<b>% Change</b>		<b>39%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

\*Rates per CF for usage exceeding 1,000 cubic feet per month

\*\*Rates per CF (subject to minimum monthly charge)

Table 2: Scenario 2: Commercial Charges  
City of Riverbank  
Water and Wastewater Rate Study

Commercial Grouping	Old Rate*	New Rate**	FY 2016**	FY 2017**	FY 2018**	FY 2019**	FY 2020**
<i>Group 1</i>							
Schools w/o Cafeteria	-	0.01119	0.01343	0.01531	0.01745	0.01797	0.01851
Offices	0.01325	0.01119	0.01343	0.01531	0.01745	0.01797	0.01851
<b>% Change</b>		<b>-16%</b>	<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>
<i>Group 2</i>							
Commercial	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
Hospitals	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
Extended Care Facilities	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
Markets (Without Delicatessens)	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
Automobile Service Facilities	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
Commercial Laundromats	0.01492	0.01492	0.01790	0.02041	0.02327	0.02397	0.02469
<b>% Change</b>		<b>0%</b>	<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>
<i>Group 3</i>							
Schools w/ Cafeteria	-	0.02014	0.02417	0.02755	0.03141	0.03235	0.03332
Restaurants	0.01624	0.02014	0.02417	0.02755	0.03141	0.03235	0.03332
Short Order Facilities	0.01624	0.02014	0.02417	0.02755	0.03141	0.03235	0.03332
Markets (With Delicatessens)	0.01624	0.02014	0.02417	0.02755	0.03141	0.03235	0.03332
<b>% Change</b>		<b>24%</b>	<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>
<i>Group 4</i>							
Restaurants (With Full Kitchens)	0.02353	0.03282	0.03939	0.04490	0.05119	0.05273	0.05431
<b>% Change</b>		<b>39%</b>	<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>

\*Rates per CF for usage exceeding 1,000 cubic feet per month

\*\*Rates per CF (subject to minimum monthly charge)

Table 3: Scenario 3: Commercial Charges  
City of Riverbank  
Water and Wastewater Rate Study

Commercial Grouping	Old Rate*	New Rate**	FY 2016**	FY 2017**	FY 2018**	FY 2019**	FY 2020**
<i>Group 1</i>							
Schools w/o Cafeteria	-	0.01119	0.01432	0.01833	0.02237	0.02617	0.02748
Offices	0.01325	0.01119	0.01432	0.01833	0.02237	0.02617	0.02748
<b>% Change</b>		<b>-16%</b>	<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>
<i>Group 2</i>							
Commercial	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
Hospitals	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
Extended Care Facilities	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
Markets (Without Delicatessens)	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
Automobile Service Facilities	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
Commercial Laundromats	0.01492	0.01492	0.01910	0.02444	0.02982	0.03489	0.03664
<b>% Change</b>		<b>0%</b>	<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>
<i>Group 3</i>							
Schools w/ Cafeteria	-	0.02014	0.02578	0.03300	0.04026	0.04711	0.04946
Restaurants	0.01624	0.02014	0.02578	0.03300	0.04026	0.04711	0.04946
Short Order Facilities	0.01624	0.02014	0.02578	0.03300	0.04026	0.04711	0.04946
Markets (With Delicatessens)	0.01624	0.02014	0.02578	0.03300	0.04026	0.04711	0.04946
<b>% Change</b>		<b>24%</b>	<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>
<i>Group 4</i>							
Restaurants (With Full Kitchens)	0.02353	0.03282	0.04201	0.05378	0.06561	0.07676	0.08060
<b>% Change</b>		<b>39%</b>	<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>

\*Rates per CF for usage exceeding 1,000 cubic feet per month

\*\*Rates per CF (subject to minimum monthly charge)

Table 4: Scenario 4: Commercial Charges  
City of Riverbank  
Water and Wastewater Rate Study

Commercial Grouping	Old Rate*	New Rate**	FY 2016**	FY 2017**	FY 2018**	FY 2019**	FY 2020**
<i>Group 1</i>							
Schools w/o Cafeteria	-	0.01119	0.01343	0.01611	0.01740	0.01879	0.02030
Offices	0.01325	0.01119	0.01343	0.01611	0.01740	0.01879	0.02030
<b>% Change</b>		<b>-16%</b>	<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
<i>Group 2</i>							
Commercial	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
Hospitals	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
Extended Care Facilities	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
Markets (Without Delicatessens)	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
Automobile Service Facilities	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
Commercial Laundromats	0.01492	0.01492	0.01790	0.02148	0.02320	0.02506	0.02706
<b>% Change</b>		<b>0%</b>	<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
<i>Group 3</i>							
Schools w/ Cafeteria	-	0.02014	0.02417	0.02900	0.03132	0.03383	0.03654
Restaurants	0.01624	0.02014	0.02417	0.02900	0.03132	0.03383	0.03654
Short Order Facilities	0.01624	0.02014	0.02417	0.02900	0.03132	0.03383	0.03654
Markets (With Delicatessens)	0.01624	0.02014	0.02417	0.02900	0.03132	0.03383	0.03654
<b>% Change</b>		<b>24%</b>	<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
<i>Group 4</i>							
Restaurants (With Full Kitchens)	0.02353	0.03282	0.03939	0.04727	0.05105	0.05513	0.05954
<b>% Change</b>		<b>39%</b>	<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>

\*Rates per CF for usage exceeding 1,000 cubic feet per month

\*\*Rates per CF (subject to minimum monthly charge)

Table 5: Industrial Charges  
 City of Riverbank  
 Water and Wastewater Rate Study

Scenario 1	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Annual Volume (Per MG)	\$96.209	\$96.209	\$96.209	\$96.209	\$96.209	\$96.209
<b>% Change</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
Annual BOD (Per LB)	\$10	\$10	\$10	\$10	\$10	\$10
<b>% Change</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
Scenario 2						
Annual Volume (Per MG)	\$96.209	\$115.451	\$131.614	\$150.040	\$154.541	\$159.177
<b>% Change</b>		<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>
Annual BOD (Per LB)	\$10	\$12	\$14	\$16	\$16	\$17
<b>% Change</b>		<b>20%</b>	<b>14%</b>	<b>14%</b>	<b>3%</b>	<b>3%</b>
Scenario 3						
Annual Volume (Per MG)	\$96.209	\$123.148	\$157.629	\$192.307	\$224.999	\$236.249
<b>% Change</b>		<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>
Annual BOD (Per LB)	\$10	\$13	\$16	\$20	\$23	\$25
<b>% Change</b>		<b>28%</b>	<b>28%</b>	<b>22%</b>	<b>17%</b>	<b>5%</b>
Scenario 4						
Annual Volume (Per MG)	\$96.209	\$115.451	\$138.541	\$149.624	\$161.594	\$174.522
<b>% Change</b>		<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
Annual BOD (Per LB)	\$10	\$12	\$14	\$16	\$17	\$18
<b>% Change</b>		<b>20%</b>	<b>20%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>

Industrial charges calculated based on the following formula:  $\text{C} = \text{Volume Charge} * (\text{Annual MG}) + \text{BOD Charge} * (\text{Annual BOD/lbs})$