



Salton Community Services District
Wastewater Rate Study
March 11, 2023

1

Development of Rate Study

- Gathered data from Salton CSD
- Verified the data with the bookkeeper, operator, and management
- Discussed possible rates with the Salton CSD Staff and management.
- Discussed possible rate with Imperial County LAFCO



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Requirements

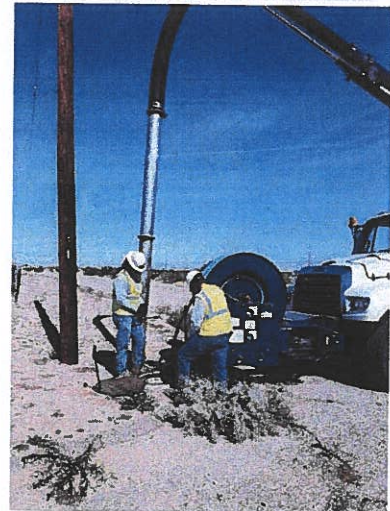
- Salton CSD must have adequate revenue to continue operations, allow for system improvements, pay debts and maintain adequate reserves.
- Affordability is a consideration.
- Prop 218 Regulations
 - Fees cannot exceed costs to provide service
 - One class of customer cannot subsidize the rates of another class



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Rate Study Evaluates Cost of Service

- Operating Budget: Money needed to operate the system
- Dept Service: Payment of money the District owes
- Operating Reserves
- Emergency Reserves
- CIP Reserves: Money needed for system improvements and upgrades



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Revenue under Current Rates

Salton CSD Current Rates			
Base Fees			
	# Equivalent Dwelling Units	Annual Rate Per EDU	Average Annual Revenue
Single Family Residential	1,823	\$ 640.74	\$ 1,168,069
Multi-Family Residential	132	\$ 640.74	\$ 84,578
SC Elementary School (Per Student)	589	\$ 15.53	\$ 9,147
SC High School (Per Student)	474	\$ 46.53	\$ 22,055
Total Base Fee Revenue	3,018		\$ 1,283,849
Stand-By Fees			
Extra Lots Stand-By Fee	18,368	\$ 21.00	\$ 385,728
Maintenance Stand-By Fee	16,958	\$ 16.18	\$ 274,380
Total Stand-By & Maintenance Stand-By Fees Revenue			\$ 660,108
Usage Revenue			
	Usage Rate	Billable Usage	
Commodity Charge per CCF	\$ 7.70	20,133	\$ 155,026
Total Operating Revenue			\$ 2,098,984
Non-Operating Revenue:			
Interest & Penalties			\$ 35,000
Administration Fees			\$ 25,032
Interest Revenue			\$ 2,975
Total Non-Operating Revenue			\$ 63,007
Total Revenue			\$ 2,161,991

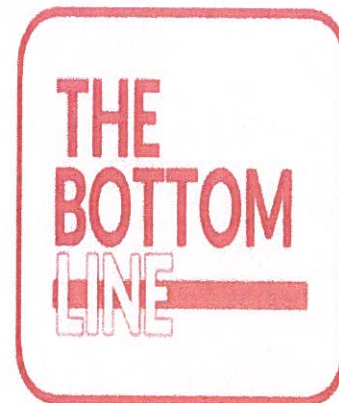
- Operating Revenue: 2,098,964
- Nonoperating: 63,007
- **Total Revenue: \$2,161,901**



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Operating Revenue at Current Rates against 2024 Budgeted Costs

Operating Revenue	\$ 2,098,984	←
Less:		
Operating Costs	\$ 2,036,514	
Debt Service	\$ 116,885	
Operating Reserves	\$ 50,913	
Emergency Reserves	\$ 20,000	
CIP Reserves	\$ 398,998	
Total Costs of Service	\$ 2,623,310	←
Operating Revenue Over/(Under) Costs of Service	\$ (524,326)	←
Plus:		
Non-Operating Revenue	63,007	←
Net Income/(Loss)	(461,319)	←



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Recommended Rate Increase

Set at minimum recommended rate to meet revenue requirements

- Operating Revenue: 2,556,597
- Nonoperating: 63,007
- **Total Revenue \$2,619,604**



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Recommended Rate Adjustment

Salton Recommended Rates					
Base Fees					
	# Equivalent Dwelling Units	Annual Rate Per EDU	Recommended Rate Adjustment	Adjusted Rates	Average Annual Revenue
Single Family Residential	1,823	\$ 640.74	\$ 197.67	\$ 838.41	\$ 1,528,421
Multi-Family Residential	132	\$ 640.74	\$ 197.67	\$ 838.41	\$ 110,670
SC Elementary School (Per Student)	589	\$ 15.53	\$ 4.79	\$ 20.32	\$ 11,968
SC High School (Per Student)	474	\$ 46.53	\$ 14.35	\$ 60.88	\$ 28,857
Total Base Fee Revenue	3,018				\$ 1,679,917
Stand-By Fees					
Extra Lots Stand-By Fee	18,368	\$ 21.00	\$ -	\$ 21.00	\$ 385,728
Maintenance Stand-By Fee	16,958	\$ 16.18	\$ 0.81	\$ 16.99	\$ 288,099
Total Stand-By & Maintenance Stand-By Fees Revenue					\$ 673,827
Usage Revenue					
	Usage Rate	Billable Usage			
Commodity Charge per CCF	\$ 7.70	20,133	\$ 2.38	\$ 10.08	\$ 202,853
Total Operating Revenue					\$ 2,556,597
Non-Operating Revenue:					
Interest & Penalties					\$ 35,000
Administration Fees					\$ 25,032
Interest Revenue					\$ 2,975
Total Non-Operating Revenue					\$ 63,007
Total Revenue					\$ 2,619,604



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Impact of Recommended Rate Adjustment

	6/30/2024	6/30/2025	6/30/2026	6/30/2027	6/30/2028
Base Rates Revenue	\$ 1,679,917	\$ 1,747,113	\$ 1,816,998	\$ 1,889,678	\$ 1,965,265
Extra Lots Stand-By Revenue	\$ 385,728	\$ 385,728.00	\$ 385,728.00	\$ 385,728.00	\$ 385,728.00
Maintenance Stand-By Revenue	\$ 288,099	\$ 302,504.44	\$ 317,629.66	\$ 333,511.14	\$ 350,186.70
Usage Revenue	\$ 202,852	\$ 210,966	\$ 219,404	\$ 228,180	\$ 237,308
Total Operating Revenue	\$ 2,556,596	\$ 2,646,311	\$ 2,739,760	\$ 2,837,097	\$ 2,938,487
Operating Costs	\$ 2,036,514	\$ 2,128,157	\$ 2,223,924	\$ 2,324,000	\$ 2,428,580
Debt Service	\$ 116,885	\$ 116,885	\$ 116,885	\$ 116,885	\$ 45,500
Operating Reserves	\$ 50,913	\$ 53,204	\$ 55,598	\$ 58,100	\$ 60,715
Emergency Reserves	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
CIP Reserves	\$ 395,291	\$ 391,073	\$ 386,360	\$ 381,119	\$ 446,699
Total Cost of Service	\$ 2,619,603	\$ 2,709,318	\$ 2,802,767	\$ 2,900,104	\$ 3,001,494
Net Operating Revenue	\$ (63,007)	\$ (63,007)	\$ (63,007)	\$ (63,007)	\$ (63,007)
Plus: Non-Operating Revenue	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007
Net Income/(Loss)	\$ (0)	\$ (0)	\$ 0	\$ -	\$ (0)



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Recommended Five Year Rate Schedule

Customer Class	Current Rate	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Single Family Residential	\$ 640.74	\$ 838.41	\$ 871.95	\$ 906.82	\$ 943.10	\$ 980.82
Multi-Family Residential	\$ 640.74	\$ 838.41	\$ 871.95	\$ 906.82	\$ 943.10	\$ 980.82
Elementary School (Per Student)	\$ 15.53	\$ 20.32	\$ 21.13	\$ 21.98	\$ 22.86	\$ 23.77
High School (Per Student)	\$ 46.53	\$ 60.88	\$ 63.32	\$ 65.85	\$ 68.49	\$ 71.23
Stand-by Fees	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00
Maintenance Fees	\$ 16.18	\$ 16.99	\$ 17.84	\$ 18.73	\$ 19.67	\$ 20.65
Usage Fee	\$ 7.70	\$ 10.08	\$ 10.48	\$ 10.90	\$ 11.33	\$ 11.79

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Next Steps

- Salton CSD will mail out a notice of public hearing on proposed sewer rates (DATE?)
- Public Hearing is scheduled:
 - **May 17th, 2023, at 2 PM**
 - **Salton CSD Office 1209 Van Buren Ave, Suite 1
Thermal, CA 92274**



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Written Protests

Written protests must be submitted by
May 17, 2023:

- **By mail to Salton CSD
1209 Van Buren Ave, Suite 1
Thermal, CA 92274, or,**
- **In person at the public hearing**




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Effective Date of Rate Increase

- Effective Date of the rate increase is July 1, 2023 for the 2023-2024 Tax Year
- Will be billed through the Imperial County property tax assessment: Due in two installments:
 - November 1, 2023 and February 1, 2024






RCAC
www.rcac.org



SALTON COMMUNITY SERVICES DISTRICT
SALTON CITY, CALIF.

Proposition 218
Salton CSD Public Workshop
March 11, 2023





CALIFORNIA
Water Boards
CALIFORNIA WATER RESOURCES CONTROL BOARD

1

What is Proposition 218?

The law establishing procedures for “**property-related**” fees and charges, including:

- How rates and fees may be determined
- Public hearing and notice requirements



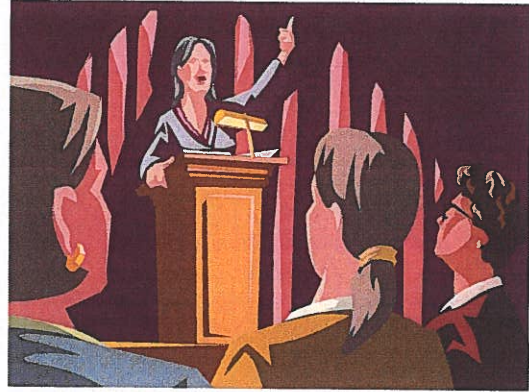
RCAC
www.rcac.org

2

Today's Public Workshop

A public workshop is not required by Prop 218. However, Salton CSD is here to provide:

- Transparency
- Early public notice and information sharing including the basis and need for the rate increases



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Prop 218: Applicability under Article XIII D

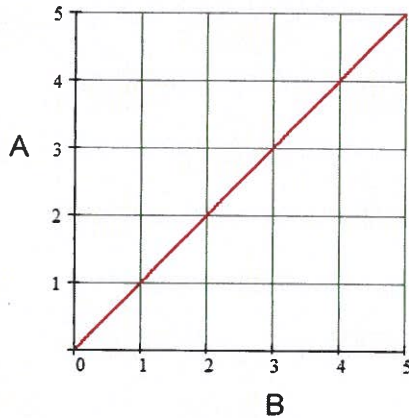


- **Property-related service:** means a public service having a direct relationship to property ownership or tenancy
- **Sewer user rates and assessments are** property related and are subject to Proposition 218



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Prop 218: Requirements for Fees and Charges



- Must not exceed the proportional cost of the service **used by or immediately available** to the parcel
- Must not be used for any purpose other than that for which the fee or charge is imposed



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Requirements for Establishing Fees

Salton CSD must:

- Identify the type of fees or charges that the utility is proposing to increase and how Prop. 218 applies.
- Identify the parcels upon which the fee or charge is proposed for imposition.
- Calculate the amount of fee or charge to be imposed.



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Fees must be based on Costs to Provide Services



- The Rate Study provides support for costs to provide services
- Includes all short-term and long-term costs including:
 - Operation and maintenance, and
 - Financial and capital expenditures, including debt service and reserve accounts
- Fees and charges may be established for a period up to five years



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Proposition 218 Mandatory Process

For water and/or wastewater rate increases this requires:

- Public notice
- Public hearing
- An opportunity for providing protests



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Prop 218: Board Resolution

The Salton CSD Board will adopt a resolution that will:

- Specify the rate
- When rate will go into effect
- When to send Notice Document
- When final public meeting will be held
 - At least 45 days after the public notice



Prop 218: Noticing Document

The noticing document will include:

- Reason/basis for rate increase
- New rates
- Effective date
- Hearing date
- How to protest
- Notice will be in English and Spanish

**NOTICE OF PUBLIC HEARING
ON PROPOSED SEWER SYSTEM RATES FOR
SALTON COMMUNITY SERVICE DISTRICT**

Public Hearing: May 17th, 2023, at 7 PM
at the Salton CSD Office 1299 Van Buren Ave, Suite 11, Florence, CA 95278

WHAT ARE THE PROPOSED RATES?

The RCAC is being furnished to you by the Salton CSD (S.C.D.) pursuant to the California Civil Code Article 411 Section 411.001, which is known as Proposition 218. Under terms of Proposition 218, the District is required to make property owners of proposed changes to property related fees such as sewer services. You have the right to notice that the S.C.D. will hold a public hearing to consider changes to its current sewer rates.

WHY DO SEWER RATES EXIST?

The S.C.D. provides sewer services to about 1,612 active 8" diameter (standard) 12" DOD and receives standard fees from approximately 1,000 EDC's. These revenues must be allocated to the following:

Annual rates paid by users of the system and standard fees are the primary sources of revenue. All revenues generated from utility fees is used to maintain and operate the sewer system and related S.C.D. operations. These revenues must be used in the order such as electrical, chemical, maintenance, laboring, fees, savings of staff member, administrative costs and must be reserved for emergency repairs and future replacement of the system when it is time for the replacement.

PROPOSED RATE CHANGES REQUIRED?

A complete budget review and financial study, done by an independent consultant. This rate study was funded by a grant from the State of California. This analysis examined the cost to provide sewer services with the objective of finding a better balance between operating and non operating revenues when compared to operating a fair and equitable rate structure for all users. Expenses must be allocated to recover the expenses while ensuring that costs are equitably allocated so that rates are fair and in proportion to the general economic conditions.

The S.C.D. has recently completed an analysis of the capital replacement requirements. All the capital projects of the S.C.D. were reviewed and an estimated replacement schedule and cost were assigned. These replacements will be funded through grants and the proposed rate increases.



Prop 218: How to protest the rates

- Property owners or tenants subject to the fees and charges may protest:
 - **By the date of the final hearing**
 - Protest must include:
 - Parcel Number or address
 - "I protest the rate increase"
 - Signature



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Prop 218: Consideration of Protests at Public Hearing

- Agency must consider all protests against the proposed rate or fee
- However, **ONLY** written protests are counted
- If the majority of the parcels protest (owner or renter), agency shall not raise rates
- The written protests will be counted at the public hearing



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Salton CSD System improvements

March 11, 2023



1

Grant Funding for Salton CSD Planning

- TA Provider and Consultant: RCAC and TKM Consulting
- Funding: Proposition 1 through the State Water Board
- Problem: Treatment capacity is over amount recommended by Regional Water Board
- Deliverables: Clean Water SRF Planning Grant Application for Treatment plant improvements by 7/31/2023



2

Grant Funding for Salton CSD Improvements

- TA Provider and Consultant: RCAC and NV5
- Funding: Proposition 1 through the State Water Board
- Problem: Aging sewer infrastructure and sewer force main breaks
- Deliverables: Clean Water SRF Construction Grant Application for system improvements by November 20, 2023
 - Preliminary Engineering Report
 - Plans and Specifications
 - Environmental compliance
 - Financial Package



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Salton CSD Conveyance Infrastructure Challenges

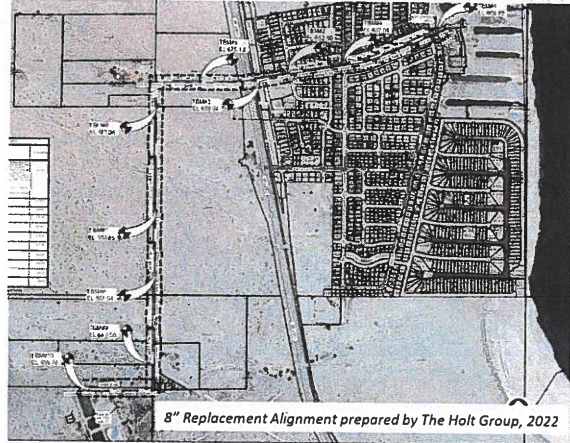
- Aging sewer infrastructure
- Previous sewer forcemain breaks
- Extensive infrastructure system built for full build-out projections vs actual flow conditions
- Manholes in poor condition
- Inefficiencies in certain lift station configurations
- Inflow & infiltration



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Desert Shores

- Priority Problem: Aging forcemain (8" asbestos-cement) from Lift Station 2 to Desert Shores WWTP
- Alternatives:
 - Forcemain Replacement (8" or 6")
 - Forcemain Rehabilitation (Sliplining)
 - Lift Station Mechanical Improvements



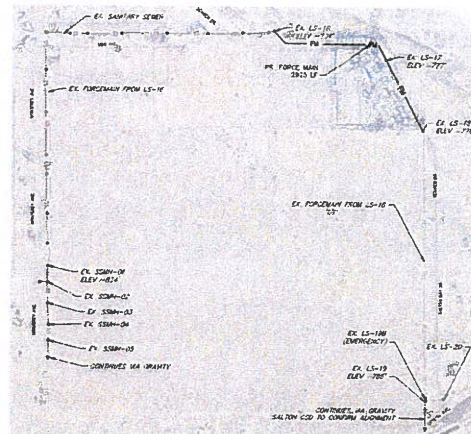
8" Replacement Alignment prepared by The Holt Group, 2022



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Salton City

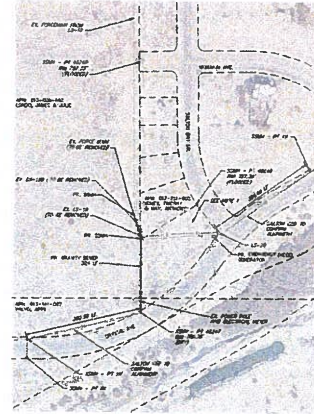
- Priority Problem: Aging forcemain (10" asbestos-cement) from Lift Station 16
- Alternatives
 - Forcemain Replacement
 - Forcemain Rehabilitation
 - Redirection of Flow from LS 16 to LS 18
 - Manhole Improvements Downstream of LS 16's Forcemain Discharge



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Salton City

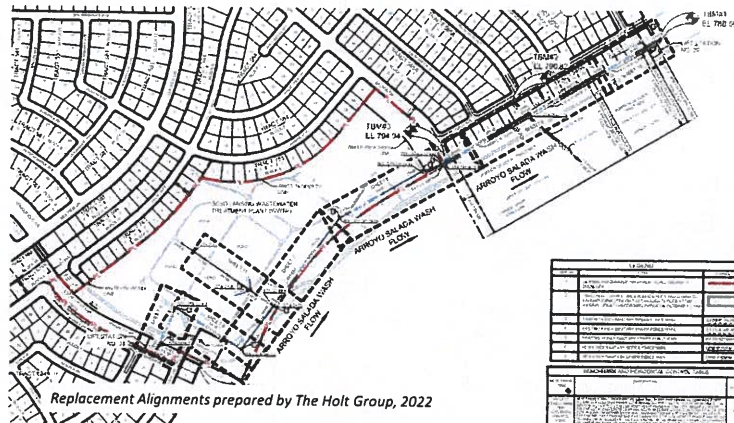
- Priority Problem: Cluster LS 19, 19B, and 20 In Close Proximity.
 - Additional Infrastructure that Needs to Be Maintained
 - No Backup Power
- Alternatives: Evaluate Redundancies and Improvements



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Salton City

- Problem: Aging forcemains from LS 22 and LS 24
- Alternatives:
 - Forcemains Replacement

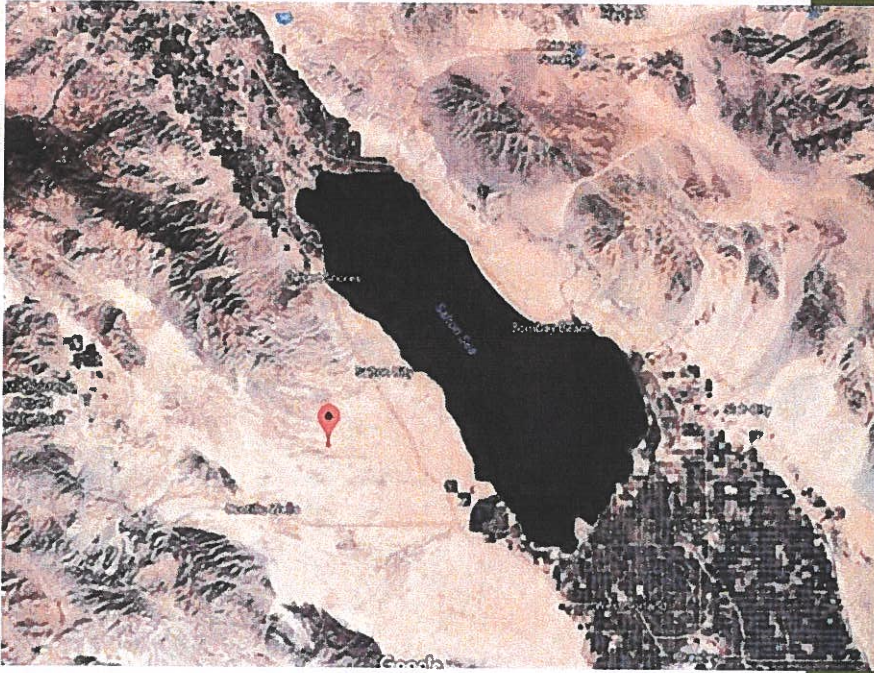


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Schedule and Grant Request

- Complete Planning Grant application by July 31, 2023
- Complete Preliminary Engineering Report for sewer conveyance by May 31, 2023
- Complete Plans and Specifications for sewer conveyance by August 31, 2023
- Complete SRF Construction Application by November 30, 2024, Grant request is estimated at over \$3 million





Salton Community Services District Wastewater Rate Study

**Rural Community
Assistance Corporation**



Prepared by:
Raul Vazquez

Rural Community Assistance
Corporation

3120 Freeboard Drive, Suite 201
West Sacramento, CA 95961

April 2021
Updated January 2023

Funded by: This document was
prepared using funds under Prop 1.

TA Work Plan Number: AR 6058

Executive Summary

Salton Community Service District [SCSD or District] serves communities that include Salton City and Desert Shores, California, which have a population of approximately 6,250 residents and a Median Household Income (MHI) of **\$34,087** as estimated by the 2015-2019 5-year American Community Survey. Consisting of wastewater collection and treatment facilities owned and operated by the District, SCSD provides wastewater services to approximately twenty-seven hundred active connections.

In January of 2020 RCAC received a technical assistance request from the District to conduct a wastewater rate study to ascertain rates that would meet its existing and future revenue needs. Developing a sustainable, fair, and justifiable rate structure was identified as the key objective of this study. This study is intended to assure compliance with California Proposition 218 as it relates to fee setting. The goal of this rate study, therefore, is to develop a suitable five-year rate structure and annual fee schedule that produces revenues adequate to meet the operating and capital financial needs of SCSD and which complies with Proposition 218. Due to higher than projected inflation increases in 2022, RCAC was asked to update the rate study.

RCAC examined financials, assets, and other data provided by the District. RCAC also consulted with SCSD staff to identify current and future operating and capital needs, community growth, and related reserves. This study's objective is to identify sustainable, equitable and justifiable rates SCSD can charge for their wastewater service area.

Under SCSD's existing rate structure, wastewater rates are based on an annual fee for its service area which includes Salton City, Vista Del Mar, and Desert Shores residential units connected to wastewater service. Salton City (SC) residential units are charged an annual fee of \$640.74 and those with an extra lot are charged an additional \$21.00 standby fee. Salton City Elementary School is charged per student at \$15.53 each. The Salton City High School is charged at \$46.53 per student. Additionally, SCSD charges two standby fees on vacant lots with immediate availability of sewer service. The original standby fee is \$21.00 plus a subsequently adopted maintenance stand by fee which is currently \$16.18.

RCAC recommends, after reviewing several options with SCSD staff, the Local Agency Formation Commission (LAFCO) and SCSD's legal counsel, the following rate adjustments over the course of the next five years:

1. An increase of on all sewer user charges in the first year. The current annual charge of \$640.74 for all residential units should be increased to \$838.41. That is an annual increase of \$197.67 or approximately \$16.47 per month. The commercial use charge should also increase from \$7.70 to \$10.08 per hundred cubic feet of water usage. Water usage data is obtained from the water purveyor Coachella Valley Water District.
2. RCAC recommends incremental increases of 4 percent in subsequent years to the base and usage rates so that the system is financially viable, without causing undue burden on customers. In the first four years, the District will not have sufficient revenue to fully fund reserve accounts. However, shortages will be recovered in the final year, with a five-year total reserve funding

projected at \$2,379,072. It will be necessary for SCSD to rely on non-operating revenue to fully recover all costs for the first four years.

1. Introduction

Rural Community Assistance Corporation

Founded in 1978, RCAC is a 501(c) (3) nonprofit organization that provides training, technical and financial resources, and advocacy so rural communities can achieve their goals and visions. For more than 40 years, our dedicated staff and active board, coupled with our key values: leadership, collaboration, commitment, quality, and integrity, have helped rural communities throughout the West achieve positive change.

RCAC's work includes environmental infrastructure (water, wastewater, solid waste facilities); affordable housing development; economic and leadership development; and community development finance. These services are available to communities with populations of fewer than 50,000, other nonprofit groups, Tribal organizations, farmworkers, Colonias and other specific populations. Headquartered in West Sacramento, California, RCAC's employees serve rural communities in 13 western states and the Pacific islands.

Purpose of this Rate Study

This wastewater rate study was conducted on behalf of Salton Community Services District by RCAC to develop a suitable five-year rate and fee schedule that produces revenue adequate to meet the operating and capital financial needs of SCSD.

Board Responsibilities

The Governing Body has the fiduciary responsibility to set the rates at such a level that the utility will be able to continue to operate now and into the future, including providing funds to replace all parts of the system as they wear out. While this document recommends certain rates, the ultimate decision rests with the Governing Body.

Guiding Principles of This Study

This study is guided by the following principles:

Sustainability: Wastewater rates should cover costs permitting the Salton Community Services District to provide wastewater services now and for the foreseeable future.

Fairness: Wastewater rates should be fair to all ratepayers. No single ratepayer or group of ratepayers should be singled out for different rates. The District should not charge more for wastewater than the cost to provide the wastewater.

Ease of Understanding: Wastewater rates should be easy for staff to understand, implement and explain to customers. The structure should be compatible with current utility billing software.

Justifiability: Wastewater rates must be based on the actual financial needs of the District. Revenue generated from wastewater rates can't be used for anything else but to pay for the costs of collecting and treating wastewater within its service area, plus any administrative costs and reserves.

Disclaimer

The recommendations contained in this rate study are based on financial information provided to RCAC by the District and its representatives. Although every effort was made to assure the reliability of this information, no warranty is expressed or implied as to the correctness, accuracy or completeness of the information contained herein.

Any opinions, findings, and conclusions or recommendations expressed in this material are solely the responsibility of the author and do not necessarily represent the official views of RCAC. For accounting advice, a Certified Public Accountant should be consulted. For legal advice, the District should seek the advice of an attorney.

2. Community and System

Community

Salton Community Services District (SCSD) is located on the west side of the Salton Sea within Imperial County. It was first formed in 1955 and named Desert Shores Community Service District (DSCSD). In 1957, Salton City (SC) was annexed into the DSCSD and renamed to Salton Community Services District. The District provides wastewater services to a population of 6,250 based on the 2019 5-year American Community Survey (ACS) estimates. According to the same survey Salton City has an estimated Median Household Income (MHI) of \$34,087 (+/- \$5,094). This number is below the state average of \$67,169. The SCSD service area includes two areas within the District boundaries: Desert Shores and Salton City. Salton City collections system also covers part of the Community of Vista Del Mar.

Wastewater System

The Salton Community Services District currently consists of approximately 450 miles of wastewater lines with approximately 5,700 manholes with average range of depth between 8'-12', as well as 23 ponds. The Desert Shores wastewater treatment plant is located one mile southwest of the Desert Shores community, west of State Highway 86. This plant utilizes ponds that are six feet deep on approximately 15 acres of land. Salton City wastewater treatment plant is located one mile west of the Salton Sea. The Salton City wastewater plant active services are spread out and, due to the topography, the systems consist of various lift stations. The gravity collection systems primarily consist of 8" vitrified clay pipe (VCP) and concrete manhole structures. The force mains serving the collection system are 8"-12" PVC (C-900) and asbestos-cement pipe (AC) with lift stations feeding them. The District wastewater facilities are routinely cleaned, inspected, repaired and rehabilitated as needed. Primary goals for the District are to operate the sewage system in a safe and efficient manner that meet the needs of the system's customers.

Future Population and Usage Projection

The District provides wastewater services to a population of 6,250 based on the 2019 5-year ACS with approximately 2,780 active wastewater service connections. Pursuant to information discussed and

received by the general manger, this analysis assumes that minimal growth may occur within the service area in the next five years and the growth will have little or no impact on the system cost and rates.

3. Current Rates and Financial Condition

Current Rate Schedule

Salton Community Services District uses one annual base rate of \$640.74 for all customers, regardless of wastewater connection size with an additional flow charge of \$7.70 per one hundred cubic feet (CCF) of water usage for commercial connections. The two Schools connected to SCSD are charged per student at a rate of \$15.53 for SC Elementary School and \$46.53 per student for SC High School. As shown on the table below, the District’s wastewater enterprise’s primary source of revenue s consists of annual wastewater base fees for service, standby fee, and maintenance standby fees. The standby fee cannot be increased at this time for legal and other reasons. However, the maintenance stand-by fee is subject to an annual increase equal to the greater of the Consumer Price Index (CPI) or 5 percent. For purposes of this rate analysis, 5 percent is the assumed annual increase to be applied to the maintenance stand-by fee.

The table shown below identifies the District boundaries (Salton city, Vista Del Mar, Desert Shores) single type of class, units, annual rate, and usage rate.

Salton CSD Current Rates	# Equivalent Dwelling Units	Annual Rate Per EDU
Base Fees		
Single Family Residential	1,823	\$ 640.74
Multi-Family Residential	132	\$ 640.74
SC Elementary School (Per Student)	589	\$ 15.53
SC High School (Per Student)	474	\$ 46.53
Total Base Rate Units	3,018	
Extra Lots Stand-By Fee	18,368	\$ 21.00
Mainteance Stand-By Fee	16,958	\$ 16.18
Commodity Charge per CCF	\$ 7.70	

Revenue from existing rates

As shown in the table below, in fiscal year ended 6/30/2019, SCSD's costs exceeded operating revenues by \$36,565.00. While operating revenue exceeded costs in FY20 and FY 21, the excess was not adequate to fully fund recommended reserve accounts. The approved budget for FY 22 and proposed budget FY 23, project further losses from operations. The goal is to generate enough revenue to fund operating costs, debt service, operating reserves, emergency reserves and capital improvement reserves to promote sustainability for the wastewater enterprise. It will be necessary to utilize non-operating revenue to fully fund reserve accounts.

SCSD Profit & Loss	Actual FY19	Actual FY 20	Actual FY 21	Approved Budget FY 2022	Proposed Budget FY 2023
Operating Revenue	\$ 1,821,487	\$ 1,745,729	\$ 2,027,702.65	\$ 1,849,650.90	\$ 1,864,500.00
Operating Costs	\$ 1,789,053	\$ 1,469,679	\$ 1,502,651.69	\$ 1,694,450.00	\$ 1,900,072.00
Debt Repayment	\$ 54,842	\$ 54,842	\$ 43,759.67	\$ 117,000.00	\$ 117,000.00
Capital Expenditures	\$ 14,157.00	\$ 55,787.49	\$ 204,900.58	\$ 178,500.00	\$ 84,000.00
Reserve Account Funding	\$ (36,565.00)	\$ 165,420.84	\$ 276,390.71	\$ (140,299.10)	\$ (236,572.00)

Revenue sufficiency associated with current rates

The table shown below indicates the current rates will not fully support the expenditures. SCSD has been experiencing some operating cost increases as a result of a large number of leaks on their force mains throughout the system due to age. Part of the goal of this rate study is to provide adequate revenue for force main replacements and any unforeseeable expenditures, operations, and maintenance to keep the system in good working order. The table below indicates the system will be operating at a deficit over the next 5 years if rates are not increased. Even with projected non-operating revenue, the wastewater enterprise will fall short of recovering all costs.

Current Rate Revenue Over/(Under) Costs for Five-Year Period	6/30/2024	6/30/2025	6/30/2026	6/30/2027	6/30/2028	5-Year Total
Estimated Annual Revenue from Base Rates at C	\$ 1,943,958	\$ 1,943,958	\$ 1,943,958	\$ 1,943,958	\$ 1,943,958	\$ 9,719,788
Estimated Annual Revenue - Usage Rates	\$ 155,026	\$ 155,026	\$ 155,026	\$ 155,026	\$ 155,026	\$ 775,130
Total Operating Revenue	\$ 2,098,984	\$ 2,098,984	\$ 2,098,984	\$ 2,098,984	\$ 2,098,984	\$ 10,494,918
Operating Costs (assumed annual inflation rate)	\$ 2,036,514	\$ 2,128,157	\$ 2,223,924	\$ 2,324,000	\$ 2,428,580	\$ 11,141,175
Debt Service	\$ 116,885	\$ 116,885	\$ 116,885	\$ 116,885	\$ 45,500	\$ 513,038
Operating Reserve	\$ 50,913	\$ 53,204	\$ 55,598	\$ 58,100	\$ 60,715	\$ 278,529
Emergency Reserve	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 100,000
Capital Improvement Reserve	\$ 398,998	\$ 398,998	\$ 398,998	\$ 398,998	\$ 398,998	\$ 1,994,992
Total Costs of Operation	\$ 2,623,309	\$ 2,717,244	\$ 2,815,405	\$ 2,917,983	\$ 2,953,793	\$ 14,027,735
Operating Revenue over/(Under) Operating Costs	\$ (524,326)	\$ (618,260)	\$ (716,421)	\$ (819,000)	\$ (854,810)	\$ (3,532,817)
Plus Non-Operating Revenue	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007	\$ 315,035
Net Income/(Loss)	\$ (461,319)	\$ (555,253)	\$ (653,414)	\$ (755,993)	\$ (791,803)	\$ (3,217,782)

4. Budget

The purpose of the wastewater enterprise budget is to ensure the system's revenues balance with its expenditures and needed reserves. To achieve a balanced budget, the utility should assess the following items with respect to future operational and capital needs, including the impact of inflation, and wastewater use trends:

- Current budget and historical revenues and expenses from the past two to four fiscal years
- Current debt service (if there is any)
- Operating and non-operating revenues and costs
- Uncollectable accounts (as a % of sales)
- Any unplanned "emergency" expenses that occurred within the past several years
- Revenues from customers billings and other source of income for the past several years
- Required "reserve" levels necessary for the coming year
- Transfer to/from financial reserves

Operating Budget	Proposed Budget	Projected	Projected	Projected	Projected	Projected
	FYE 6/30/2023	FYE 6/30/2024	FYE 6/30/2025	FYE 6/30/2026	FYE 6/30/2027	FYE 6/30/2028
Salaries & Benefits	\$ 1,178,222	\$ 1,327,075	\$ 1,386,794	\$ 1,449,200	\$ 1,514,413	\$ 1,582,562
Uniforms Expense	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Safety Supplies Expense	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Work Boots Expense	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Janitorial Supplies Expense	\$ 950	\$ 993	\$ 1,037	\$ 1,084	\$ 1,133	\$ 1,184
Janitorial Cleaning Expense	\$ 3,000	\$ 3,135	\$ 3,276	\$ 3,423	\$ 3,578	\$ 3,739
Bank Charges Expense	\$ 200	\$ 209	\$ 218	\$ 228	\$ 239	\$ 249
SM Check order Expense	\$ 500	\$ 523	\$ 546	\$ 571	\$ 596	\$ 623
Vehicle Maintenance Expense	\$ 10,000	\$ 10,450	\$ 10,920	\$ 11,412	\$ 11,925	\$ 12,462
Equipment Maintenance Expense	\$ 20,000	\$ 20,900	\$ 21,841	\$ 22,823	\$ 23,850	\$ 24,924
Fuel & Oil	\$ 45,000	\$ 49,500	\$ 51,728	\$ 54,055	\$ 56,488	\$ 59,030
Shop Supplies Expense	\$ 2,500	\$ 2,613	\$ 2,730	\$ 2,853	\$ 2,981	\$ 3,115
Other Vehicle Equipment Expense	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
SM CVWD water Service Expense	\$ 8,000	\$ 8,360	\$ 8,736	\$ 9,129	\$ 9,540	\$ 9,969
Electric Service	\$ 100,000	\$ 104,500	\$ 109,203	\$ 114,117	\$ 119,252	\$ 124,618
Cell Phone Expense	\$ 15,000	\$ 15,675	\$ 16,380	\$ 17,117	\$ 17,888	\$ 18,693
Underground Dig Alerts	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Internet Service	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Propane	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Alarm Security	\$ 1,200	\$ 1,254	\$ 1,310	\$ 1,369	\$ 1,431	\$ 1,495
Solid Waste Disposal	\$ 250	\$ 261	\$ 273	\$ 285	\$ 298	\$ 312
Employees; Licenses	\$ 4,000	\$ 4,180	\$ 4,368	\$ 4,565	\$ 4,770	\$ 4,985
County Permits	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
State Permits	\$ 100	\$ 105	\$ 109	\$ 114	\$ 119	\$ 125
Memberships/Association Dues	\$ 7,750	\$ 8,099	\$ 8,463	\$ 8,844	\$ 9,242	\$ 9,658
Waste Discharge Permit Fees	\$ 37,000	\$ 38,665	\$ 40,405	\$ 42,223	\$ 44,123	\$ 46,109
Toxic Water Disposal	\$ 2,000	\$ 2,090	\$ 2,184	\$ 2,282	\$ 2,385	\$ 2,492
Sewer Lines Maintenance	\$ 15,000	\$ 15,675	\$ 16,380	\$ 17,117	\$ 17,888	\$ 18,693
Pump Station Maintenance	\$ 50,000	\$ 60,000	\$ 62,700	\$ 65,522	\$ 68,470	\$ 71,551
Sewer Pond Maintenance	\$ 15,000	\$ 25,000	\$ 26,125	\$ 27,301	\$ 28,529	\$ 29,813
Plumbing Supplies	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Electrical Supplies	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Hardware Supplies	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Lab Testing	\$ 15,000	\$ 15,675	\$ 16,380	\$ 17,117	\$ 17,888	\$ 18,693
Professional Services	\$ 42,000	\$ 25,000	\$ 26,125	\$ 27,301	\$ 28,529	\$ 29,813
Professional Services - Koppel & Gruber	\$ 6,500	\$ 6,793	\$ 7,098	\$ 7,418	\$ 7,751	\$ 8,100
Smart Cover Monitoring	\$ 3,500	\$ 3,658	\$ 3,822	\$ 3,994	\$ 4,174	\$ 4,362
Building & Grounds Maintenance	\$ 10,000	\$ 10,450	\$ 10,920	\$ 11,412	\$ 11,925	\$ 12,462
Postage	\$ 1,200	\$ 1,254	\$ 1,310	\$ 1,369	\$ 1,431	\$ 1,495
Office Supplies	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Fire Extinguidher	\$ 650	\$ 679	\$ 710	\$ 742	\$ 775	\$ 810
Express Shipping	\$ 200	\$ 209	\$ 218	\$ 228	\$ 239	\$ 249
Advertising	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Liability Insurance	\$ 90,000	\$ 94,050	\$ 98,282	\$ 102,705	\$ 107,327	\$ 112,156
Legal Expense	\$ 85,000	\$ 88,825	\$ 92,822	\$ 96,999	\$ 101,364	\$ 105,925
SM Finance, Budgeting & Audit Expense	\$ 75,000	\$ 25,000	\$ 26,125	\$ 27,301	\$ 28,529	\$ 29,813
Technical Support Services	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Property Tax Collection Service	\$ 10,000	\$ 10,450	\$ 10,920	\$ 11,412	\$ 11,925	\$ 12,462
GASB 68 Reports	\$ 3,000	\$ 3,135	\$ 3,276	\$ 3,423	\$ 3,578	\$ 3,739
Election Costs	\$ 200	\$ 209	\$ 218	\$ 228	\$ 239	\$ 249
Travel	\$ 2,000	\$ 2,090	\$ 2,184	\$ 2,282	\$ 2,385	\$ 2,492
Training	\$ 4,000	\$ 12,000	\$ 12,540	\$ 13,104	\$ 13,694	\$ 14,310
Physicals	\$ 1,000	\$ 1,045	\$ 1,092	\$ 1,141	\$ 1,193	\$ 1,246
Copies Lease/Maintenance	\$ 5,000	\$ 5,225	\$ 5,460	\$ 5,706	\$ 5,963	\$ 6,231
CA/US Flag	\$ 750	\$ 784	\$ 819	\$ 856	\$ 894	\$ 935
Subscriptions	\$ 200	\$ 209	\$ 218	\$ 228	\$ 239	\$ 249
Drug Testing	\$ 250	\$ 261	\$ 273	\$ 285	\$ 298	\$ 312
Bulk Water	\$ 1,500	\$ 1,568	\$ 1,638	\$ 1,712	\$ 1,789	\$ 1,869
Computer Software	\$ 4,000	\$ 4,180	\$ 4,368	\$ 4,565	\$ 4,770	\$ 4,985
Breakroom	\$ 250	\$ 261	\$ 273	\$ 285	\$ 298	\$ 312
Payroll Processing	\$ 4,500	\$ 4,703	\$ 4,914	\$ 5,135	\$ 5,366	\$ 5,608
Printing/Copying	\$ 500	\$ 523	\$ 546	\$ 571	\$ 596	\$ 623
District Function Expenses	\$ 200	\$ 209	\$ 218	\$ 228	\$ 239	\$ 249
Total Operating Costs	\$ 1,900,072	\$ 2,036,514	\$ 2,128,157	\$ 2,223,924	\$ 2,324,000	\$ 2,428,580

Reserve Funding

The AWWA standards guiding this wastewater rate study recommends a review of three types of reserves. However, if the District incurs debt that requires it, a debt reserve should also be established.

1. **Operating reserves:** Operating reserves are established to provide the utility with the ability to withstand short term cash flow fluctuations. The industry standard calls for 12.5 percent of the annual budget be held in operating reserves. To stabilize rates, the operating reserves are budgeted over the five-year period in this rate analysis.

1. **Emergency Reserves:** Emergency reserve are intended to help utilities deal with short-term emergencies, such as mainline breaks or pump failures. The emergency reserve amount recommendation is based on the cost of the immediate replacement or reconstruction of the system's single most critical asset. The emergency reserve should be set at the replacement cost of the most expensive part that, if it failed, would be catastrophic to the system. Consultation with SCSD staff identified a target reserve of \$100,000. RCAC recommends that the District fully fund this emergency reserve account over the next five years at \$20,000 per annum.

2. **Capital improvement Reserve (CIP):** This reserve is to be used strictly to fund the portion of long- or short-term capital assets that are worn out or obsolete. Because a full schedule of equipment and infrastructure was not available for calculation of ideal annual reserve contributions, the amount of 2 percent of the wastewater system's fixed assets of \$19,949,918 was budgeted as the target annual CIP reserve amount. That amount is \$398,998 annually or approximately \$2 million over the five-year period.

The table shown below indicates the target discussed with SCSD:

Type of Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Operating Reserve	\$ 50,913	\$ 53,204	\$ 55,598	\$ 58,100	\$ 60,715
Emergency Reserve	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
CIP Reserves	\$ 395,291	\$ 391,073	\$ 386,360	\$ 381,119	\$ 446,699
Total Reserves Funding	\$ 466,204	\$ 464,277	\$ 461,958	\$ 459,219	\$ 527,414

SCSD should make periodic transfers from its operating account to the various reserve accounts. In addition, RCAC suggest the District consider establishing separate accounts for each reserve. The benefit of splitting the reserves into four separate accounts are:

1. These reserves have different time horizons, for example operating and emergency reserves should be readily available. Capital improvement reserves funds can be invested in CDs with different maturity dates to coincide with the planned need or capital replacements.

2. District policies can be established for each reserve type involving investment, access and use of funds.

5. Recommended Rates

The rate recommendation for SCSD wastewater service follows the same rate structure that is currently employed by SCSD. The table below identifies the class, current rates, and the recommended adjusted rate. The recommended base rate increase for all active residential and commercial customers connections increases from \$640.74 to \$838.41 annually. Rates for the two schools identified and connected with SCSD wastewater service will continue to charge per student at an increased rate of \$20.32 for the elementary school and \$60.88 for the high school. An annual 4 percent increase to base and usage rates and 5 percent for the stand-by fees after the first year will be necessary to offset the impact of inflation.

Recommended Rate Adjustment	#Units	EDUs	Current Annual Rate	Adjustment	Adjusted Rate	Average Annual Base Revenue
Single Family Residential	1,823	1,823	\$640.74	\$197.67	\$838.41	\$1,528,418.31
Multi-Family Residential	132	132	\$640.74	\$197.67	\$838.41	\$110,669.89
SC Elementary School (Per Student)	589	589	\$15.53	\$4.79	\$20.32	\$11,969.07
SC High School (Per Student)	474	474	\$46.53	\$14.35	\$60.88	\$28,859.26
Total Base Rates Revenue	3,018	3,018				\$1,679,916.53
Extra Lots Stand-By Fees	18368	18368	\$ 21.00	\$ -	\$ 21.00	\$ 385,728.00
Maintenance Stand-By Fees	16958	16958	\$16.18	\$0.81	\$16.99	\$288,099.46
Total Stand-By Fees	35,326	35,326				\$ 673,827.46
Commodity Charge	Rate Per ccf	Adjustment	Adjusted Rate	Billable Usage	Total Usage Revenue	
SC Commercial	\$ 7.70	\$ 2.38	\$ 10.08	16,162	\$ 162,835.31	
DS Commercial	\$ 7.70	\$ 2.38	\$ 10.08	3,972	\$ 40,016.23	
Total Usage/Commodity Charges				20,133	\$ 202,851.54	
Total Revenue						\$ 2,556,596

Impact of suggested rates on five-year period

Even with the recommended rate adjustment, non-operating revenue must be utilized to fully recover costs. The District will be unable to fully fund reserve accounts over the first four years. The shortage

will be recovered in year five, for a total capital replacement funding of \$2,00,542 over the five-year period.

Budget Assuming 5% Inflation per year	06/30/2024	6/30/2025	6/30/2026	6/30/2027	6/30/2028	5 Year Total
Total Monthly Required Reserves Fund	\$ 38,850	\$ 38,850	\$ 38,850	\$ 38,850	\$ 38,850	
Total yearly required reserve fund	\$ 466,204	\$ 464,277	\$ 461,958	\$ 459,219	\$ 527,414	\$ 2,379,072
Debt Service	\$ 116,885	\$ 116,885	\$ 116,885	\$ 116,885	\$ 45,500	\$ 513,038
Operating Costs	\$ 2,036,514	\$ 2,128,157	\$ 2,223,924	\$ 2,324,000	\$ 2,428,580	\$ 11,141,175
Total Operating Budget	\$ 2,619,603	\$ 2,709,318	\$ 2,802,767	\$ 2,900,104	\$ 3,001,494	\$ 14,033,286
	06/30/2024	6/30/2025 Assumes 4% Increase over Prior Year	6/30/2026 Assumes 4% Increase over Prior Year	6/30/2027 Assumes 4% Increase over Prior Year	6/30/2028 Assumes 4% Increase over Prior Year	
Estimated Annual Revenue From Base Rate	\$ 1,679,917	\$ 1,747,113.20	\$ 1,816,997.72	\$ 1,889,677.63	\$ 1,965,264.74	\$ 9,098,970
Estimated Annual Revenue - Usage Charges	\$ 202,852	\$ 210,965.61	\$ 219,404.23	\$ 228,180.40	\$ 237,307.61	\$ 1,098,709
Estimated Revenue from Maintenance Stand-By Fees (5% annual increase)	\$ 288,099	\$ 302,504.44	\$ 317,629.66	\$ 333,511.14	\$ 350,186.70	\$ 1,591,931
Estimated Revenue Stand-By Fees	\$ 385,728	\$ 385,728.00	\$ 385,728.00	\$ 385,728.00	\$ 385,728.00	\$ 1,928,640
Total Operating Revenue	\$ 2,556,596	\$ 2,646,311	\$ 2,739,760	\$ 2,837,097	\$ 2,938,487	\$ 13,718,251
Net Operating Revenue Over/(under) Operating Cost	\$ (63,007)	\$ (63,007)	\$ (63,007)	\$ (63,007)	\$ (63,007)	\$ (315,035)
Non-Operating Revenue						
Interest & Penalties	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 175,000.00
Admin Fees -	\$ 25,032.00	\$ 25,032.00	\$ 25,032.00	\$ 25,032.00	\$ 25,032.00	\$ 125,160.00
Interest Income	\$ 2,975.00	\$ 2,975.00	\$ 2,975.00	\$ 2,975.00	\$ 2,975.00	\$ 14,875.00
Total Non-Operating Revenue	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007	\$ 63,007	\$ 315,035
Net Income/Loss	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Adjusted Rate 5 Year Rate Schedule					
Rate Type	Year 1	Year 2	Year 3	Year 4	Year t
Base Rate	\$ 838.41	\$ 871.95	\$ 906.82	\$ 943.10	\$ 980.82
Maintenance Standby Fees	\$ 16.99	\$ 17.84	\$ 18.73	\$ 19.67	\$ 20.65
Standby Fees	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00	\$ 21.00
Usage Rate	\$ 10.08	\$ 10.48	\$ 10.90	\$ 11.34	\$ 11.79

6. Conclusion and recommendations

Working closely with SCSD staff and management, RCAC evaluated SCSD rates to develop a sustainable, fair, and justifiable rate and fee structure. The recommended rates should meet the system's financial needs based on current system information and informed estimates of future conditions, but it is important to monitor actual revenue. Rates should be addressed at least annually while setting budgets to verify that they are still sufficient. A complete rate analysis should be completed every five years. When the recommended rate structure has been elected by the District, community outreach, education, and the Proposition 218 process should begin as soon as possible.

RCAC also recommends that SCSD adopts best practices to improve operating efficiency. These practices include developing an asset management plan, conducting an energy audit, and investigating sources of wastewater loss and non-revenue wastewater.

PROPOSITION 218

California approved Proposition 218 in 1996 requiring agencies to adopt property fees and charges in accordance with a defined public process found in article XIII D or by associated court decision. Water and wastewater rates are user fees under the definition and must meet the following requirements:

- Revenues derived from the fee or charge must not exceed the funds required to provide the property-related service.
- Revenue from the fee or charge must not be used for any purpose other than that for which the fee or charge is imposed.
- No fee or charge may be imposed for general governmental services, such as police, fire, ambulance, or libraries, where the service is available to the public in substantially the same manner as it is to property owners.
- The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel.
- The fee or charge may not be imposed for service, unless the service is actually used by, or immediately available to, the owner of the property in question.

Written notice should be given to both the record owners and customers within the area subject to the fee or charge. The notice shall include the following:

- The formula or schedule of charges by which the property owner or customer can easily calculate their own potential charge.
- The basis upon which the amount of the proposed fee or charge is to be imposed on each parcel. An explanation of the costs which the proposed fee will cover and how the costs are allocated among property owners.
- Date, time and location of a public hearing on the rate adjustment. The public hearing must occur 45 or more days after the mailing of the notice.
- A statement that there is a 120-day statute of limitations for challenging any new, increased or extended fee or charge.

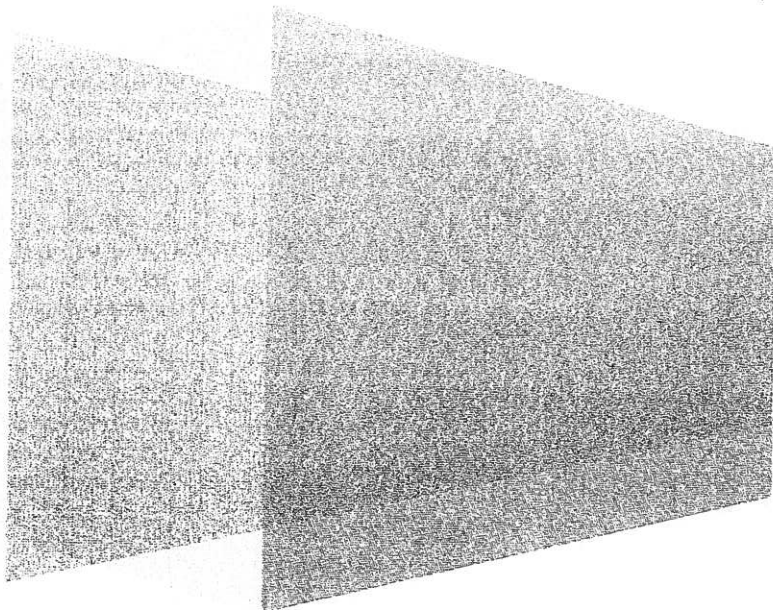
California's Proposition 218 provides that a customer of the District or owner of record of a parcel or parcels subject to the proposed rate increases may submit a protest against any or all of the proposed rate increases by filing a written protest with the District at or before the time the public hearing has concluded. Only one protest per parcel is counted. If written protests are filed by a majority of the affected parcels, the proposed rate increases will not be imposed.

CITY OF HOLTVILLE

Sewer Rate Study

Funded by Community Development Block Grant

Raftelis Financial Consultants, Inc.



June 19, 2012

July 19, 2012

Alexander P. Meyerhoff, AICP
City Manager
City of Holtville
121 W. 5th Street
Holtville, CA 92250

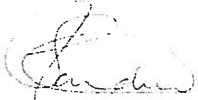
Subject: Sewer Rate Study Report

Dear Mr. Meyerhoff:

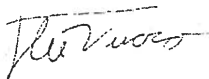
Raftelis Financial Consultants Inc. (RFC) is pleased to present this report on sewer rates to the City of Holtville (City). We are confident that the results developed will ensure the financial viability of the utility. This report summarizes the recommendations and findings of the study.

It was a pleasure working with you and we appreciate the assistance you, Jack Holt, David Aguirre and other City staff members provided during the course of the study. If you have any questions, please call me at (626) 583-1895.

Sincerely,



Sudhir Pardiwala
Vice President



Steve Vuoso
Senior Consultant

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CITY OF HOLTVILLE - SEWER RATE STUDY 2012

1 EXECUTIVE SUMMARY

The City of Holtville (City) engaged Raftelis Financial Consultants, Inc. (RFC) to conduct a comprehensive sewer rate study to determine the sewer rates over the planning period from fiscal year¹ (FY) 2013 to 2017. These fiscal years encompass the period beginning July 1, 2012 and ending June 30, 2017. This report documents the resultant findings, analyses, and proposed changes that were developed with data collected from the City.

The main driving force for this study was the need for the City to complete major capital improvement projects including a Wastewater Treatment Plant (WWTP) upgrade and a Sewer Outfall Pipeline (Pipeline) replacement and residential collection system improvement. The WWTP is expected to cost \$6 million over 3 years (from FY 2012 through FY 2014). The Pipeline project is expected to cost \$4.5 million over 2 years (from FY 2012 through FY 2013). The City is still in the process of securing funding for these projects; however, at its direction we have developed financial plans and associated rate increases under two scenarios. The first scenario assumes that the two major capital projects are funded via Clean Water State Revolving Fund (CWSRF) Program Funds. The second scenario assumes CWSRF loans with fifty percent of the loans being forgivable (CWSRF 50). The two scenarios have significantly different impacts on the additional revenues needed over the next five years.

One major element of the rate component of this study is regarding the Barbara Worth Country Club (BWCC). The BWCC currently maintains its own collection system and therefore does not utilize the vast majority of the City's collection system. The City requested that RFC calculate the appropriate rates for the BWCC given this situation.

1.1 CWSRF SCENARIO

Under this scenario, the \$10.5 million in major capital projects (WWTP and Pipeline) will be funded via two SRF loans received during FY 2013. The loan terms are assumed to be 20 years with an annual interest rate of 2.4%. Payments on the loans commence the year after the projects are completed.

1.1.1 CWSRF SCENARIO RATE INCREASES

Annual rate increases of 22% will be needed for the first 3 years to ensure the City continues to meet all its operational and capital financing, debt coverage requirements and sustain the sewer utility fund.

Table 1-1 displays the proposed rate increases and effective dates.

¹ A fiscal year for the City is defined as the period from July 1 to June 30 of the following year. Therefore, fiscal year July 1, 2011 through June 30, 2012 is identified as FY 2012; fiscal year July 1, 2012 through June 30, 2013 is identified as FY 2013; and so forth.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

TABLE 1-1
PROPOSED RATE INCREASES - CWSRF SCENARIO - FY 2013 – FY 2016

Effective Date	Proposed Increases
January 1, 2013	22%
January 1, 2014	22%
January 1, 2015	22%
January 1, 2016	0%
January 1, 2017	0%

1.1.2 CWSRF SCENARIO PROPOSED RATES

The proposed rate structure is similar to the current rate structure. Although there are increases in rates planned as part of the forecast, the structural changes to the rates resulted from calculating BWCC rates taking into account their limited use of the collection system.

Table 1-2 outlines the proposed rates for the forecast period after the annual rate increases outlined in Table 1-1 are applied and the rate adjustments regarding the BWCC rates. The current consumption allotments associated with non-residential customers remain unchanged (i.e., industrial, commercial).

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

TABLE 1-2 PROPOSED MONTHLY RATES - CWSRF SCENARIO - FY 2013 - FY 2017

Line No.	Customer Class	Existing		FY 2013		FY 2014		FY 2015		FY 2016		FY 2017	
		Fixed \$/Month	Consumption Fee (\$/gal)	Fixed \$/Month	Consumption Fee (\$/gal)	Fixed \$/Month	Consumption Fee (\$/gal)	Fixed \$/Month	Consumption Fee (\$/gal)	Fixed \$/Month	Consumption Fee (\$/gal)	Fixed \$/Month	Consumption Fee (\$/gal)
1	Single Family	\$ 49.32		\$ 60.17		\$ 75.19		\$ 93.96		\$ 96.24		\$ 98.58	
2	Multifamily (per dwelling unit)	\$ 49.32		\$ 60.17		\$ 75.19		\$ 93.96		\$ 96.24		\$ 98.58	
3	Senior Discount	\$ 39.44		\$ 48.12		\$ 60.13		\$ 75.14		\$ 76.97		\$ 78.84	
4	Offices	\$ 45.02	\$ 3.95	\$ 54.92	\$ 4.94	\$ 68.63	\$ 6.17	\$ 85.76	\$ 7.71	\$ 87.84	\$ 7.90	\$ 89.98	\$ 8.09
5	Churches	\$ 45.02	\$ 3.95	\$ 54.92	\$ 4.94	\$ 68.63	\$ 6.17	\$ 85.76	\$ 7.71	\$ 87.84	\$ 7.90	\$ 89.98	\$ 8.09
6	Service Stations	\$ 64.93	\$ 3.95	\$ 79.21	\$ 4.94	\$ 98.99	\$ 6.17	\$ 123.70	\$ 7.71	\$ 126.71	\$ 7.90	\$ 129.79	\$ 8.09
7	Restaurants												
8	Under 30 persons	\$ 131.69	\$ 3.95	\$ 160.66	\$ 4.94	\$ 200.77	\$ 6.17	\$ 250.89	\$ 7.71	\$ 256.99	\$ 7.90	\$ 263.24	\$ 8.09
9	Over 30 persons	\$ 239.69	\$ 3.95	\$ 292.42	\$ 4.94	\$ 365.43	\$ 6.17	\$ 456.66	\$ 7.71	\$ 467.76	\$ 7.90	\$ 479.13	\$ 8.09
10	Hotels												
11	Under 30 persons	\$ 214.88	\$ 3.95	\$ 262.15	\$ 4.94	\$ 327.60	\$ 6.17	\$ 409.39	\$ 7.71	\$ 419.34	\$ 7.90	\$ 429.53	\$ 8.09
12	Over 30 persons	\$ 406.05	\$ 3.95	\$ 495.38	\$ 4.94	\$ 619.06	\$ 6.17	\$ 773.61	\$ 7.71	\$ 792.42	\$ 7.90	\$ 811.68	\$ 8.09
13	Laundromats	\$ 225.49	\$ 3.95	\$ 275.10	\$ 4.94	\$ 343.78	\$ 6.17	\$ 429.61	\$ 7.71	\$ 440.05	\$ 7.90	\$ 450.75	\$ 8.09
14	Schools	\$ 323.42	\$ 3.95	\$ 394.57	\$ 4.94	\$ 493.08	\$ 6.17	\$ 616.18	\$ 7.71	\$ 631.16	\$ 7.90	\$ 646.50	\$ 8.09
15	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$ 323.42	\$ 3.95	\$ 394.57	\$ 4.94	\$ 493.08	\$ 6.17	\$ 616.18	\$ 7.71	\$ 631.16	\$ 7.90	\$ 646.50	\$ 8.09
16	Truck Disposal												
17	Roto-Rooter	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
18	Alpha Site Logistics	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
19	A&S, AnconIM, Mt.View	\$ 0.14		\$ 0.17		\$ 0.21		\$ 0.26		\$ 0.26		\$ 0.26	
20	Sharps Sanitation	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
21	Lori's Sanitation	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
22	AG Portable Services	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
23	SD, WMI, Mau, Och, P, I, m	\$ 0.14		\$ 0.17		\$ 0.21		\$ 0.26		\$ 0.26		\$ 0.26	
24	Joel and Munoz Labor	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
25	Rent-A-Can	\$ 0.12		\$ 0.15		\$ 0.18		\$ 0.22		\$ 0.22		\$ 0.22	
Barbara Worth Country Club Rates													
26	Single Family	\$ 49.32		\$ 36.41		\$ 45.49		\$ 56.85		\$ 58.23		\$ 59.64	
27	Multifamily (per dwelling unit)	\$ 49.32		\$ 36.41		\$ 45.49		\$ 56.85		\$ 58.23		\$ 59.64	
28	Senior Discount	\$ 39.44		\$ 29.11		\$ 36.38		\$ 45.46		\$ 46.57		\$ 47.70	
29	Offices	\$ 45.02	\$ 3.95	\$ 33.23	\$ 2.99	\$ 41.52	\$ 3.73	\$ 51.89	\$ 4.66	\$ 53.15	\$ 4.78	\$ 54.44	\$ 4.89
30	Churches	\$ 45.02	\$ 3.95	\$ 33.23	\$ 2.99	\$ 41.52	\$ 3.73	\$ 51.89	\$ 4.66	\$ 53.15	\$ 4.78	\$ 54.44	\$ 4.89
31	Service Stations	\$ 64.93	\$ 3.95	\$ 47.93	\$ 2.99	\$ 59.89	\$ 3.73	\$ 74.84	\$ 4.66	\$ 76.66	\$ 4.78	\$ 78.53	\$ 4.89
32	Restaurants												
33	Under 30 persons	\$ 131.69	\$ 3.95	\$ 97.21	\$ 2.99	\$ 121.47	\$ 3.73	\$ 151.80	\$ 4.66	\$ 155.49	\$ 4.78	\$ 159.27	\$ 4.89
34	Over 30 persons	\$ 239.69	\$ 3.95	\$ 176.93	\$ 2.99	\$ 221.10	\$ 3.73	\$ 276.30	\$ 4.66	\$ 283.01	\$ 4.78	\$ 289.89	\$ 4.89
35	Hotels												
36	Under 30 persons	\$ 214.88	\$ 3.95	\$ 158.61	\$ 2.99	\$ 198.21	\$ 3.73	\$ 247.70	\$ 4.66	\$ 253.72	\$ 4.78	\$ 259.88	\$ 4.89
37	Over 30 persons	\$ 406.05	\$ 3.95	\$ 299.73	\$ 2.99	\$ 374.56	\$ 3.73	\$ 468.07	\$ 4.66	\$ 479.45	\$ 4.78	\$ 491.10	\$ 4.89
38	Laundromats	\$ 225.49	\$ 3.95	\$ 166.45	\$ 2.99	\$ 208.00	\$ 3.73	\$ 259.93	\$ 4.66	\$ 266.25	\$ 4.78	\$ 272.72	\$ 4.89
39	Schools	\$ 323.42	\$ 3.95	\$ 238.73	\$ 2.99	\$ 298.33	\$ 3.73	\$ 372.81	\$ 4.66	\$ 381.88	\$ 4.78	\$ 391.16	\$ 4.89
40	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$ 323.42	\$ 3.95	\$ 238.73	\$ 2.99	\$ 298.33	\$ 3.73	\$ 372.81	\$ 4.66	\$ 381.88	\$ 4.78	\$ 391.16	\$ 4.89

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1.2 CWSRF 50 SCENARIO

Under this scenario, the \$10.5 million in major capital projects (WWTP and Pipeline) will be funded via two SRF loans received during FY 2013, with fifty percent of the loan value being forgivable. The loan terms are assumed to be 20 years with an annual interest rate of 2.4%. Payments on the loans commence the year after the projects are completed.

1.2.1 CWSRF 50 SCENARIO RATE INCREASES

A rate increase of 13% will be needed in FY 2013 and 12% increases in FY 2014 and FY 2015 to ensure the City continues to meet all its financial obligations and sustain the sewer utility. Table 1-3 displays the proposed rate increases and effective dates.

TABLE 1-3
PROPOSED RATE INCREASES – CWSRF 50 SCENARIO - FY 2013 – FY 2017

Effective Date	Proposed Increases
January 1, 2013	13%
January 1, 2014	12%
January 1, 2015	12%
January 1, 2016	0%
January 1, 2017	0%

1.2.2 CWSRF 50 PROPOSED RATES

Table 1-4 outlines the proposed rates for the forecast period after the annual rate increases outlined in Table 1-3 are applied, along with changes to the results of the changing of the BWCC rates. The current consumption allotments associated with non-residential customers remain unchanged.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

TABLE 1-4 PROPOSED RATE INCREASES - CWSRF 50 SCENARIO - FY 2013 - FY 2017

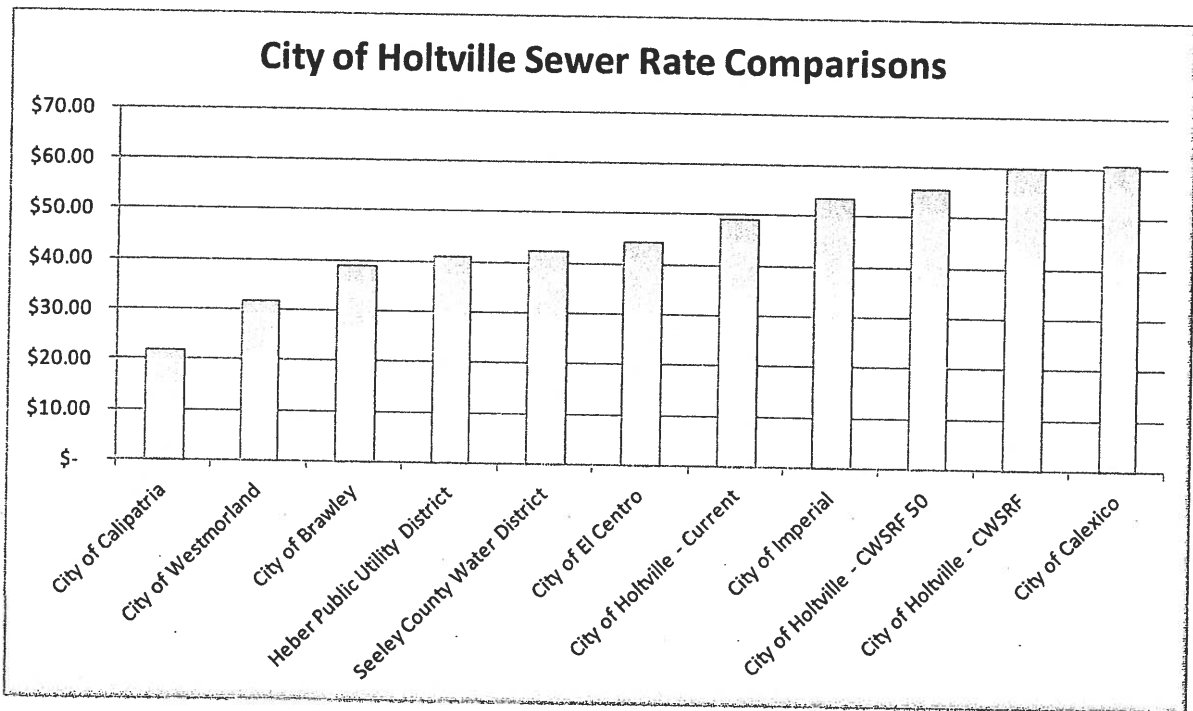
Line No.	Customer Class	Existing		FY 2013		FY 2014		FY 2015		FY 2016		FY 2017	
		Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)
1	Single Family	\$ 49.32		\$ 55.73		\$ 63.92		\$ 73.31		\$ 75.07		\$ 76.87	
2	Multifamily (per dwelling unit)	\$ 49.32		\$ 55.73		\$ 63.92		\$ 73.31		\$ 75.07		\$ 76.87	
3	Senior Discount	\$ 39.44		\$ 44.57		\$ 51.12		\$ 58.63		\$ 60.04		\$ 61.48	
4	Offices	\$ 45.02	3.95	\$ 50.87	4.57	\$ 58.34	5.24	\$ 66.91	6.01	\$ 68.52	6.15	\$ 70.16	6.30
5	Churches	\$ 45.02	3.95	\$ 50.87	4.57	\$ 58.34	5.24	\$ 66.91	6.01	\$ 68.52	6.15	\$ 70.16	6.30
6	Service Stations	\$ 64.93	3.95	\$ 73.37	4.57	\$ 84.15	5.24	\$ 96.51	6.01	\$ 98.83	6.15	\$ 101.20	6.30
7	Restaurants												
8	Under 30 persons	\$ 131.69	3.95	\$ 148.81	4.57	\$ 170.67	5.24	\$ 195.74	6.01	\$ 200.44	6.15	\$ 205.25	6.30
9	Over 30 persons	\$ 239.69	3.95	\$ 270.85	4.57	\$ 310.63	5.24	\$ 356.25	6.01	\$ 364.80	6.15	\$ 373.55	6.30
10	Hotels												
11	Under 30 persons	\$ 214.88	3.95	\$ 242.81	4.57	\$ 278.47	5.24	\$ 319.37	6.01	\$ 327.03	6.15	\$ 334.88	6.30
12	Over 30 persons	\$ 406.05	3.95	\$ 458.84	4.57	\$ 526.23	5.24	\$ 603.52	6.01	\$ 618.00	6.15	\$ 632.83	6.30
13	Laundromats	\$ 225.49	3.95	\$ 254.80	4.57	\$ 292.22	5.24	\$ 335.14	6.01	\$ 343.18	6.15	\$ 351.42	6.30
14	Schools	\$ 323.42	3.95	\$ 365.46	4.57	\$ 419.14	5.24	\$ 480.70	6.01	\$ 492.24	6.15	\$ 504.05	6.30
15	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$ 323.42	3.95	\$ 365.46	4.57	\$ 419.14	5.24	\$ 480.70	6.01	\$ 492.24	6.15	\$ 504.05	6.30
16	Truck Disposal												
17	Roto-Rooter	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
18	Alpha Site Logistics	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
19	A&S, AnconM, Mt.View	\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.20		\$ 0.20		\$ 0.20	
20	Sharps Sanitation	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
21	Lori's Sanitation	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
22	AG Portable Services	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
23	SD,VMJ, Maui, Och, Prim	\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.20		\$ 0.20		\$ 0.20	
24	Joel and Munoz Labor	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
25	Rent-A-Can	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
Barbara Worth Country Club Rates													
26	Single Family	\$ 49.32		\$ 34.02		\$ 39.02		\$ 44.75		\$ 45.82		\$ 46.92	
27	Multifamily (per dwelling unit)	\$ 49.32		\$ 34.02		\$ 39.02		\$ 44.75		\$ 45.82		\$ 46.92	
28	Senior Discount	\$ 39.44		\$ 27.20		\$ 31.20		\$ 35.79		\$ 36.65		\$ 37.53	
29	Offices	\$ 45.02	3.95	\$ 31.05	2.79	\$ 35.51	3.20	\$ 40.84	3.67	\$ 41.82	3.75	\$ 42.82	3.85
30	Churches	\$ 45.02	3.95	\$ 31.05	2.79	\$ 35.51	3.20	\$ 40.84	3.67	\$ 41.82	3.75	\$ 42.82	3.85
31	Service Stations	\$ 64.93	3.95	\$ 44.78	2.79	\$ 51.36	3.20	\$ 58.91	3.67	\$ 60.32	3.75	\$ 61.77	3.85
32	Restaurants												
33	Under 30 persons	\$ 131.69	3.95	\$ 90.83	2.79	\$ 104.17	3.20	\$ 119.48	3.67	\$ 122.35	3.75	\$ 125.28	3.85
34	Over 30 persons	\$ 239.69	3.95	\$ 165.32	2.79	\$ 189.60	3.20	\$ 217.45	3.67	\$ 222.67	3.75	\$ 228.01	3.85
35	Hotels												
36	Under 30 persons	\$ 214.88	3.95	\$ 148.21	2.79	\$ 169.97	3.20	\$ 194.94	3.67	\$ 199.61	3.75	\$ 204.41	3.85
37	Over 30 persons	\$ 406.05	3.95	\$ 280.07	2.79	\$ 321.20	3.20	\$ 368.38	3.67	\$ 377.22	3.75	\$ 386.27	3.85
38	Laundromats	\$ 225.49	3.95	\$ 155.53	2.79	\$ 178.37	3.20	\$ 204.56	3.67	\$ 209.47	3.75	\$ 214.50	3.85
39	Schools	\$ 323.42	3.95	\$ 223.07	2.79	\$ 255.84	3.20	\$ 293.41	3.67	\$ 300.46	3.75	\$ 307.66	3.85
40	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$ 323.42	3.95	\$ 223.07	2.79	\$ 255.84	3.20	\$ 293.41	3.67	\$ 300.46	3.75	\$ 307.66	3.85

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

1.3 RATE SURVEY

RFC conducted a survey comparing monthly bills for City of Holtville SFR (Single Family Residence) customers under the existing and two proposed scenarios to other regional sewer utilities for FY 2013. Figure 1-1 displays the results. Where the City falls in comparison is impacted by which financial plan is implemented.

FIGURE 1-1
BILL COMPARISON TO SURROUNDING AGENCIES FY 2013



CITY OF HOLTVILLE - SEWER RATE STUDY 2012

2 INTRODUCTION

The City of Holtville (City) engaged Raftelis Financial Consultants, Inc. (RFC) to conduct a sewer rates and fees study that could be utilized to evaluate the revenue requirements and rates to be collected from City customers to ensure the financial viability of the utility. This report documents the findings and analyses of the study, as well as proposed changes.

The City's population was estimated at 6,479 in 2008. This is forecasted to grow to 7,915 by the year 2035. The City provides sewer services to approximately 2,000 residences and businesses. The majority of the customers are within City boundaries, with some customers outside of the City, including those at the Barbara Worth Country Club.

The City last increased rates on July 1, 2009. The City is currently in the process of completing two major capital projects. The City estimates that \$6 million dollars will be spent on an upgrade for the Wastewater Treatment Plant (WWTP) through FY 2014. The upgrade is necessary to ensure the City remains in compliance with discharge requirements by Colorado Regional Water Quality Control Board; failure to do so will result in significant fines for the City. The second project is a Sewer Outfall Pipeline Replacement (Pipeline). This project is estimated to cost the City a total of \$4.5 million through FY 2013.

The City is currently in the process of trying to secure subsidized funding for these two projects, including grants. However, the City directed RFC to conduct analyses under the best and worst case funding scenario assumptions. The first scenario assumes that the two major capital projects are funded via Clean Water State Revolving Fund (CWSRF) Program Funds. The second scenario assumes CWSRF loans with fifty percent of the loans being forgivable (CWSRF 50).

The City completed implementing a five year rate plan at the end of FY 2010. Rates have not been increased in FY 2011 or FY 2012. The City wishes to implement another five-year rate plan. Rates should be fair and equitable to the different customer classes and consistent with regulatory requirements. One major element of the rate component of this study is regarding the Barbara Worth Country Club (BWCC). The BWCC now currently maintains its own collection system and therefore does not benefit from the vast majority of the City collection system expenditures. The City requested that RFC calculate the appropriate rates for the BWCC given this situation.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

3 SEWER RATE STUDY

The following subsections present the findings and recommendations of the rate study pertaining to the sewer utility.

3.1 EXISTING SEWER RATES

Under the current sewer rate structure, residential customers are charged a fixed monthly fee for each dwelling unit. Non-residential customers are charged a fixed monthly charge plus a volume charge for each thousand gallons of water consumption that exceeds a defined allotment that varies by customer class. The City also charges a per gallon charge for Truck Disposal customers that are not permanently connected to the system. The current rate structure has been in effect since July 1, 2010 and is outlined in Table 3-1.

**TABLE 3-1
EXISTING SEWER RATE STRUCTURE**

Line No.	Customer Class	Fixed \$/Month	Consumption Allotment (gal.)	Consumption Fee (\$/kgal)
1	Single Family	\$ 49.32		
2	Multifamily (per dwelling unit)	\$ 49.32		
3	Senior Discount	\$ 39.44		
4	Offices	\$ 45.02	10,000	\$ 3.95
5	Churches	\$ 45.02	25,000	\$ 3.95
6	Service Stations	\$ 64.93	15,000	\$ 3.95
7	<u>Restaurants</u>			
8	Under 30 persons	\$ 131.69	30,000	\$ 3.95
9	Over 30 persons	\$ 239.69	60,000	\$ 3.95
10	<u>Hotels</u>			
11	Under 30 persons	\$ 214.88	50,000	\$ 3.95
12	Over 30 persons	\$ 406.05	175,000	\$ 3.95
13	Laundromats	\$ 225.49	100,000	\$ 3.95
14	Schools	\$ 323.42	150,000	\$ 3.95
15	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$ 323.42	500,000	\$ 3.95
16	<u>Truck Disposal</u>	<u>\$/gallon</u>		
17	Roto-Rooter	\$ 0.12		
18	Alpha Site Logistics	\$ 0.12		
19	A&S, AnconM, Mt.View	\$ 0.14		
20	Sharps Sanitation	\$ 0.12		
21	Lori's Sanitation	\$ 0.12		
22	AG Portable Services	\$ 0.12		
23	SD,VMJ,Maui,Och,Prim	\$ 0.14		
24	Joel and Munoz Labor	\$ 0.12		
25	Rent-A-Can	\$ 0.12		

3.2 SEWER BILLING UNITS & GROWTH

Table 3-2 displays the current number of dwelling units and non-residential accounts that are billed during FY 2012. The accounts are shown by customer class and location (inside city, outside city, and

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

country club). Multifamily accounts are billed on a per dwelling unit basis and therefore shown similarly in the following table.

**TABLE 3-2
SEWER BILLING UNITS – FY 2012**

Line No.	Customer Class	Inside City	Outside City	Country Club	Total
1	Single Family	1,020	53	69	1,142
2	Multifamily (dwelling units)	658	9	41	708
3	Senior Discount	45			45
4	Offices	38	2		40
5	Churches	17			17
6	Service Stations	13	3		16
7	<u>Restaurants</u>				
	Under 30 persons	6		1	7
	Over 30 persons	1		1	2
8	<u>Hotels</u>				
	Under 30 persons	2			2
	Over 30 persons	1		1	2
9	Schools	3			3
10	Meat Processors, Packing Sheds, coolers, ice plants, etc.	9			9

Although there may be some minor growth in accounts, dwelling units and non-residential accounts are forecasted to remain constant throughout the forecast period of FY 2013 through FY 2017.

4 SEWER REVENUE REQUIREMENTS

A review of a utility's revenue requirements is a key first step in the financial planning process. The review involves an analysis of annual operating revenues under the current rates, non-rate revenues, operation and maintenance (O&M) expenses, capital expenditures, and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenditures, capital improvement financing plan, and debt service requirements.

4.1 SEWER SYSTEM RATE REVENUE

The City owns and operates the sewer system. The principal source of operating revenues and capital revenues comes from sewer service charges from the City's users; such revenues are forecasted to be approximately \$1.4 million during the forecast period if rates are kept constant. Table 4-1 outlines the rate revenue by source.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

**TABLE 4-1
SEWER RATE REVENUE UNDER CURRENT RATES FY 2013 – FY 2017**

Line No.	Customer Classes	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
		\$	\$	\$	\$	\$	\$
1	Fixed Rate Revenue	1,237,751	1,237,751	1,237,751	1,237,751	1,237,751	1,237,751
2	Consumption Rate Revenue	35,092	35,092	35,092	35,092	35,092	35,092
3	Truck Disposal Revenue	137,260	70,000	70,000	70,000	70,000	70,000
4	Total	1,410,103	1,342,843	1,342,843	1,342,843	1,342,843	1,342,843

4.2 SEWER SYSTEM EXPENDITURES

For the sound financial operation of the City's sewer system, revenues generated must be sufficient to meet the revenue requirements or cash obligations of the system. Revenue requirements include O&M expenses of collection, treatment, and disposal costs, capital improvement program (CIP) expenditures, and principal and interest payments on existing debt. Additionally, debt coverage requirements, discussed later, need to be met.

4.2.1 SEWER OPERATION AND MAINTENANCE (O&M) EXPENSES

O&M expenditures include the cost of operating and maintaining sewer collection, treatment, and disposal facilities. O&M expenses also include the costs of providing technical services, such as laboratory services and other administrative costs of the sewer system. These costs are a normal obligation of the system, and such requirements are met from operating revenues as they are incurred. The comprehensive forecasted annual O&M expenditures for the study are based upon the City's budgeted FY 2011 expenditures, adjusted for the effect of inflation in future years. The City conservatively uses an inflation factor of 3% in projecting all O&M expenditures. Projected O&M expenditures for the study period are detailed in Table 4-2.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

**TABLE 4-2
SEWER O&M EXPENDITURES FY 2012 – FY 2017**

Line No.		FY 2012 \$	FY 2013 \$	FY 2014 \$	FY 2015 \$	FY 2016 \$	FY 2017 \$
Sewer Treatment Plant							
1	Salaries	199,367	205,348	211,508	217,853	224,389	224,389
2	Fringe Benefits	87,242	89,859	92,555	95,332	98,192	98,192
3	Personal Expenses	8,446	8,699	8,960	9,229	9,506	9,506
4	Materials, Supplies, & Se	282,220	290,687	299,407	308,389	317,641	317,641
5	Other	5,150	5,305	5,464	5,628	5,796	5,796
6	Debt Service	141,225	144,225	141,975	139,725	142,081	142,081
7	Sewer Treatment Plant Total	723,650	744,123	759,870	776,156	797,606	797,606
Sewer Collection System							
8	Salaries	202,606	208,684	214,945	221,393	228,035	228,035
9	Fringe Benefits	96,811	99,715	102,707	105,788	108,961	108,961
10	Personal Expenses	8,343	8,593	8,851	9,117	9,390	9,390
11	Materials, Supplies, & Services	67,723	69,754	71,847	74,002	76,222	76,222
12	Other	129,059	132,931	136,919	141,026	145,257	145,257
13	Sewer Collection System Total	504,541	519,678	535,268	551,326	567,866	567,866
14	Total Sewer O&M	1,228,191	1,263,800	1,295,137	1,327,482	1,365,471	1,365,471

4.2.2 SEWER CAPITAL IMPROVEMENT PROGRAM (CIP)

As discussed in a previous section, the City has two major capital improvement projects that must be completed in the coming years. The WWTP and Pipeline projects comprise the vast majority of the City's CIP during the forecast period. However, additional replacement projects, averaging approximately \$131,601 annually during FY 2013 through FY 2017, are also planned. The total CIP expenditures are outlined in Table 4-3.

**TABLE 4-3
SEWER CAPITAL IMPROVEMENT PROGRAM FY 2012 – FY 2017**

	FY 2012 \$	FY 2013 \$	FY 2014 \$	FY 2015 \$	FY 2016 \$	FY 2017 \$
Major Projects						
Wastewater Treatment Plant Upgrade	700,000	2,500,000	2,800,000	-	-	-
Sewer Outfall Pipeline Upgrade	600,000	3,900,000	-	-	-	-
Total Major Projects	1,300,000	6,400,000	2,800,000	-	-	-
Replacement Projects						
	45,320	152,770	157,353	112,551	115,927	115,927
Total CIP	1,345,320	6,552,770	2,957,353	112,551	115,927	115,927

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

4.2.3 EXISTING DEBT SERVICE REQUIREMENTS

Debt service requirements consist of principal and interest payments on existing debt. The City currently has debt service obligations associated with the outstanding 2003 Sewer Revenue Bonds. Existing debt service annual payments are approximately \$140,000 per year and are displayed in Table 4-4.

**TABLE 4-4
EXISTING DEBT SERVICE REQUIREMENTS FY 2012 – FY 2017**

Line No.		FY 2011 \$	FY 2012 \$	FY 2013 \$	FY 2014 \$	FY 2015 \$	FY 2016 \$	FY 2017 \$
Sewer Revenue Bonds - 2003								
1	Principal	40,000	40,000	45,000	45,000	45,000	50,000	55,000
2	Interest	103,225	101,225	99,225	96,975	94,725	92,081	89,144
3	Total	143,225	141,225	144,225	141,975	139,725	142,081	144,144

4.2.4 DEBT SERVICE COVERAGE

The City must meet debt service coverage requirements on its outstanding (and future) bond issues. Coverage requirements typically vary between 1.0 and 1.25 or higher. The City's required debt coverage is 1.25, which means that the City's Net System Revenues shall amount to at least 1.25 times the Annual Debt Service. All potential financial plans must continue to meet this requirement.

4.2.5 OPERATING RESERVE

Operating reserves may be used to meet ongoing cash flow requirements as well as emergency requirements. Typically, a balance in the range of 10% to 50% of annual operating expenses is considered appropriate - this represents one (1) to six (6) months of working capital. Given that the City bills on a monthly basis, the cash flow is relatively stable; therefore, we recommend a target operating reserve of 25% of annual O&M expenditures.

The City should plan to establish and fund a capital reserve of between 50 and 100% of the annual replacement type project costs in the future after the financial situation has stabilized.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

5 PROPOSED FINANCIAL PLANS

A financial plan compares the revenue requirements and the non rate revenues to determine the rate revenues needed for the financial stability of the enterprise. In order to meet all of the revenue requirements outlined in section 4, RFC has developed two potential financial planning scenarios that will be discussed further in this section. At the direction of the City, the first scenario (CWSRF) assumes that the two major capital projects (WWTP and Pipeline) will be funded via SRF loans. The second scenario (CWSRF 50) assumes that the two major capital projects will be funded via SRF loans that are fifty percent forgivable.

5.1 Rate Structure Revision

Under both of the two following Financial Plan Scenarios, changes to all customer rates will occur due to the BWCC now maintaining its own collection system. In order to allocate their fair share of the costs, the City's costs should be looked at in total and the portion that BWCC shares some percentage in should be separated to equitably allocate costs. Table 5-1 first displays the total City operating and capital costs and the second section displays those portions and pro-rated portions that BWCC benefits from.

TALBE 5-1

CITY OPERATING AND CAPITAL COSTS AND AMOUNTS BWCC BENEFITS FROM

Line No.	City	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
1	O&M- Collection	\$ 504,541	\$ 519,678	\$ 535,268	\$ 551,326	\$ 567,866	\$ 584,902
2	O&M- Treatment	\$ 582,425	\$ 599,898	\$ 617,895	\$ 636,431	\$ 655,524	\$ 675,190
3	Existing Debt Service	\$ 141,225	\$ 144,225	\$ 141,975	\$ 139,725	\$ 142,081	\$ 144,144
4	SRF Loan, Pipeline	\$ -	\$ -	\$ 142,971	\$ 142,971	\$ 142,971	\$ 142,971
5	SRF Loan WWTP	\$ -	\$ -	\$ -	\$ 190,628	\$ 190,628	\$ 190,628
6	Rate Funded Capital	\$ 45,320	\$ 152,770	\$ 157,353	\$ 112,551	\$ 115,927	\$ 119,405
7	Total	\$ 1,273,511	\$ 1,416,570	\$ 1,595,461	\$ 1,773,633	\$ 1,814,998	\$ 1,857,240
<u>BWCC</u>							
8	O&M- Collection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	O&M- Treatment	\$ 582,425	\$ 599,898	\$ 617,895	\$ 636,431	\$ 655,524	\$ 675,190
10	Existing Debt Service	\$ 141,225	\$ 144,225	\$ 141,975	\$ 139,725	\$ 142,081	\$ 144,144
11	SRF Loan, Pipeline	\$ -	\$ -	\$ 10,008	\$ 10,008	\$ 10,008	\$ 10,008
12	SRF Loan WWTP	\$ -	\$ -	\$ -	\$ 190,628	\$ 190,628	\$ 190,628
13	Rate Funded Capital	\$ 45,320	\$ 152,770	\$ 157,353	\$ 112,551	\$ 115,927	\$ 119,405
14	Total	\$ 768,970	\$ 896,892	\$ 927,230	\$ 1,089,343	\$ 1,114,169	\$ 1,139,375
15	Percent of costs BWCC shares in	60%	63%	58%	61%	61%	61%

There are two specific items in Table 5-1 that vary across the two sections. Line 1 indicates the collection system related operating costs for the City. As BWCC maintains its own collection system, these costs are excluded in the BWCC section shown on line 8. Similarly, line 4 reflects the SRF loan payments for the Pipeline project. Per the City's engineers, the BWCC will benefit partially from this project and should share in 7% of the loan payment costs, which is reflected on line 11.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

Line 15 in Table 5-1 reflects the percentage of the total costs that the BWCC should share in². This number may fluctuate slightly from year-to-year, but as this number should reflect a long-term relationship, an average of the years is appropriate to use when setting rates. An average of the percentages shown on line 15 is approximately 61%. This reflects that the BWCC rates should be approximately 61% of the City rates.

However, simply reducing the BWCC rates would not allow the City to meet its overall revenue requirement. Therefore, the remaining customer rates have to be adjusted to recover revenue no longer being collected from BWCC.

Table 5-2 displays the important figures in adjusting the BWCC and City rates and how they were derived.

TABLE 5-2 CITY AND BWCC RATE ADJUSTMENT PROCESS

Line	No. <u>Fixed Rate Revenue</u>	<u>FY 2013</u>
	1 BWCC Revenue	74,432
	2 City Revenue	1,163,320
	3 Total Rate Revenue	1,237,751
	4 BWCC % of Fixed Rate Revenue	6.01%
	5 City % of Fixed Rate Revenue	93.99%
	6 Percentage of City Costs BWCC Share In (BWCC rate should be 61% of City Rates)	61%
	7 New BWCC % of Rate Revenue	3.67%
	8 Percentage of Revenue Requirement Unmet	2.34%
	9 Percentage Applied to All Rates to Meet Revenue Requirement	2.40%

The first three lines of Table 5-2 display the level of fixed revenue from BWCC and the remaining City customers under the current rate structure. Currently, the BWCC fixed revenue is approximately 6.01% (line 4) of the Total City Fixed Revenue (line 3), while the City percentage is approximately 94% (line 5). Line 6 reflects the percentage of costs that the BWCC shares in, as calculated in Table 5-1. Multiplying this factor (line 6) to the existing percentage of rate revenue (line 4) results in what should be the new percentage of total fixed rate revenue collected by the City from BWCC, which is shown on line 7. This

² The value on line 15 for each year is derived from dividing the corresponding BWCC cost participation amount on line 14 by the total City cost on line 7.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

leaves approximately 2.34% total revenue requirement shortfall (100% - line 5 – line 7). In order to ensure all revenue requirements are met, rates must be increased by a percentage (line 9) of 2.4%. Line 9: line 8 / (line 5 + line 7).

5.2 CWSRF FINANCIAL PLAN SCENARIO

Under this scenario, the \$10.5 million in major capital projects (WTP and Pipeline) will be funded via two SRF loans received during FY 2013. The outfall loan of \$4.5 million will result in debt service payment of \$285,942 for 20 years. The treatment plant SRF loan is for \$6 million and results in \$381,257 in annual debt service. The loan terms are assumed to be 20 years with an annual interest rate of 2.4%. Payments on the loans commence the year after the projects are completed.

In order to meet all revenue requirements as outlined in Section 4, annual rate increases of 22% will be needed under this scenario in the first three years of the forecast. Table 5-3 outlines the proposed rate increases and effective dates.

**TABLE 5-3
PROPOSED RATE INCREASES - CWSRF SCENARIO - FY 2013– FY 2017**

Effective Date	Proposed Increases
January 1, 2013	22%
January 1, 2014	22%
January 1, 2015	22%
January 1, 2016	0%
January 1, 2017	0%

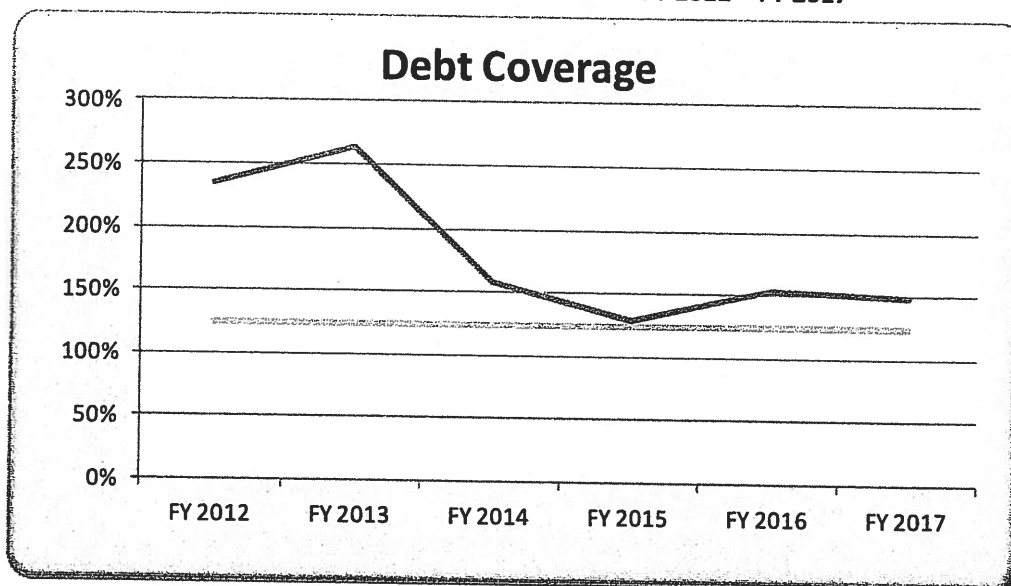
The operating financial plan presented in Table 5-4 provides a basis for evaluating the timing and extent of sewer revenue increases required to meet the projected revenue requirements for the study period. As shown in Table 5-4, and graphically in the following Figure 5-1, debt coverage is met in each year of the forecast period.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

**TABLE 5-4
SEWER OPERATING FINANCIAL PLAN – CWSRF SCENARIO – FY 2012 – FY 2017**

Line No.		FY 2012 \$	FY 2013 \$	FY 2014 \$	FY 2015 \$	FY 2016 \$	FY 2017 \$
1	Revenue from Existing Retail Rates	1,410,103	1,342,843	1,342,843	1,342,843	1,342,843	1,342,843
2	Additional Rate Revenue Required	-	147,700	475,600	875,700	1,095,500	1,095,500
3							
4	Total Rate Revenue	1,410,103	1,490,543	1,818,443	2,218,543	2,438,343	2,438,343
6	Interest Earnings	8,186	9,901	11,215	12,830	16,054	20,357
7	Total Revenue	1,418,289	1,500,444	1,829,657	2,231,373	2,454,397	2,458,700
	Revenue Requirements						
8	O&M- Collection	504,541	519,678	535,268	551,326	567,866	584,902
9	O&M- Treatment	582,425	599,898	617,895	636,431	655,524	675,190
10	Existing Debt Service	141,225	144,225	141,975	139,725	142,081	144,144
11	SRF Loan, Pipeline	-	-	285,942	285,942	285,942	285,942
12	SRF Loan WWTP	-	-	-	381,257	381,257	381,257
13	Rate Funded Capital	45,320	152,770	157,353	112,551	115,927	119,405
14	Total Revenue Requirements	1,273,511	1,416,570	1,738,433	2,107,232	2,148,598	2,190,840
15	Net Annual Cash Balance	144,778	83,874	91,225	124,141	305,800	267,860
16	Debt Coverage Ratio	235%	264%	158%	129%	152%	148%
17	Required Coverage Ratio	125%	125%	125%	125%	125%	125%

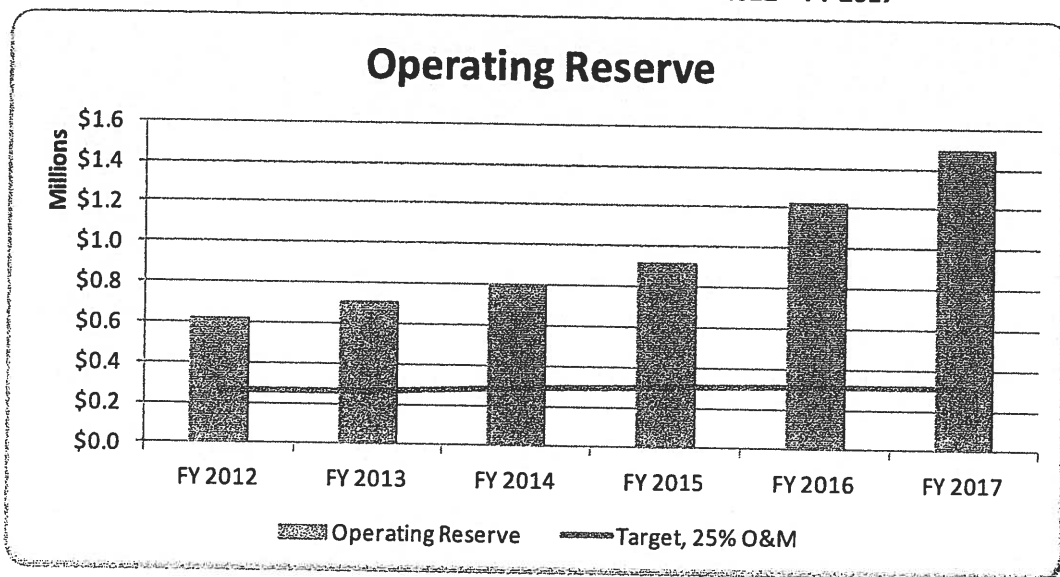
**FIGURE 5-1
DEBT COVERAGE – CWSRF SCENARIO – FY 2012 – FY 2017**



CITY OF HOLTVILLE - SEWER RATE STUDY 2012

Additionally, the operating reserve target of 25% of annual O&M is met under this financial plan, as shown in Figure 5-2. The target is approximately \$272,000 in FY 2012 and increases as O&M expenses increase.

FIGURE 5-2
OPERATING RESERVE – CWSRF SCENARIO – FY 2012 – FY 2017



As shown in Figure 5-2, the operating reserve does accumulate a balance beyond its targeted amount and it would appear that lower rate increases would be acceptable. However, it is the need to meet debt coverage requirements shown in Table 5-4 and Figure 5-1 that ultimately determines the level of rate increases needed under this scenario.

5.3 CWSRF 50 Scenario

Under this scenario, the \$10.5 million in major capital projects (WWTP and Pipeline) will be funded via CWSRF loans with fifty percent of the loans being forgivable. The outfall loan of \$2.25 million will result in loan payment of \$142,971 for 20 years. The treatment plant SRF loan is for \$3 million and results in \$190,628 in annual debt service. The loan terms are assumed to be 20 years with an annual interest rate of 2.4%. Payments on the loans commence the year after the projects are completed.

In order to meet all revenue requirements as outlined in Section 4, annual rate increases of 13% will be required in FY 2013 and 12% in FY 2014 and FY 2015. Table 5-5 outlines the proposed rate increases and effective dates.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

**TABLE 5-5
PROPOSED RATE INCREASES – CWSRF 50 SCENARIO – FY 2013 – FY 2017**

Effective Date	Proposed Increases
January 1, 2013	13%
January 1, 2014	12%
January 1, 2015	12%
January 1, 2016	0%
January 1, 2017	0%

The operating financial plan presented in Table 5-6 provides a basis for evaluating the timing and extent of sewer revenue increases required to meet the projected revenue requirements for the study period.

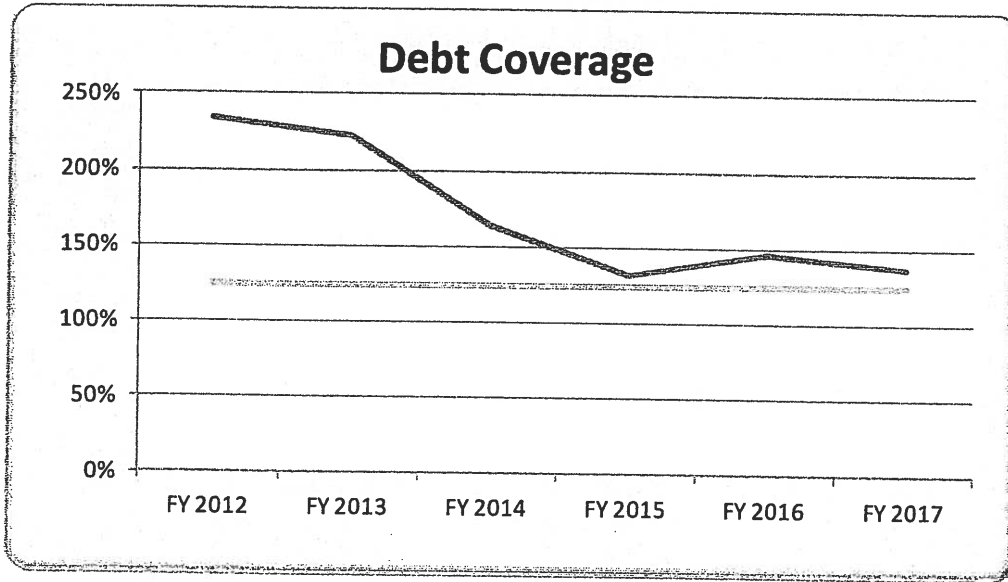
**TABLE 5-6
SEWER OPERATING FINANCIAL PLAN – CWSRF 50 SCENARIO – FY 2012 – FY 2017**

Line No.		FY 2012 \$	FY 2013 \$	FY 2014 \$	FY 2015 \$	FY 2016 \$	FY 2017 \$
1	Revenue from Existing Retail Rates	1,410,103	1,342,843	1,342,843	1,342,843	1,342,843	1,342,843
2	Additional Rate Revenue Required	-	87,300	265,600	458,700	560,600	560,600
3							
4	Total Rate Revenue	1,410,103	1,430,143	1,608,443	1,801,543	1,903,443	1,903,443
6	Interest Earnings	8,186	9,445	9,788	10,245	11,279	12,467
7	Total Revenue	1,418,289	1,439,588	1,618,231	1,811,788	1,914,722	1,915,910
	Revenue Requirements						
8	O&M- Collection	504,541	519,678	535,268	551,326	567,866	584,902
9	O&M- Treatment	582,425	599,898	617,895	636,431	655,524	675,190
10	Existing Debt Service	141,225	144,225	141,975	139,725	142,081	144,144
11	SRF Loan, Pipeline	-	-	142,971	142,971	142,971	142,971
12	SRF Loan WWTP	-	-	-	190,628	190,628	190,628
13	Rate Funded Capital	45,320	152,770	157,353	112,551	115,927	119,405
14	Total Revenue Requirements	1,273,511	1,416,570	1,595,461	1,773,633	1,814,998	1,857,240
15	Net Annual Cash Balance	144,778	23,018	22,770	38,156	99,724	58,670
16	Debt Coverage Ratio	235%	222%	163%	132%	145%	137%
17	Required Coverage Ratio	125%	125%	125%	125%	125%	125%

The ultimate driving force for the large rate increases associated with this scenario is the need to meet debt coverage requirements. As shown in Table 5-6, and graphically in the following Figure 5-3, debt coverage is met in each year of the forecast period.

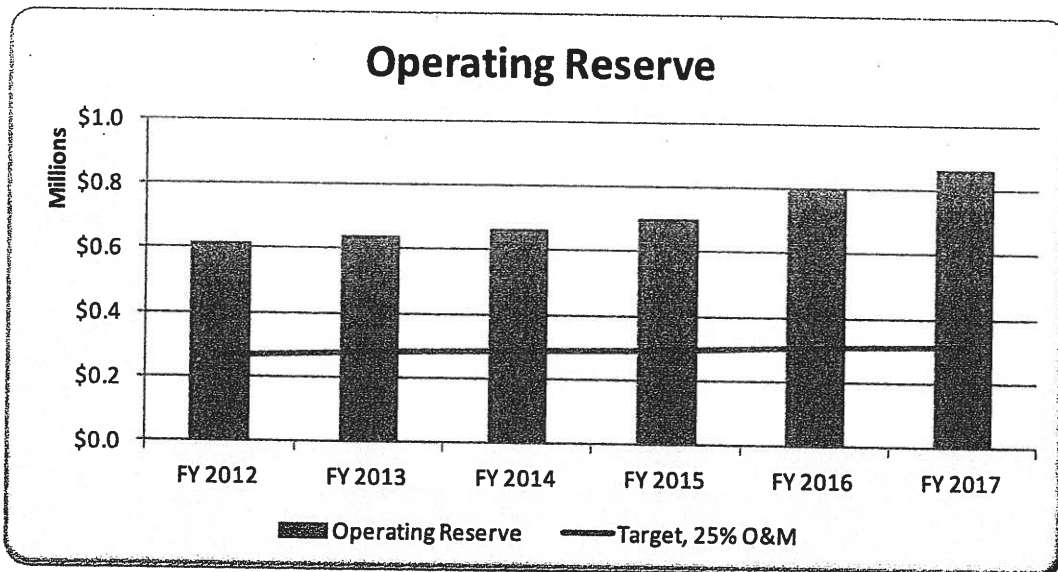
CITY OF HOLTVILLE - SEWER RATE STUDY 2012

**FIGURE 5-3
DEBT COVERAGE – CWSRF 50 SCENARIO – FY 2012 – FY 2017**



Additionally, the operating reserve target of 25% of annual O&M is met under this financial plan, as shown in Figure 5-4.

**FIGURE 5-4
OPERATING RESERVE - FY 2012 – FY 2017**



As with the CWSRF scenario, the operating reserve does accumulate a balance beyond its targeted amount and it would appear that lower rate increases would be acceptable. However, it is the need to meet the debt coverage shown in Table 5-6 and Figure 5-3 that is ultimately responsible for the level of rate increases needed under the CWSRF 50 scenario.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

6 PROPOSED RATES

This section outlines the proposed rates over the forecast period under both the CWSRF and CWSRF 50 scenarios. The rates are calculated by applying percentage increases outlined in the previous section across the board to the existing rates. It should be noted that consumption allotments remain unchanged and therefore are not displayed in the proposed rate tables.

6.1 CWSRF SCENARIO RATES

Table 6-1 outlines the proposed monthly rates for the forecast period after rates are adjusted as described in section 5.1 and the annual rate increases outlined in Table 5-3 are applied.

6.2 CWSRF 50 SCENARIO RATES

Table 6-2 outlines the proposed monthly rates for the forecast period after rates are adjusted as described in section 5.1 and the annual rate increases outlined in Table 5-5 are applied.

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

TABLE 6-1 PROPOSED MONTHLY RATES - CWSRF SCENARIO - FY 2013 - FY 2017

City Rates Line No.	Customer Class	Existing		FY 2013		FY 2014		FY 2015		FY 2016		FY 2017	
		Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)
1	Single Family	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17
2	Multifamily (per dwelling unit)	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17	\$ 49.32	\$ 60.17
3	Senior Discount	\$ 39.44	\$ 48.12	\$ 39.44	\$ 48.12	\$ 39.44	\$ 48.12	\$ 39.44	\$ 48.12	\$ 39.44	\$ 48.12	\$ 39.44	\$ 48.12
4	Offices	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95
5	Churches	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95
6	Service Stations	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95
7	Restaurants	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95
8	Under 30 persons	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95
9	Over 30 persons	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95
10	Hotels	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95
11	Under 30 persons	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95
12	Over 30 persons	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
13	Laundromats	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
14	Schools	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
15	Meat Processors, Packing Sheds, coolers, Ice plants, etc.	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
16	Truck Disposal	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
17	Roti-Rooter	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
18	Alpha Site Logistics	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
19	A&S, AnconM, Mh.View	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
20	Sharps Sanitation	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
21	Lori's Sanitation	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
22	AG Portable Services	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
23	SD, VMJ, MauJ, Och, Prim	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
24	Joel and Munoz Labor	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
25	Rent-A-Can	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15	\$ 0.12	\$ 0.15
Barbara Worth Country Club Rates													
26	Single Family	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41
27	Multifamily (per dwelling unit)	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41	\$ 49.32	\$ 36.41
28	Senior Discount	\$ 39.44	\$ 29.11	\$ 39.44	\$ 29.11	\$ 39.44	\$ 29.11	\$ 39.44	\$ 29.11	\$ 39.44	\$ 29.11	\$ 39.44	\$ 29.11
29	Offices	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95
30	Churches	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95	\$ 45.02	\$ 3.95
31	Service Stations	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95	\$ 64.93	\$ 3.95
32	Restaurants	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95	\$ 131.69	\$ 3.95
33	Under 30 persons	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95	\$ 239.69	\$ 3.95
34	Over 30 persons	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95	\$ 214.88	\$ 3.95
35	Hotels	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95	\$ 406.05	\$ 3.95
36	Under 30 persons	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95	\$ 225.49	\$ 3.95
37	Over 30 persons	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
38	Laundromats	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
39	Schools	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95
40	Meat Processors, Packing Sheds, coolers, Ice plants, etc.	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95	\$ 323.42	\$ 3.95

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

TABLE 6-2 PROPOSED MONTHLY RATES - CWSRF 50 SCENARIO - FY 2013 - FY 2017

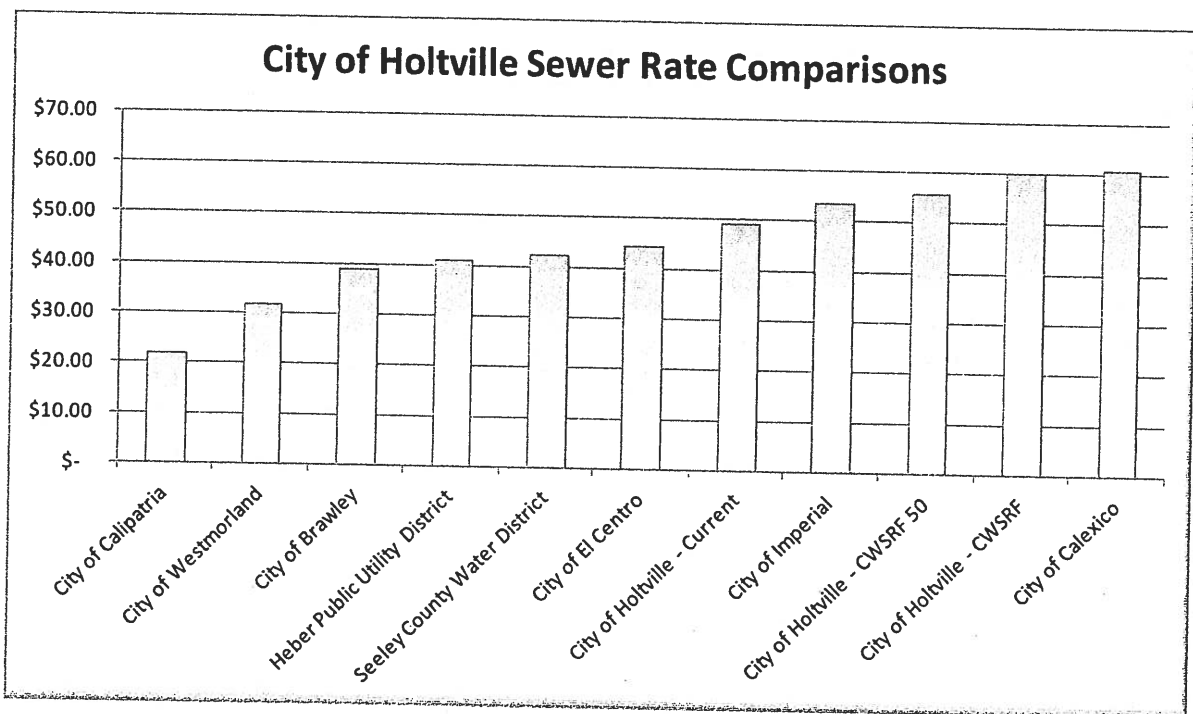
City Rates	Line No.	Customer Class	Existing		FY 2013		FY 2014		FY 2015		FY 2016		FY 2017	
			Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)	Fixed \$/Month	Consumption Fee (\$/kgal)
	1	Single Family	\$ 49.32		\$ 55.73		\$ 63.92		\$ 73.31		\$ 75.07		\$ 76.87	
	2	Multifamily (per dwelling unit)	\$ 49.32		\$ 55.73		\$ 63.92		\$ 73.31		\$ 75.07		\$ 76.87	
	3	Senior Discount	\$ 39.44		\$ 44.57		\$ 51.12		\$ 58.63		\$ 60.04		\$ 61.48	
	4	Offices	\$ 45.02	3.95	\$ 50.87	4.57	\$ 58.34	5.24	\$ 66.91	6.01	\$ 68.52	6.15	\$ 70.16	6.30
	5	Churches	\$ 45.02	3.95	\$ 50.87	4.57	\$ 58.34	5.24	\$ 66.91	6.01	\$ 68.52	6.15	\$ 70.16	6.30
	6	Service Stations	\$ 64.93	3.95	\$ 73.37	4.57	\$ 84.15	5.24	\$ 96.51	6.01	\$ 98.83	6.15	\$ 101.20	6.30
	7	Restaurants												
	8	Under 30 persons	\$131.69	3.95	\$148.81	4.57	\$170.67	5.24	\$195.74	6.01	\$200.44	6.15	\$205.25	6.30
	9	Over 30 persons	\$239.69	3.95	\$270.85	4.57	\$310.63	5.24	\$356.25	6.01	\$364.80	6.15	\$373.55	6.30
	10	Hotels												
	11	Under 30 persons	\$214.88	3.95	\$242.81	4.57	\$278.47	5.24	\$319.37	6.01	\$327.03	6.15	\$334.88	6.30
	12	Over 30 persons	\$406.05	3.95	\$458.84	4.57	\$526.23	5.24	\$603.52	6.01	\$618.00	6.15	\$632.83	6.30
	13	Laundromats	\$225.49	3.95	\$254.80	4.57	\$292.22	5.24	\$335.14	6.01	\$343.18	6.15	\$351.42	6.30
	14	Schools	\$323.42	3.95	\$365.46	4.57	\$419.14	5.24	\$480.70	6.01	\$492.24	6.15	\$504.05	6.30
	15	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$323.42	3.95	\$365.46	4.57	\$419.14	5.24	\$480.70	6.01	\$492.24	6.15	\$504.05	6.30
	16	Truck Disposal												
	17	Roto-Rooter	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	18	Alpha Site Logistics	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	19	A&S, AnconM, MtView	\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.20		\$ 0.20		\$ 0.20	
	20	Sharps Sanitation	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	21	Lori's Sanitation	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	22	AG Portable Services	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	23	SD,VMJ,Meui,Och,Prim	\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.20		\$ 0.20		\$ 0.20	
	24	Joel and Munoz Labor	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	25	Rent-A-Can	\$ 0.12		\$ 0.14		\$ 0.16		\$ 0.18		\$ 0.18		\$ 0.18	
	26	Barbara Worth Country Club Rates												
	26	Single Family	\$ 49.32		\$ 34.02		\$ 39.02		\$ 44.75		\$ 45.82		\$ 46.92	
	27	Multifamily (per dwelling unit)	\$ 49.32		\$ 34.02		\$ 39.02		\$ 44.75		\$ 45.82		\$ 46.92	
	28	Senior Discount	\$ 39.44		\$ 27.20		\$ 31.20		\$ 35.79		\$ 36.65		\$ 37.53	
	29	Offices	\$ 45.02	3.95	\$ 31.05	2.79	\$ 35.61	3.20	\$ 40.84	3.67	\$ 41.82	3.75	\$ 42.82	3.85
	30	Churches	\$ 45.02	3.95	\$ 31.05	2.79	\$ 35.61	3.20	\$ 40.84	3.67	\$ 41.82	3.75	\$ 42.82	3.85
	31	Service Stations	\$ 64.93	3.95	\$ 44.78	2.79	\$ 51.36	3.20	\$ 58.91	3.67	\$ 60.32	3.75	\$ 61.77	3.85
	32	Restaurants												
	33	Under 30 persons	\$131.69	3.95	\$ 90.83	2.79	\$104.17	3.20	\$119.48	3.67	\$122.35	3.75	\$125.28	3.85
	34	Over 30 persons	\$239.69	3.95	\$165.32	2.79	\$189.60	3.20	\$217.45	3.67	\$222.67	3.75	\$228.01	3.85
	35	Hotels												
	36	Under 30 persons	\$214.88	3.95	\$148.21	2.79	\$169.97	3.20	\$194.94	3.67	\$199.61	3.75	\$204.41	3.85
	37	Over 30 persons	\$406.05	3.95	\$280.07	2.79	\$321.20	3.20	\$368.38	3.67	\$377.22	3.75	\$386.27	3.85
	38	Laundromats	\$225.49	3.95	\$155.53	2.79	\$178.37	3.20	\$204.56	3.67	\$209.47	3.75	\$214.50	3.85
	39	Schools	\$323.42	3.95	\$223.07	2.79	\$255.84	3.20	\$293.41	3.67	\$300.46	3.75	\$307.66	3.85
	40	Meat Processors, Packing Sheds, coolers, ice plants, etc.	\$323.42	3.95	\$223.07	2.79	\$255.84	3.20	\$293.41	3.67	\$300.46	3.75	\$307.66	3.85

CITY OF HOLTVILLE - SEWER RATE STUDY 2012

7 RATE SURVEY

RFC conducted a survey comparing monthly bills for City SFR customers under the existing and two proposed scenarios to other regional utilities for FY 2013. Figure 7-1 displays the results. Where the City falls in comparison is impacted by which financial plan is implemented.

FIGURE 7-1
BILL COMPARISON TO SURROUNDING AGENCIES FY 2012





Water & Sewer Rate Study

October 20, 2017



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

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October 20, 2017

Stefan T. Chatwin
City Manager
City of Imperial
420 South Imperial Avenue
Imperial, CA 92251

Re: Water & Sewer Rate Study

Bartle Wells Associates (BWA) is pleased to submit to the City of Imperial (City) the attached Water & Sewer Rate Study. The results of the of the study were presented to the Imperial City Council at the September 20th City Council meeting.

This study presents BWA's analysis of the operating and non-operating expenses of the City's water and sewer funds and provides five-year cash flow projections and rates. The primary purpose of this study was to analyze the City's water & sewer enterprise funds and make recommendations that would achieve their financial sustainability. Another important purpose of this study was to review rates considering the San Juan Capistrano court decision to ensure that rates adhere to the State's legal requirements.

The enclosed report recommends updating rates and charges to more accurately recover the costs of providing service to the City's water and sewer customers. Recommendations were developed with substantial input from City staff. BWA finds that the rates and charges proposed in our report are based on the cost of service for each customer, follow generally accepted rate design criteria, and adhere to the substantive requirements of Proposition 218. BWA believes that the proposed rates are fair and reasonable to the City's customers.

We have enjoyed working with the City on this rate study and appreciate the assistance of AJ Gaddis, Jackie Loper, Laura Gutierrez and Alexis Chalupnik as well that of other City staff throughout the project. Please contact us with any future questions about this study and the rate recommendations.

Yours truly,

Doug Dove, CIPFA
Principal

Erik Helgeson
Financial Analyst

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APPENDICES

APPENDIX A: Water Tables

APPENDIX B: Wastewater Tables

1 EXECUTIVE SUMMARY

1.1 Background

The City of Imperial lies in California's Imperial valley, twelve miles North of the border between the United States and Mexico. The City was incorporated in 1904. Water and sewer service is provided to over 5,400 accounts, serving a population of approximately 17,000 people who live both in and adjacent to the City.

The revenues from the City's water and sewer utilities are entirely derived from charges for services. The City must establish rates and charges adequate to fund the cost of providing water and wastewater services, including costs for operations and capital improvements needed to keep City's utility infrastructure in safe and reliable operating condition. Rates were last increased in 2013.

The City retained Bartle Wells Associates (BWA) to develop a comprehensive rate analysis and study for the City's water and sewer enterprises. Basic objectives of the rate study include:

- Identify rate setting principles.
- Develop long-term financial projections to determine future annual water and wastewater enterprise revenue requirements.
- Evaluate rate alternatives and recommend water and wastewater designed to equitably recover the costs of providing service.

Based on input from City staff, key guiding principles included developing rates that:

- Are fair and equitable to all customer classes.
- Recover the costs of providing service and generate adequate funding for capital needs.
- Are easy to understand and implement.
- Comply with the legal requirements of Proposition 218 and other California laws.

1.2 Proposition 218

Utility rates are subject to the procedural and substantive requirements as set forth in 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 and wastewater. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water and

wastewater service. The substantive requirements of Article 13D, Section 6 require the City's utility rates to meet the following conditions:

- Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.
- 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 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.
- No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property in question.
- 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 procedural requirements of Proposition 218 for all utility rate increases are as follows:

- **Noticing Requirement:** The City must mail a notice of proposed rate increases to all affected property owners. The notice must specify the basis of the fee, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
- **Public Hearing:** The City must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
- **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If 50% plus one of affected property owners submit written protests the proposed rate increases, the increases cannot be adopted.

1.3 Use of Generally Accepted Rate-Making Principles

The rates developed in this study use a straightforward methodology to establish an equitable system of fixed and variable charges that recover the cost of providing service and fairly apportion costs to each rate component. The rates were developed using generally accepted cost-based principles and methodologies for establishing water rates, charges, and fees contained and discussed in the American Water Works Association (AWWA) M1 Manual.

In developing water rates, it is important to know that there is no “one-size-fits-all” approach for establishing cost-based water rates. “The (M1 Manual) is aimed at outlining the basic elements involved in water rates and suggesting alternative rules of procedure for formulating

rates, thus permitting the exercise of judgment and preference to meet local conditions and requirements.”¹

BWA used the following criteria when developing our recommendations for the City’s water and wastewater rates and finances:

- 1) *Revenue Sufficiency*: Rates should recover the annual cost of service and provide revenue stability.
- 2) *Rate Impact*: While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
- 3) *Equitable*: Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
- 4) *Practical*: Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer, and easy to understand.

1.4 Water Overview

1.4.1 Water Customers

The City owns a potable water distribution system that serves 5,428 accounts, 2.5% of which are outside of the City limits. This study assumed 100 new connections per year.

1.4.2 Water System

The City has a single water supply. It receives raw water deliveries from the Imperial Irrigation District. The City’s treatment plant can produce seven million gallons per day. The City stores two million gallons of treated water at the treatment plant, has two, two-million-gallon storage tanks and two remote booster stations.

BWA recommends (1) updating rates to better reflect revenue requirements and the cost of service; (2) modify the volumetric rate structure by shifting from a three-tier structure to a single, uniform rate which reflects the City’s single source of water; (3) transition the monthly fixed charge structure from a single charge to charges based on a customer’s meter size, reflecting the capacity needed to serve the meter; (4) charge the City for water use; and (5) charge customers outside the City the same rates as those inside the City limits.

¹ AWWA Manual M1 Manual, Principles of Water Rates, Fees, and Charges, Sixth Edition, 2012, page 5.

1.4.3 Current Water Rates

Current monthly water rates are shown on Table 1. Rates were last increased in August 2013. Customers pay a monthly fixed rate and a volumetric rate. There are three volumetric tiers and all customers pay the same monthly fixed rate.

Table 1: Current Monthly Water Rates

Monthly Fixed Rate:	
<i>All Customers</i>	\$12.00
Quantity Rate per Hundred Cubic Feet (HCF):	
<i>All Customers</i>	
0 to 30 HCF	\$2.99
31 to 35 HCF	3.29
36 HCF and above	\$3.84

1.4.4 Proposed Water Rates

Table 2 shows the proposed monthly fixed meter charges (base rates) and volumetric rates for the next five years. The proposed rates will be effective January 1st in fiscal year (FY) 2017-18 and effective July 1st in each remaining year of the notice period. Every water connection will be charged a base rate according to meter size and a volumetric rate per unit of water consumption. The proposed rate structure condenses the current three-tier rate structure into a uniform rate. The uniform rate more accurately reflects the cost to serve customers from the single source of supply.

Table 2: Proposed Water Rates, FY 2017-18 through FY 2021-22

Monthly Fixed Rate					
Meter Size	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
1"	\$13.06	\$14.12	\$15.16	\$15.77	\$16.41
1 ½"	16.86	21.72	26.57	27.64	28.75
2"	21.42	30.84	40.24	41.85	43.53
3"	33.59	55.18	76.75	79.82	83.02
4"	47.27	82.54	117.81	122.53	127.44
6"	\$85.29	\$158.58	\$231.87	\$241.15	\$250.80
Quantity Rate per Hundred Cubic Feet (HCF):					
Cubic Feet	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
All Usage	\$3.36	\$3.57	\$3.75	\$3.90	\$4.06

1.5 Wastewater System Overview

1.5.1 Wastewater System

The City also owns and operates a wastewater system which includes the wastewater treatment plant and the collection system.

The City's wastewater system has large infrastructure repair and replacement projects planned in the next five years. The largest project is replacing the wastewater treatment plant. The plant was built in the sixties and has served long past its useful life.

BWA recommends (1) updating rates to better reflect revenue requirements and the cost of service; (2) modify the residential rate structure by shifting to only a monthly flat rate; (3) bill commercial customers the greater of the residential fixed charge or a volumetric rate based on a customer's strength classification; (4) charge the City for water use; and (5) charge customers outside the City the same rates as those inside the City limits.

1.5.2 Current Wastewater Rates

The current monthly wastewater charges are shown on Table 3.

Table 3: Current and Future Adapted Monthly Wastewater Rates

<i>Monthly Base Sewer Rate per Equivalent Dwelling Unit (EDU)</i>	
All Customers	\$48.40 per EDU
<i>Quantity Rate per Hundred Cubic Feet of Water Consumed (HCF):</i>	
<i>Residential Customers</i>	
36 HCF and above	\$0.93
<i>Commercial Customers</i>	
21 HCF and above	\$2.42

1.5.3 Proposed Wastewater Rates

Table 4 shows the proposed wastewater rates for the next five years. The proposed rates will be effective January 1st in FY 2017-18 and effective July 1st in each remaining year of the notice period. Residential users will be charged a fixed rate per Equivalent Dwelling Unit, while all other users will be charged a rate per hundred cubic feet of water consumption depending on strength class. No user will be charged less than the minimum charge, equal to the residential flat rate per EDU.

Table 4: Proposed Sewer Rates, FY 2017-18 through FY 2021-22

Annual Rate Per Equivalent Domestic Unit, Single-Family Residential Users

User Class	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Single-Family	\$56.45	\$60.41	\$64.64	\$67.23	\$69.92

Annual Rate Per Equivalent Domestic Unit, Multi-Family Residential Users

User Class	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Multi-Family	\$48.39	\$51.78	\$55.41	\$57.63	\$59.94

Quantity Rate Per 100 Cubic Feet of Water Consumption, Commercial Users

User Class	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Low-Strength	\$1.57	\$1.68	\$1.80	\$1.88	\$1.96
Domestic-Strength	\$2.82	\$3.02	\$3.24	\$3.37	\$3.51
High-Strength	\$4.34	\$4.65	\$4.98	\$5.18	\$5.39

Minimum Annual Rate Per Connection, Commercial Users

User Class	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Commercial	\$56.45	\$60.41	\$64.64	\$67.23	\$69.92

2 WATER FINANCES & RATES

2.1 Water Financial Overview

Bartle Wells Associates conducted an independent evaluation of the City's water enterprise finances. Key observations include:

- Water rates have not been increased since FY 2013-14. Staff has strived to keep costs down but water expenses are still subject to inflation.
- The water enterprise has a substantial amount of outstanding debt service due to the construction of the water treatment plant and the subsequent state mandated upgrades.
- The convergence of capital repair and replacement projects in FY 2018-19 and FY 2019-20 will require additional funds to maintain prudent reserves.
- Additional debt financing may be needed to help fund capital improvement projects in upcoming years.
- The water enterprise has only a large amount of outstanding debt. Rates will need to be raised to maintain a debt coverage ratio above 1.25.
- The City has had to draw down fund reserves in recent years to support annual operating and capital funding needs.
- As mentioned in Section 1.3, water rates were developed using generally accepted cost-based principles and methodologies for establishing water rates, charges, and fees contained and discussed in the AWWA M1 Manual.
- Water expenses were determined by developing projections based on audits, budgets, and up to date information provided by the City. Projected expenses and minimum reserve fund targets were used to develop annual revenue requirements.

2.2 Current Monthly Water Rates

The City bills water service monthly. The current water rates include two components:

- 1) **Fixed Base Charge:** All customers pay the same fixed amount per month.
- 2) **Variable Charges:** Residential customers are billed according to a 3-tier inclining rate structure. Water use is first billed in tier 1 and subsequently billed in higher, more expensive, tiers as water use increases in each billing period. Quantity Charges are billed per hundred cubic feet (HCF), with 1 HCF equal to approximately 748 gallons of water.

2.3 Current Water Accounts

Table 5 shows the current number of water accounts by meter size and the corresponding equivalent demand units. An equivalent demand unit (EDU) is the ratio of any meter's safe maximum flow to that of a 1" meter's. The safe maximum flow is based on the American Water Works Association's meter service equivalent standards. The proposed fixed rates by meter size are determined based on the number of EDU's. Table 6 shows water meter flow rates and meter ratios which represent capacity.

Table 5: Current Water Accounts

Meter Size	Customers	Capacity Factor**	Equivalent Demand Units
1" or below***	5,329.0	1.0	5,329.0
2"	41.0	3.2	131.2
4"	57.0	10.0	570.0
6"	1.0	20.0	20.0
Total	5,428.0		6,050.2

* Customer count data as of June 2017 provided by City staff

** Capacity factors based on AWWA operating capacity standards by meter size

*** Meters 1" or below reflect the varying meter sizes in single family homes

Table 6: Water Meter Flow Rates and Meter Ratios

Meter Size	Max Flow Rate (GPM)	EDU
1 inch	50	1.0
2 inch	160	3.2
4 inch	500	10.0
6 inch	1000	20.0

Safe maximum operating capacity by meter size per current AWWA standards (Table B-1 M1 Manual 6th Edition, pg. 326)

2.4 Financial Challenges / Key Drivers of Rate Increases

The City’s water enterprise will need to have small consistent water rate increases. Key drivers of future rate increases are summarized as follows.

2.4.1 Ongoing Operating Cost Inflation

The City faces ongoing operating cost inflation due to annual increases in a range of expenses such as utilities, supplies, salaries, benefits, etc. Since 1996, the average annual CPI for all urban customers has been 2.3%, whereas the average for the Construction Cost Index Engineering News Record (CCI ENR) 20-Cities average is 3.1%. BWA uses a 3.0% operating cost inflation assumption. Appendix A includes a detailed description of water expense projections through FY 2021/22.

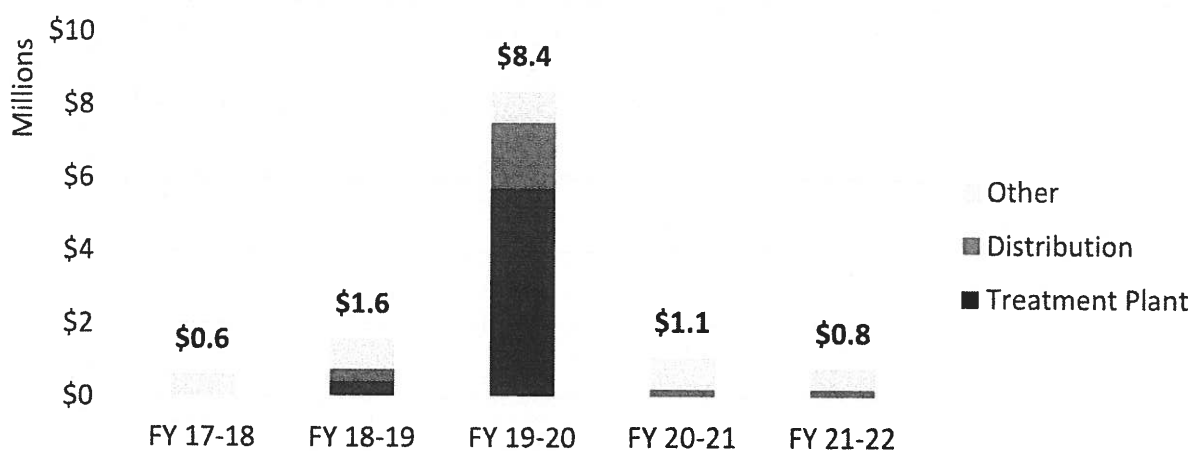
2.4.2 Water Reserve Funds

The City needs to maintain reserves. Maintaining a prudent level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and emergency capital repairs.

2.4.3 Capital Projects

The City’s water system requires a steady stream of repair and improvement projects. Accounting for construction cost inflation, the City anticipates funding approximately \$12.5 million of capital improvement projects over the next 5 years, an average of \$2.5 million per year. The largest costs are the upgrades to the water treatment plant estimated to cost \$6.2 million. Figure 1 shows projected capital spending per year.

Figure 1: Projected Capital Spending



2.5 Water Enterprise Revenue Requirements

2.5.1 Water Revenue Requirements: Cash Flow Projection

The water cash flow projections incorporate the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

Growth & Water Demand Assumptions

- The City has had sustained growth and there are many developments in the works. Based on input from City staff BWA is assuming 100 new connections per year.
- Future water sales are projected to increase with growth.

Revenue Assumptions

- Investment income is estimated based projected reserve levels. Future projections are estimated based on conservative interest earning rates; actual amounts will vary based on reserves and future interest earning rates.
- Other revenues are projected to stay constant for the study period.

Expense Assumptions

- Operating and maintenance costs are based on the 2017-18 budget and escalate at the annual rate of 3.0% to account for future cost inflation.
- Based on the City's compensation information, salary costs are projected to grow at 5% and benefit costs are projected to grow at 7% annually.
- The City is projecting utility (gas and electric) costs to increase at 5.0% annually.
- Capital expenditures include \$12.5 million in projects through FY 2021-22. Capital cost inflation is projected to be 3.0% for the study period.

Revenue Increases

Based on the above assumptions BWA recommends the following rate revenue increases. The following table shows the debt service coverage ratio with the recommended increases will stay at 1.25x or greater.

Table 7: Recommended Water Rate Revenue Increases

Revenue Escalation	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Rate Revenue Increase	6.0%	6.0%	5.0%	4.0%	4.0%
Debt Coverage Ratio (Target 1.25)	1.39	1.59	1.25	1.35	1.61

The recommended annual rate increases begin in FY 2017-18 and are needed to fund annual operating and capital expenses, provide healthy debt service coverage and maintain prudent reserves.

With the large capital expenditures projected in the next five years, BWA recommends using capacity fee revenues to mitigate the impact of the capital projects. The water capacity fund cashflow is shown in Table 8.

Table 8: Water Capacity Cash Flow Projection

Capacity Fund	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Beginning Capacity Balance	\$2,534,787	\$2,611,889	\$1,288,991	\$66,093	\$143,195
Water Capacity Fees	177,102	177,102	177,102	177,102	177,102
Contract Service	100,000	100,000	100,000	100,000	100,000
Cash Funded Capital	\$0	\$1,400,000	\$1,300,000	\$0	\$220,000
Net Capacity Income	\$77,102	-\$1,322,898	-\$1,222,898	\$77,102	-\$142,898
Ending Capacity Balance	\$2,611,889	\$1,288,991	\$66,093	\$143,195	\$297

Figure 2 depicts the projected revenues with increases, expenses, and reserve levels. The cash flow is shown in detail in Table 9. The recommended annual rate increases begin in FY 2017-18 and are needed to fund annual operating and capital expenses, provide healthy debt service coverage and maintain prudent reserves.

Figure 2: Water Utility Projected Revenues & Expenses

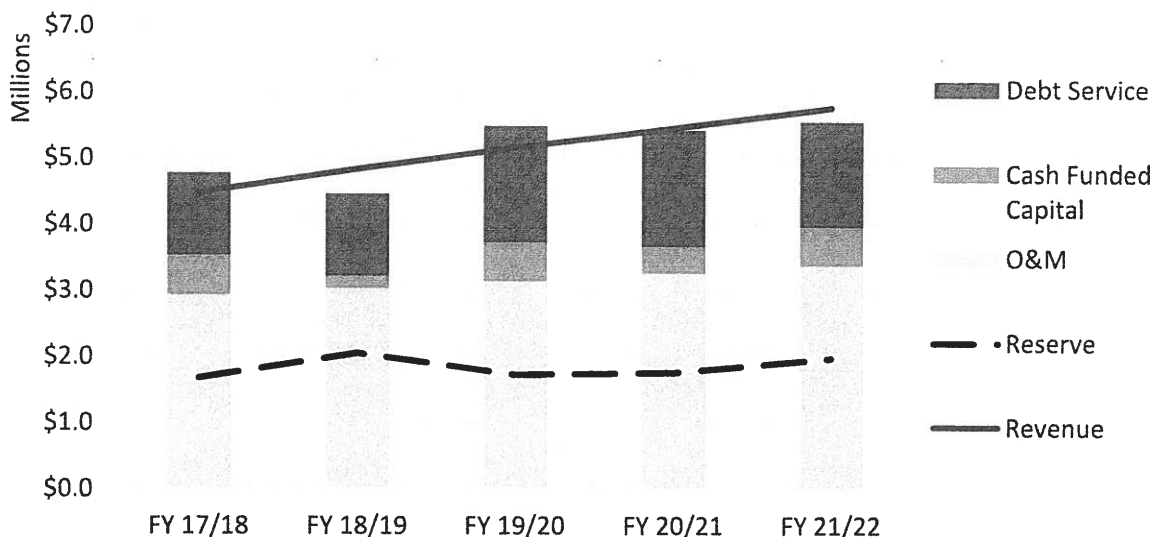


Table 9: Water Cash Flow Projection

Item	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Reserves					
Beginning Unrestricted Balance	\$1,973,501	\$1,678,279	\$2,051,591	\$1,728,846	\$1,761,498
Revenue Escalation					
Rate Revenue Increase	6.0%	6.0%	5.0%	4.0%	4.0%
Revenues					
Rate Revenue	\$4,129,000	\$4,455,914	\$4,807,193	\$5,135,674	\$5,432,746
Additional Rate Revenue	247,740	267,355	240,360	205,427	217,310
Timing Adjustment*	-123,870				
Other Revenue	216,500	102,500	102,500	102,500	102,500
Interest on Reserves	<u>\$4,934</u>	<u>\$4,196</u>	<u>\$5,129</u>	<u>\$4,322</u>	<u>\$4,404</u>
Total Revenue	\$4,474,304	\$4,829,965	\$5,155,182	\$5,447,923	\$5,756,960
Expenses					
Operating Expense	\$2,926,503	\$3,027,565	\$3,139,448	\$3,255,548	\$3,376,027
Existing Debt Service	1,243,023	1,242,888	1,242,369	1,241,069	1,072,599
New Debt Service	<u>\$0</u>	<u>\$0</u>	<u>\$515,000</u>	<u>\$515,000</u>	<u>\$515,000</u>
Total Expenses	\$4,169,526	\$4,270,453	\$4,896,817	\$5,011,617	\$4,963,626
Net Operating Revenues	\$304,778	\$559,511	\$258,365	\$436,306	\$793,334
Capital					
Debt Revenue ¹			\$6,500,000	\$700,000	
Capital Expense	<u>\$600,000</u>	<u>\$186,200</u>	<u>\$7,081,110</u>	<u>\$1,103,654</u>	<u>\$579,111</u>
Cash Funded Capital	-\$600,000	-\$186,200	-\$581,110	-\$403,654	-\$579,111
Net Revenues	-\$295,222	\$373,311	-\$322,745	\$32,652	\$214,223
Ending Unrestricted Balance	\$1,678,279	\$2,051,591	\$1,728,846	\$1,761,498	\$1,975,720
Target Balance**	<u>\$1,463,252</u>	<u>\$1,513,783</u>	<u>\$1,569,724</u>	<u>\$1,627,774</u>	<u>\$1,688,014</u>
Variance from Target	\$215,028	\$537,808	\$159,122	\$133,724	\$287,707

*Based on January 1 rate adoption

**BWA recommends the target balance be 50% of operating expenses

2.6 Cost of Service

Water utilities have used a wide range of approaches or perspectives for allocating and recovering their costs for providing service, and these costs are most commonly recovered from a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges varies for each agency. They should be proportional to each system's expenditures and must not exceed the cost of providing service. A higher level of fixed charges provides better revenue stability and less dependence on variable sales. On the other hand, higher dependence on volumetric revenues provides a greater conservation incentive.

Depending on perspective, the same costs can reasonably be allocated 100 percent to fixed revenue recovery, 100 percent to variable rate recovery, or to some combination of the two. For example, debt service used to fund water treatment facilities can legitimately be treated as a) a fixed annual cost that should be recovered from fixed charges, b) a cost related to providing water supply to meet customer demand and therefore a cost that should be recovered from variable rates, or c) a cost that can be recovered from both fixed and variable rates in recognition of the two alternative perspectives.

Many of the utility's costs are variable costs that vary by water consumption including personnel, supplies, and utilities. However, a portion of these variable costs can reasonably be apportioned to fixed rate recovery, and vice-versa with fixed costs. For example, a share of the fixed cost of salaries related to water production can reasonably be recovered from usage-based charges as these costs are incurred to provide water supply to meet customer demand. Likewise, debt service payments may be fixed annual costs, but it is reasonable to recover some of these costs from usage-based rates as the costs are incurred to fund infrastructure that will improve the water delivery system.

While there is no single correct approach, BWA believes that costs should be allocated within a reasonable range of fixed and variable allocation that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

Meter capacity ratios provide a basis for charging customers proportional to the capacity that is reserved for them in the water system. Larger meters have the ability to place a greater demand on the water system and are therefore charged based on that potential demand. Meter ratios are widely used in California rate setting and are consistent with meter ratios adopted by the California Public Utility Commission for private water companies. The fixed charges for larger meters are determined by multiplying the base charge by the corresponding 1" EDU. This establishes a fixed cost per account.

Table 10 shows a breakdown of the water utility's expenses and how they are allocated. The proportional allocation is then applied to the rate revenue requirement so that the rates are proportional to the service provided.

Table 10: Allocation of Water System Expenses and Revenues to Fixed & Variable Costs

Allocation Category	Amount	Customer	Capacity	Volume	Total
Maintenance	\$572,886		30%	70%	100%
Administration	\$1,857,006	15%	15%	70%	100%
Volume Only	\$385,189			100%	100%
Utilities	\$168,000	10%	10%	80%	100%
Conservation	\$44,484			100%	100%
Capital	\$642,930		20%	80%	100%
Debt	\$1,757,369		20%	80%	100%
	Functional Allocation \$	\$295,351	\$947,277	\$4,185,236	\$5,427,864
	Functional Allocation %	5.00%	17.00%	78.00%	100%
	Revenue Requirement	\$218,837	\$744,046	\$3,413,857	\$4,376,740

To recover the allocated costs proportionally to the service provided, a unit cost must be derived. Critical to this step is using the unit which relates to the function. Fixed costs are recovered either per customer or per unit of capacity (EDU). Fixed costs which are related to the number of customers were allocated to the customer category. Fixed costs which are related to the size of the system were allocated to the capacity category. Costs reasonably recovered volumetrically were allocated to the volume category. Volume costs are recovered per unit of volume (HCF). The following table shows the allocation units and total revenue requirement by function. The revenue requirement divided by the demand allocation units in a given category provides each category's unit rate.

Table 11: Allocation Units by Customer Class and Function

Allocation Units	Customer	Capacity	Volume
	<i>Customer</i>	<i>EDU</i>	<i>HCF</i>
Demand Allocation Units	5,428	6,050	1,017,620
Revenue Requirement	<u>\$218,837</u>	<u>\$744,046</u>	<u>\$3,413,857</u>
Charge	\$40.32	\$122.98	\$3.36

2.7 Water Rate Structure Recommendations

BWA evaluated the City’s water rate structure for equity and compliance with the substantive provisions of Proposition 218. Rate structure recommendations listed below incorporate input received from staff.

2.7.1 Fixed Service Charge Recommendations

The current fixed charge is currently the same for all customers. BWA recommends that the capacity portion of a customer’s fixed charge be based on their meter size. Meter size is used as a proxy to estimate the demand that each customer can place on the water system. A significant portion of a water system’s design and, in turn, the utility’s operating and capital costs are related to meeting capacity requirements. The fixed charge is levied regardless of water consumption and recognizes that even when a customer does not use any water the City incurs fixed costs by maintaining the readiness to serve each connection.

shows water meter flow rates and meter ratios which represent capacity. An equivalent demand unit (EDU) is the ratio of any meter’s safe maximum flow to that of a 1” meter’s. The safe maximum flow is based on the American Water Works Association’s meter service equivalent standards.

The fixed meter rates through FY 2021-22 shown in Table 12 are projected to be sufficient to meet revenue requirements. To make the transition to fixed rates based on meter size less of a financial burden to the City’s customers, BWA recommends phasing in the rates over a three-year period, ending in FY 19-20. Under Proposition 218, the rates shown below are the maximum rates that the City can enact each year. The City may choose to adopt rates that are lower than those shown based upon an annual review of the water utility’s finances to ensure that revenues are in line with expenses.

Table 12: Proposed Fixed Meter Rates

Fixed Rates	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
<i>Meter Size</i>	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
1" or below		\$13.06	\$14.12	\$15.16	\$15.77	\$16.41
1 1/2"		16.86	21.72	26.57	27.64	28.75
2"		21.42	30.84	40.24	41.85	43.53
3"		33.59	55.18	76.75	79.82	83.02
4"		47.27	82.54	117.81	122.53	127.44
6"		\$85.29	\$158.58	\$231.88	\$241.16	\$250.81
All Meters	\$12.00					

2.7.2 Water Variable Charge Recommendations

Bartle Wells is recommending a change from the current three-tier rate structure to a uniform rate. A uniform rate will reflect the uniform cost of raw water from the Imperial Irrigation District (IID). IID is the only source of water for the City. The uniform rate will also make water revenues less variable by reducing the proportion of revenue recovered from irrigation use which tends to be less consistent.

Table 13 shows the proposed volumetric rates to be used for all customer classes over the next five years. Under Proposition 218, the rates shown below are the maximum rates that the City can enact each year. The City can adopt rates that are lower than those shown based upon an annual review of the water utility’s finances to ensure that revenues are in line with expenses.

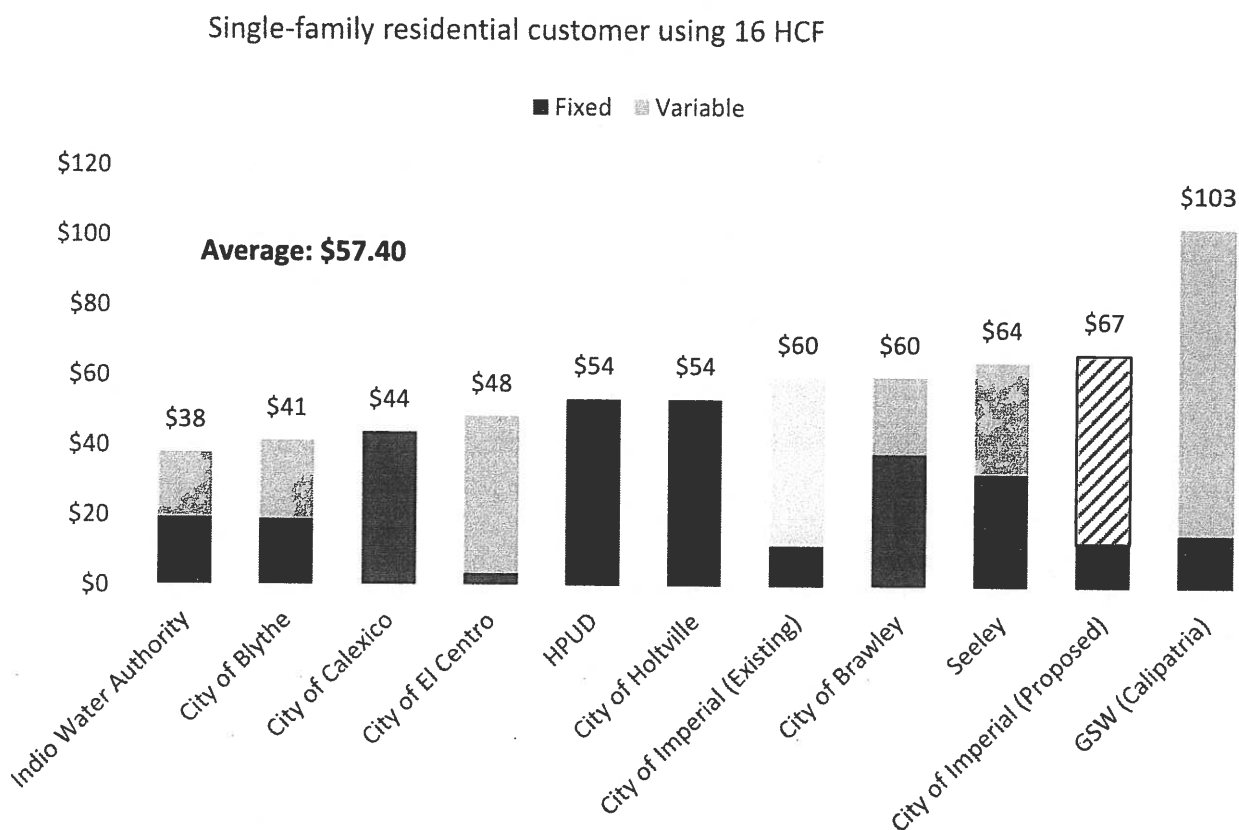
Table 13: Proposed Volumetric Water Rates

Volumetric Rates	Tiers FY 16-17		Tiers FY 17-18		FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Current</i>	<i>Current</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Residential								
Tier 1	0-30 HCF	\$2.99	All HCF	\$3.36	\$3.57	\$3.75	\$3.90	\$4.06
Tier 2	31-35 HCF	\$3.29						
Tier 3	>35 HCF	\$3.84						

2.8 Regional Water Rate Survey

The following chart compares the water bill for a typical single-family home to those of other regional agencies. While the City's proposed water rates are near the upper end of the chart, they are still close to the overall average. Rates can vary widely from agency to agency due to a multitude of factors. The survey shown is for comparative purposes only.

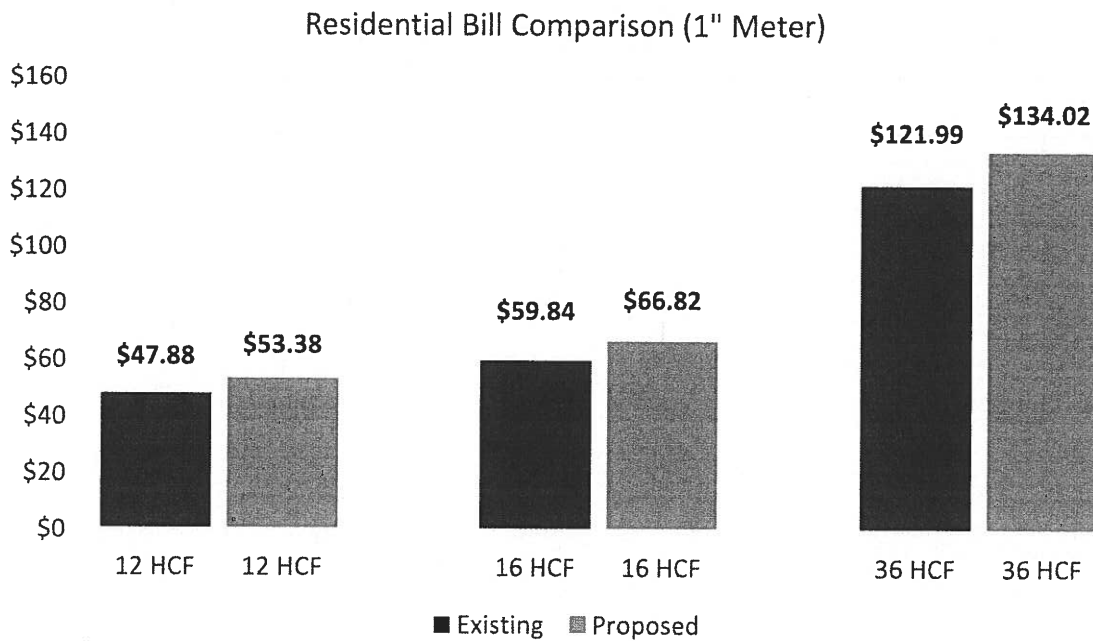
Figure 3: Single Family Residential Water Rate Survey



Single Family Residential Bill Impacts

While the overall recommended increase in FY 2017-18 is 6.0%, the individual impact to customers will vary due to the rate structure change. The figure below exhibits the monthly impacts to a median bill (12 HCF), an average bill (16 HCF), and a summer bill (36 HCF). In FY 2017-18, some bills will increase proportionally more than the overall revenue increase. This is due to the reduction in tiers and reducing outside City rates to be the same as those inside the City.

Figure 4: Single Family Residential Monthly Bill Comparisons



3 SEWER FINANCES & RATES

3.1 Sewer Financial Overview

Bartle Wells Associates conducted an independent evaluation of sewer enterprise finances. Key observations include:

- Expenses are projected to exceed revenues without revenue increases in the following year.
- Sewer rates have not been increased since FY 2013-14. City staff has strived to keep costs down but costs are still subject to inflation.
- The large amount of capital repair and replacement projects will require additional funds to maintain prudent reserves.
- Additional debt financing may be needed to help fund capital improvement projects in upcoming years.
- The water enterprise has only a moderate amount of outstanding debt. Rates will need to be raised to maintain a debt coverage ratio above 1.25.
- Sewer expenses were determined by developing projections based on audits, budgets, and up to date information provided by the City. Projected expenses and minimum reserve fund targets were used to develop annual revenue requirements.

3.2 Current Monthly Sewer Rates

The City has two classes of wastewater customers:

- **Residential single-family and multi-family** customers pay a fixed amount per dwelling unit and a volumetric rate for water use in excess of 36 HCF in a billing period. Currently, the monthly fixed cost for residential sewer service is \$48.40 per EDU and the volumetric rate is \$0.93 per HCF for all water use over 36 HCF in a billing period.
- **Commercial** customers pay a fixed amount per connection and a volumetric rate for water use in excess of 21 HCF in a billing period. Currently, the monthly fixed cost for residential sewer service is \$48.40 per connection and the volumetric rate is \$2.42 per HCF for all water use over 21 HCF in a billing period.

3.3 Current Sewer Accounts

Table 14 shows the current number of sewer accounts.

Table 14: Current Sewer Accounts

Class	Customers
Residential	5,008
Multi-Family*	267
Commercial	212
Total	5,487

*Multi-Family customer count is based in number of dwelling units

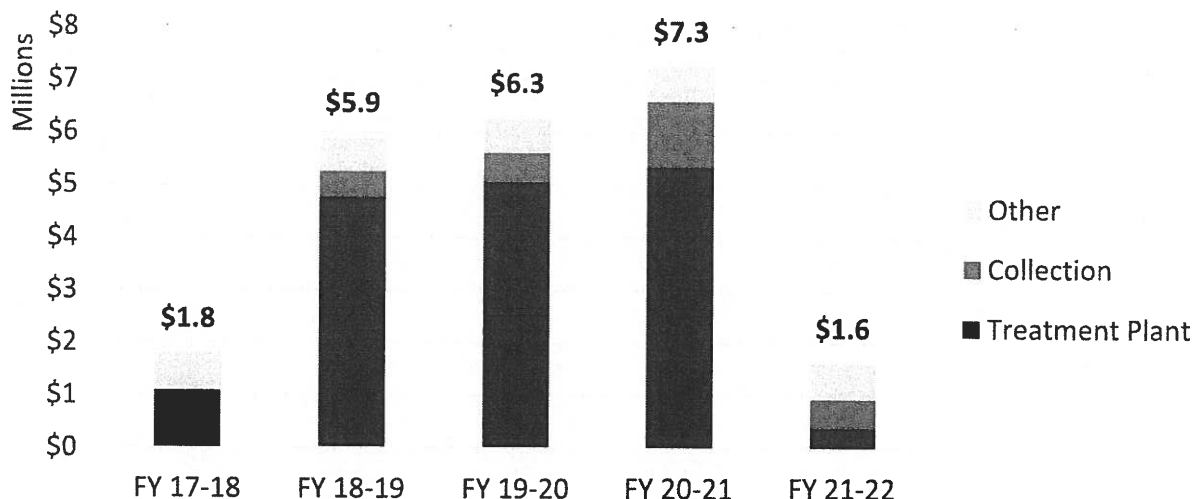
3.4 Financial Challenges / Key Drivers of Rate Increases

Going forward, the City’s sewer enterprise is facing several financial challenges that will require sewer rate increases over the next 5 years. Key drivers of rate increases are summarized below.

3.4.1 Capital Improvements / Aging Infrastructure

The City’s sewer system requires a significant amount of repair and improvement projects. The largest of these projects is a new sewer treatment plant projected to cost \$16.7 million. The new plant will replace the current one which has served long past its useful life. Accounting for construction cost inflation, the City anticipates funding approximately \$22.8 million of capital improvement projects over the next five years, an average of \$4.6 million per year.

Figure 5: Projected Sewer Capital Spending



3.4.2 Ongoing Operating Cost Inflation

The City faces ongoing operating cost inflation due to annual increases in a range of expenses such as utilities, supplies, salaries, benefits, etc. Since 1996, the average annual CPI for all urban customers has been 2.3%, whereas the average for the Construction Cost Index Engineering News Record (CCI ENR) 20-Cities average is 3.1%. BWA uses a 3.0% operating cost inflation assumption. Appendix B includes a detailed description of water expense projections through FY 2021-22.

3.4.3 Sewer Reserve Funds

Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and emergency capital repairs.

3.4.4 Sewer Debt Coverage

The City will need the combined increases in FY 17-18 and FY 18-19 to issue debt and maintain a debt coverage ratio above 1.25x. Bartle Wells recommends maintaining at minimum a 1.25x debt coverage ratio. This will help the City maintain a strong financial position and be better positioned to obtain additional financing.

3.5 Sewer Enterprise Financial Projections

The water cash flow projections incorporate the latest information available as well as reasonable, prudently conservative assumptions. Key assumptions include:

Growth Assumptions

- The City has had sustained growth and there are many developments in the works. Based on input from City staff BWA is assuming 100 new connections per year.
- Future rate revenue is projected to increase with growth.

Revenue Assumptions

- Based on the financial projections the City will need financing in FY 2019-20 to fully fund the sewer system's capital improvement needs.
- Investment income is estimated based projected reserve levels. Future projections are estimated based on conservative interest earning rates; actual amounts will vary based on reserves and future interest earning rates.
- Other revenues are projected to stay constant for the study period.

Expense Assumptions

- Operating and maintenance costs are based on the 2017-18 budget and escalate at the annual rate of 3.0% to account for future cost inflation.
- Based on the City’s compensation information, salary costs are projected to grow at 5% and benefit costs are projected to grow at 7% annually.
- The City is projecting utility (gas and electric) costs to increase at 5.0% annually.
- Capital expenditures include \$22.8 million in projects through FY 2021-22. Capital cost inflation is projected to be 3.0% for the study period.

Revenue Increases

Based on the above assumptions BWA recommends the following rate revenue increases. The following table shows the debt service coverage ratio with the recommended increases.

Table 15: Recommended Sewer Rate Revenue Increases

Revenue Escalation	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Rate Revenue Increase	13.0%	13.0%	4.0%	4.0%	4.0%
Debt Coverage Ratio (Target 1.25)	2.02	1.29	1.39	1.50	1.61

The recommended annual rate increases begin in FY 2017-18 and are needed to fund annual operating and capital expenses, provide healthy debt service coverage and maintain prudent reserves.

With the large capital expenditures projected in the next five years BWA recommends using capacity fee revenues to mitigate the expense of the projects. The water capacity fund cashflow is shown in Table 16.

Table 16: Sewer Capacity Cash Flow Projection

Capacity Fund	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Beginning Capacity Balance	\$2,594,466	\$1,542,052	\$89,638	\$62,224	\$64,810
Water Capacity Fees	147,586	147,586	147,586	147,586	147,586
Contract Service	1,200,000				
Cash Funded Capital	\$0	\$1,600,000	\$175,000	\$145,000	\$145,000
Net Capacity Income	-\$1,052,414	-\$1,452,414	-\$27,414	\$2,586	\$2,586
Ending Capacity Balance	\$1,542,052	\$89,638	\$62,224	\$64,810	\$67,396

Figure 6 depicts the projected cash flow with increases. The cash flow is shown in detail in Table 17. The recommended annual rate increases begin in FY 2017-18 and are needed to fund annual operating and capital expenses, provide healthy debt service coverage and maintain prudent reserves.

Figure 6: Sewer Utility Projected Revenues & Expenses

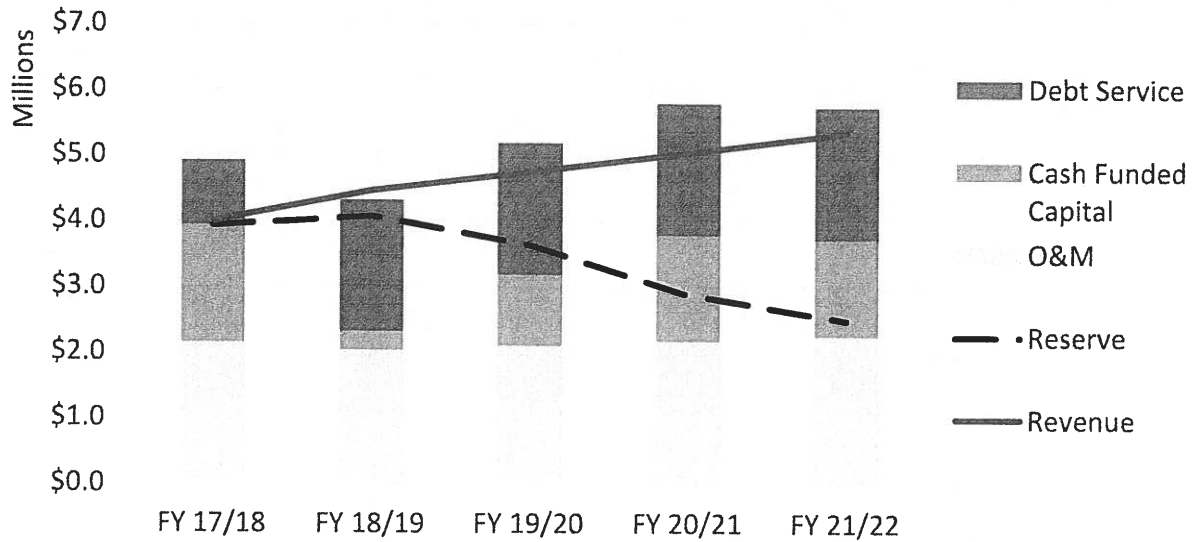


Table 17: Sewer Cash Flow Projection

Item	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22
Reserves					
Beginning Unrestricted Balance	\$3,982,501	\$3,924,965	\$4,071,467	\$3,627,105	\$2,874,947
Revenue Escalation					
Rate Revenue Increase	13.0%	13.0%	4.0%	4.0%	4.0%
Revenues					
Rate Revenue	\$3,403,700	\$3,933,933	\$4,544,505	\$4,829,411	\$5,129,839
Additional Rate Revenue	442,481	511,411	181,780	193,176	205,194
Timing*	-221,241				
Other Revenue	359,500	4,500	4,500	4,500	4,500
Interest on Reserves	<u>\$9,956</u>	<u>\$9,812</u>	<u>\$10,179</u>	<u>\$9,068</u>	<u>\$7,187</u>
Total Revenue	\$3,994,397	\$4,459,657	\$4,740,963	\$5,036,155	\$5,346,720
Expenses					
Operating Expense	\$2,145,155	\$2,026,938	\$2,096,342	\$2,168,207	\$2,242,623
Existing Debt Service	986,510	984,150	985,210	985,670	993,520
New Debt Service	<u>\$0</u>	<u>\$1,023,000</u>	<u>\$1,023,000</u>	<u>\$1,023,000</u>	<u>\$1,023,000</u>
Total Expenses	\$3,131,665	\$4,034,088	\$4,104,552	\$4,176,877	\$4,259,143
Net Operating Revenues	\$862,732	\$425,569	\$636,411	\$859,278	\$1,087,577
Capital					
Debt Revenue**		\$4,000,000	\$5,000,000	\$5,500,000	
Capital Expense	<u>\$1,783,000</u>	<u>\$4,279,067</u>	<u>\$6,080,774</u>	<u>\$7,111,436</u>	<u>\$1,475,733</u>
Cash Funded Capital	-\$1,783,000	-\$279,067	-\$1,080,774	-\$1,611,436	-\$1,475,733
Net Revenues	-\$920,268	\$146,502	-\$444,362	-\$752,157	-\$388,156
Ending Unrestricted Balance	\$3,924,965	\$4,071,467	\$3,627,105	\$2,874,947	\$2,486,792
Target Balance	<u>\$1,072,578</u>	<u>\$1,013,469</u>	<u>\$1,048,171</u>	<u>\$1,084,104</u>	<u>\$1,121,312</u>
Variance from Target	\$2,852,387	\$3,057,998	\$2,578,934	\$1,790,844	\$1,365,480

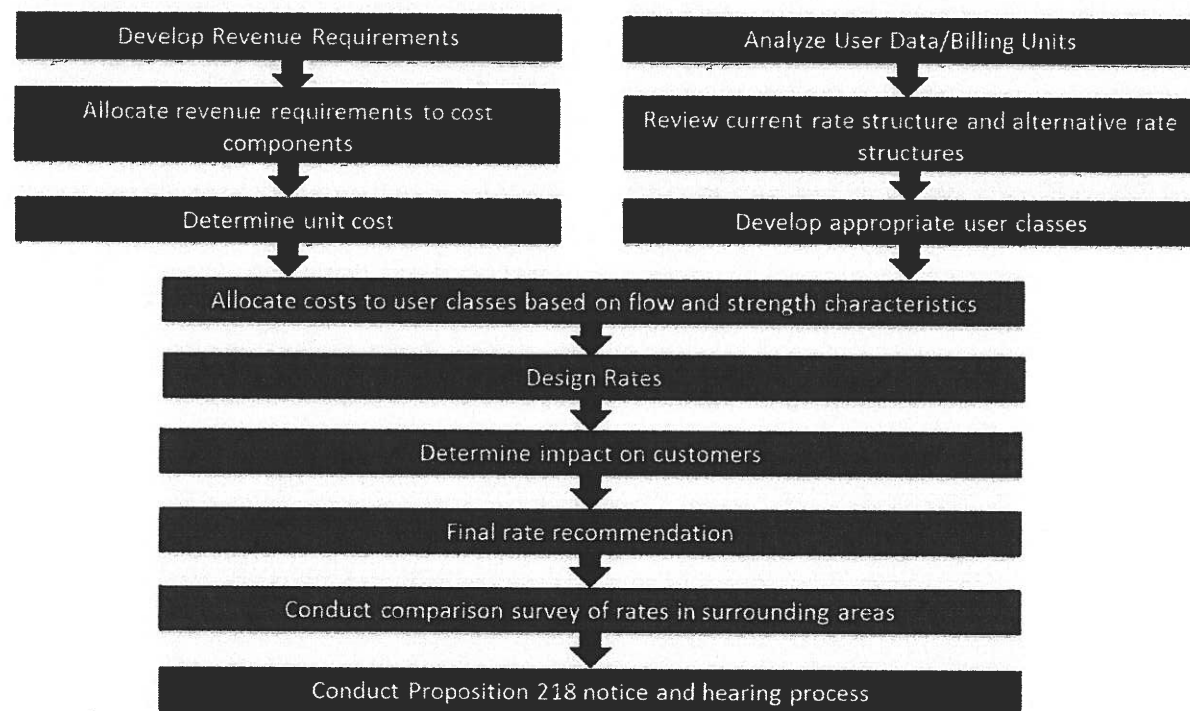
*Based on January 1 rate adoption

**Reflects timed use of funds from financing

3.6 Cost of Service

This section details the development of the City’s sewer rates and compliance with Proposition 218 through a comprehensive cost of service and rate design study process as shown in the following figure.

Figure 7: Comprehensive Cost of Service Study Process



While there is no single correct approach for cost allocation, BWA believes that costs should be allocated within a reasonable range that reflects both a) underlying cost causation, to the extent such causation can reasonably be determined or estimated, and b) the policy preferences of the agency in cases where a range of reasonable approaches can be justified.

The cost of service process builds on the financial plan analysis and assigns sewer system costs to functional cost components (accounts, flow, BOD (biochemical oxygen demand), and TSS (total suspended solids)). This process is intended to proportionately allocate costs to each customer based on how he or she takes sewer service.

Table 18 shows a breakdown of the water utility’s expenses and how they are allocated. The proportional allocation is then applied to the rate revenue requirement so that the rates are proportional to the service provided.

Table 18: Allocation of Water System Expenses and Revenues to Fixed & Variable Costs

Allocation Category	Amount	Flow	BOD	TSS	Total
Maintenance	\$348,777	60%	20%	20%	100%
Administration	\$1,429,584	60%	20%	20%	100%
Treatment	\$34,131		50%	50%	100%
Utilities	\$214,446	60%	20%	20%	100%
Capital	\$1,143,602	60%	20%	20%	100%
Debt	\$1,904,210	60%	20%	20%	100%
	Functional Allocation \$	\$3,024,372	\$1,025,189	\$1,025,189	\$5,074,751
	Functional Allocation %	60%	20%	20%	100.00%
	Revenue Requirement	\$2,307,709	\$769,236	\$769,236	\$3,846,181

3.7 Commercial Customer Classification

Table 19 shows the distinct types of businesses that will fall under each strength category. These classifications are based on the State Water Resource Control Board Guidelines for Wastewater Agencies. Low, Medium and High Strength Commercial users have been classified based on the amount of sewer flow Biochemical Oxygen Demand, and Total Suspended Solids that each type of business creates.

Low strength users have a lesser effect on the sewer system than a typical single-family home. This may be due to factors contributing to low sewer flow, BOD and TSS, such as reduced operating hours or fewer occupants.

Medium strength users are based on the same qualifications and rates for typical residential users because their impact on the sewer system resembles that of a typical single-family home in terms of sewer flow, BOD, and TSS.

High strength commercial has a higher impact on the sewer system than a single-family residence, demanding more sewer treatment due to higher sewer flow, BOD, and TSS.

Table 19: Proposed User Classifications

Proposed User Classifications into Low, Medium/Domestic, and High Strength Dischargers

Low Strength	<ul style="list-style-type: none"> Banks & Financial Institutions Barber Shops/Hair Salons (hair cutting only) Post Offices/Government Retail Stores Libraries Schools Churches, Halls & Lodges
Medium/Commercial/ Domestic Strength	<ul style="list-style-type: none"> Residential - All Appliance Repair Beauty Shops (hair cutting w/additional treatments) Dry Cleaners Nail Salons Pet Groomers Commercial Laundromats Bars & Taverns Tasting Rooms Breweries (with Pretreatment) Hospitals - General, Convalescent & Veterinarian Hotels, Motels, B&Bs, and Vacation Rentals Offices - Business and Professional Offices - Medical/Dental Pools with Restrooms (Clubhouse) Theaters Warehouses Car Washes High Tech Medical Manufacturing Light Manufacturing/Industrial Gym or Health Club Machine Shops Service Stations, Garages, Auto Repair Shops Mini Marts - W/O Dish Washer or Garbage Disposal Mini Mart with Gas Pumps - W/O Dish Washer or Garbage Disposal Spa with Various Beauty Treatments Parking Garages
High Strength	<ul style="list-style-type: none"> Restaurants Coffee Shops Ice Cream Parlors Catering Eatery Bakeries Butcher Shops Fish Market/Shop Markets - with Dish Washer or Garbage Disposal Markets - with Bakeries or Butcher Shops Mini Marts - with Dish Washer or Garbage Disposal Breweries (without Pretreatment) Wineries Market Dairies (milk producers, yogurt, ice cream maker) Specialty Foods Manufacturing (e.g., cheese or olive oil maker)

Source: Based on State Water Resources Control Board's Revenue Program Guidelines for Wastewater Agencies

3.8 Flow and Loadings

BWA estimated the flows and loadings of each customer class based on the projected indoor use of customers in each class. Single-family and multi-family customers' indoor use is based on average winter use while 80% of total commercial use is assumed to be indoor. The strength of each class is based on guidelines produced by the State Water Resource Control Board Guidelines for Wastewater Agencies. The total estimated strength of each class is based on the projected, total class, indoor flow, multiplied by the strength characteristics the class. Detailed flow and loading analysis is in Table 3 of Appendix B.

Table 20: Sewer Allocation Units and Revenue Requirements by Class

Class	Flow	BOD	TSS	Revenue Requirement
Residential	841,344	1,313,309	919,316	\$3,392,281
Multi-family	38,448	60,016	42,011	\$155,022
Nonresidential				
Low	5,721	4,644	4,644	\$19,666
Medium	66,125	103,218	72,253	\$266,613
High	2,327	7,264	4,359	\$12,599

Table 21: Sewer Allocation Units and Unit Rate

Allocation Units	Flow	BOD	TSS
Demand Units	953,965	1,488,451	1,042,583
Revenue Requirement	<u>2,307,709</u>	<u>769,236</u>	<u>769,236</u>
Unit Rate	\$2.42	\$0.52	\$0.74

3.9 Sewer Rate Design Recommendations

Rate design involves developing a rate structure that proportionately recovers costs from sewer system customers. Final rate recommendations are designed to (a) fund the utility's short- and long-term costs of providing service; (b) proportionately allocate costs to all customers and customer classes; and (c) comply with the substantive requirements of Proposition 218.

3.9.1 Residential Recommendations

BWA recommends that single-family and multi-family residential customers pay only a monthly fixed charge. The fixed charge reflects the amount of sewer discharge from a home (indoor use). Basing the rate on volumetric use will recover additional cost from customers who are likely irrigating and therefore not putting any additional load on the sewer system.

BWA also recommends having the multi-family charge be less than the single-family charge because multi-family units have less discharge than single family homes. BWA also recommends that multi-family customers with more than eight units be considered commercial customers.

3.9.2 Commercial Recommendations

BWA recommends nonresidential customers pay the greater of the single-family residential fixed charge or a strength based, volumetric rate. BWA believes the recommended structure will better reflect the cost of service and improve revenue stability. The minimum charge is based on the reasoning that the City has certain fixed charges for every connection to the system. The strength based, volumetric rate reflects specific load each commercial customer places on the system.

3.10 Sewer Rate Calculation

The residential rate calculations are simply the revenue requirements divided by the number bills. The commercial rates based on strength factors are calculated by dividing the class’s revenue requirement by its projected indoor volume. The volumetric revenue requirements and the volume used in the rate calculations had to be adjusted to account for the customers who were going to pay the minimum charge.

Table 22: Proposed Sewer Rate Calculation

Residential	Revenue Requirement	Customers	Annual Fixed	Monthly Fixed		
	\$3,392,281	5008	\$677.37	\$56.45		
	\$155,022	267	\$580.60	\$48.39		
Nonresidential	Revenue Requirement	Customers	Volumetric Revenue Requirement	Volume Over Minimum	Volume Over Minimum	Rate (HCF)
Low Strength	\$19,666	23	\$4,086.22	37%	2,610	\$1.57
Domestic Strength	\$266,613	184	\$141,971.30	61%	50,420	\$2.82
High Strength	\$12,599	5	\$9,211.82	100%	2,909	\$4.34

3.11 Current and Proposed Sewer Rates

The current rates and recommended rate increases are shown on Table 23. Under Proposition 218, the sewer rates shown on Table 23 are the maximum rates that the City can enact each year. The City can adopt rates that are lower than those shown based upon an annual review of the sewer utility's finances to ensure that revenues are in line with expenses.

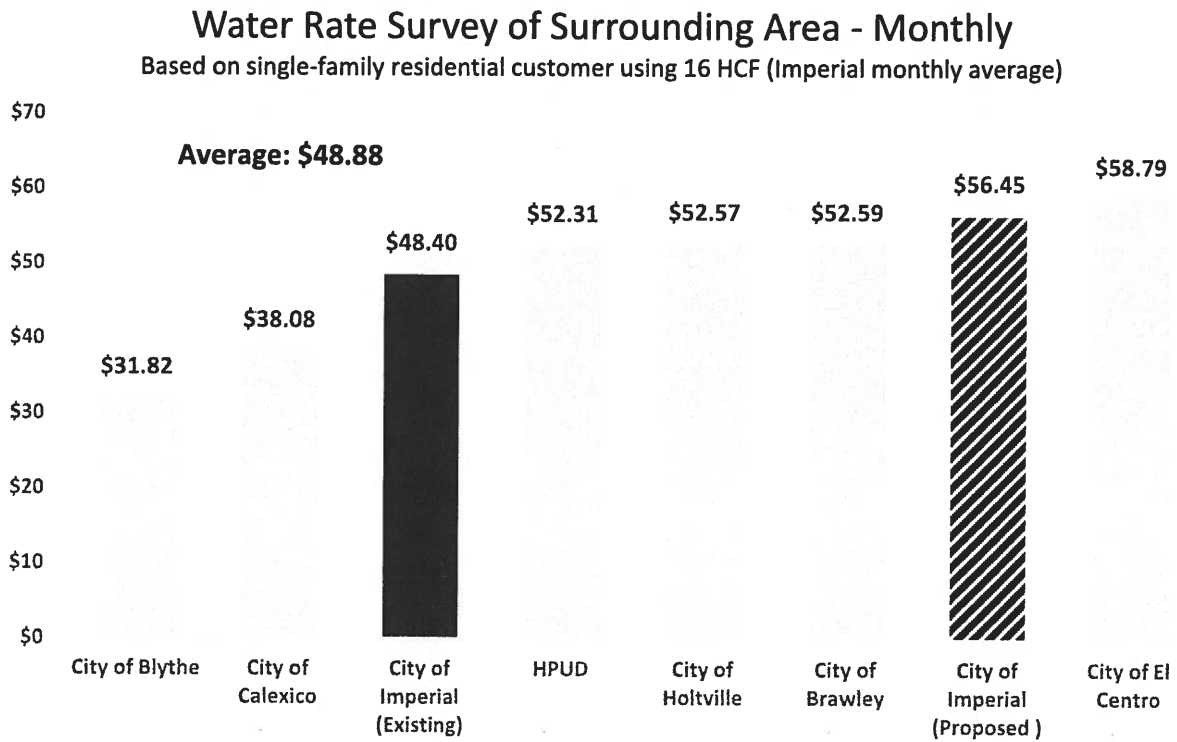
Table 23: Proposed Sewer Rate Increases

Volumetric Rates	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Single-Family Residential						
Volumetric (>36 HCF)	\$0.93					
Fixed	\$48.40	\$56.45	\$60.41	\$64.64	\$67.23	\$69.92
Multi-Family Residential						
Volumetric (>36 HCF)	\$0.93					
Fixed (Per Unit)	\$48.40	\$48.39	\$51.78	\$55.41	\$57.63	\$59.94
Commercial						
Volumetric (>21 HCF)	\$2.42					
Fixed Charge	\$48.40					
Minimum Charge		\$56.45	\$60.41	\$64.64	\$67.23	\$69.92
Volumetric (All Use)						
Low Strength		\$1.57	\$1.68	\$1.80	\$1.88	\$1.96
Domestic Strength		\$2.82	\$3.02	\$3.24	\$3.37	\$3.51
High Strength		\$4.34	\$4.65	\$4.98	\$5.18	\$5.39

3.12 Regional Sewer Rate Survey

The following chart compares the sewer bills for a typical single-family home to those of other regional agencies. Rates can vary widely from agency to agency due to a variety of factors.

Figure 8: Monthly Residential Sewer Rate Survey of Regional Agencies



The City’s sewer rates are projected stay near the average of the surveyed utilities after the recommended rate increases.

4 CONCLUSIONS AND RECOMMENDATIONS

This water and sewer rate study report presents a comprehensive review of the City of Imperial's water and sewer revenue requirements, cost allocations, and rate structures. The City last conducted a comprehensive cost of service review in 2009. Since then, the City has identified needed capital improvements and experienced substantial growth. These factors were considered in the rate study to fairly develop rates for customers.

4.1 Conclusions

The City practices sound financial planning that has provided for the financial health of the water and sewer enterprises. Historically, the City has gradually increased rates to keep up with inflationary cost increases and to accumulate reserves. This allows the City to avoid rate spikes when new costs are incurred. Unfortunately, the City is facing several years of unusually high capital spending due to the water and wastewater treatment plant needing major upgrades and more than inflationary increases are needed. However, the City's commitment to having financially sound utilities providing reliable, high quality water and sewer service will benefit the community many years into the future.

4.2 Recommendations

BWA recommends that the City adopt the rates shown in this report. Rates were developed as part of a collaborative process that included a workshop with the City Council and closely working with City staff. BWA also recommends the utilities charge the City for services and charge customers outside the City the same rates as those inside the City limits.

At minimum, BWA recommends that the City review and update its cost allocation every five years and/or concurrent with Master Plan Updates. Proposition 218 allows public agencies to adopt rates over a five-year planning horizon. Any further rate increases must be supported by a cost of service analysis.

APPENDIX A

Water Rate Study Tables

City of Imperial Water Rate Study 2017



September 20, 2017



BARTLE WELLS ASSOCIATES
Independent Public Finance Advisors

**Table A
Imperial Water
Recommended Water Rates**

Volumetric Rates	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Proposed Structure						
All Demand		\$3.36	\$3.57	\$3.75	\$3.90	\$4.06
Existing Structure						
Tier 1 (0-30 HCF)	\$2.99					
Tier 2 (31-35 HCF)	\$3.29					
Tier 3 (36+ HCF)	\$3.84					
Fixed Rates						
Meter Size	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
Proposed Structure						
1" or below		\$13.06	\$14.12	\$15.16	\$15.77	\$16.41
1 1/2"		16.86	21.72	26.57	27.64	28.75
2"		21.42	30.84	40.24	41.85	43.53
3"		33.59	55.18	76.75	79.82	83.02
4"		47.27	82.54	117.81	122.53	127.44
6"		\$85.29	\$158.58	\$231.88	\$241.16	\$250.81
Existing Structure						
All Meters	\$12.00					

**Table 1
Imperial Water
Customers Data**

Meter Size	Customers	Capacity Factor**	Equivalent Demand Units
1" or below***	5,329.0	1.0	5,329.0
2"	41.0	3.2	131.2
4"	57.0	10.0	570.0
6"	1.0	20.0	20.0
Total	5,428.0		6,050.2

* Customer data as of June 2017 provided by City staff

** Capacity factors based on AWWA operating capacity standards by meter size

*** Meters 1" or below reflect the varying meter sizes in single family homes

Table 2
Imperial Water
Growth Calculations

	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Metered Water Demand					
Demand (HCF)	1,017,620	1,036,028	1,054,437	1,072,845	1,091,253
Demand (AF)	2,336	2,378	2,421	2,463	2,505
Customers	5,428	5,528	5,628	5,728	5,828
Additional Customers ¹	100	100	100	100	100
Total Customers	5,528	5,628	5,728	5,828	5,928
Consumption per Customer	184	184	184	184	184
Growth²	1.84%	1.81%	1.78%	1.75%	1.72%
Raw Water Purchase Cost					
Purchase Amount (HCF)	2,177,995	2,217,394	2,256,794	2,296,193	2,335,592
Purchase Amount (AF)	5,000	5,090	5,181	5,271	5,362
\$/AF	\$20.00	\$20.60	\$21.22	\$21.85	\$22.51
Cost Escalation		3.0%	3.0%	3.0%	3.0%
Total Water Cost	\$100,000	\$104,863	\$109,928	\$115,203	\$120,695
Growth³	5.26%	4.86%	4.83%	4.80%	4.77%
Chemical Cost					
Treated AF	5,000	5,090	5,181	5,271	5,362
\$/AF	\$46.00	\$47.38	\$48.80	\$50.27	\$51.77
Cost Escalation		3.0%	3.0%	3.0%	3.0%
Total Chemical Cost	\$230,000	\$241,185	\$252,835	\$264,967	\$277,598
Growth³		4.86%	4.83%	4.80%	4.77%

¹Assumption used in City Budget

²Escelation factor used to escalate revenue (demand growth with no inflation)

³Escelation used in factor including inflation and demand growth

Table 3
Imperial Water
Projected Operating Expenses

Cost Escalation	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
General Inflation Factor	General			3.0%	3.0%	3.0%	3.0%
No Escalation	None			0.0%	0.0%	0.0%	0.0%
Linked to Calculation	Linked						
Utilities	Utilities			5.0%	5.0%	5.0%	5.0%
Benefits	Benefits			7.5%	5.0%	5.0%	5.0%
Salary	Salary			5.0%	3.5%	3.5%	3.5%

Expenses¹	Category	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
			<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
<u>WATER OPERATIONS EXPENSES:</u>								
<u>TOTAL SALARIES & BENEFITS</u>								
SALARIES-REGULAR	Administration	Salary	\$575,000	\$781,128	\$820,184	\$848,891	\$878,602	\$909,353
OVERTIME	Administration	Salary	44,000	30,000	31,500	32,603	33,744	34,925
COURT TIME / STANDBY TIME	Administration	Salary	21,000	18,000	18,900	19,562	20,246	20,955
CERTIFICATE PAY	Administration	General	5,400	7,800	8,034	8,275	8,523	8,779
UNIFORM ALLOWANCE	Administration	General	16,000	15,000	15,450	15,914	16,391	16,883
RETIREMENT	Administration	Benefits	36,900	55,286	59,432	62,404	65,524	68,800
FICA/MC	Administration	Benefits	48,500	64,118	68,927	72,373	75,992	79,791
WORKER'S COMP	Administration	Benefits	65,000	65,000	69,875	73,369	77,037	80,889
UNEMPLOYMENT INSURANCE	Administration	Benefits	4,100	5,939	6,384	6,704	7,039	7,391
HEALTH INSURANCE	Administration	Benefits	81,000	129,570	139,288	146,252	153,565	161,243
VEHICLE ALLOWANCE	Administration	General	\$900	\$1,200	\$1,236	\$1,273	\$1,311	\$1,351
<u>TOTAL OPERATING & ADMINISTRATIVE</u>								
ADVERTISING (INCL LEGAL)	Administration	General	\$500	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251
CONTRACT SERVICE	Administration	General	180,000	250,000	230,000	236,900	244,007	251,327
PROGRAMS - BACKFLOW	Administration	General	18,000	26,500	27,295	28,114	28,957	29,826
GENERAL LIABILITY	Administration	General	200,000	200,000	206,000	212,180	218,545	225,102
M & O IMPROVEMENTS	Maintenance	General	3,000	5,000	5,150	5,305	5,464	5,628
MAINTENANCE OF VEHICLES & EQUIPMENT	Maintenance	General	300,000	401,200	413,236	425,633	438,402	451,554
VEHICLE FUEL	Maintenance	General	20,000	30,000	30,900	31,827	32,782	33,765
PUBLICATION / DUES	Administration	General	75,000	67,000	69,010	71,080	73,213	75,409
RENT OF EQUIPMENT / PROPERTY	Administration	General	500	5,000	5,150	5,305	5,464	5,628
TELEPHONE	Administration	General	7,000	10,000	10,300	10,609	10,927	11,255
TESTING SERVICES	Volume Only	General	33,000	38,000	39,140	40,314	41,524	42,769
CHEMICALS	Volume Only	Linked	180,000	230,000	241,185	252,835	264,967	277,598
TRAINING / EDUCATION	Administration	General	200	9,000	9,270	9,548	9,835	10,130
TRAVEL & MEETINGS	Administration	General	4,200	5,000	5,150	5,305	5,464	5,628
UTILITIES - ELECTRIC	Utilities	Utilities	135,000	160,000	168,000	176,400	185,220	194,481
OFFICE SUPPLIES	Administration	General	8,000	10,000	10,300	10,609	10,927	11,255
CUSTODIAL SUPPLIES	Administration	General	100	2,500	2,575	2,652	2,732	2,814
BANK CHARGE	Administration	General	30,000	25,000	25,750	26,523	27,318	28,138
POSTAGE/FREIGHT	Administration	General	11,000	10,000	10,300	10,609	10,927	11,255
SAFETY/EQUIPMENT/CLOTHING	Administration	General	3,500	4,500	4,635	4,774	4,917	5,065
SMALL TOOLS	Maintenance	General	55,000	10,000	10,300	10,609	10,927	11,255
SPECIAL DEPT SUPPLIES	Maintenance	General	95,000	110,000	113,300	116,699	120,200	123,806
WATER PURCHASES	Volume Only	Growth	\$95,000	\$100,000	\$104,863	\$109,928	\$115,203	\$120,695
<u>WATER CONSERVATION EXPENSES:</u>								
<u>TOTAL SALARIES & BENEFITS</u>								
SALARIES-TEMPORARY	Conservation	Salary	\$0	\$18,000	\$18,900	\$19,562	\$20,246	\$20,955
OVERTIME	Conservation	Salary	1,500	0	0	0	0	0
FICA/MC	Conservation	Benefits	150	1,377	1,480	1,554	1,632	1,714
UNEMPLOYMENT INSURANCE	Conservation	Benefits	5	385	414	435	456	479
HEALTH INSURANCE	Conservation	Benefits	\$0	\$0	\$0	\$0	\$0	\$0

Table 3
Imperial Water
Projected Operating Expenses

Cost Escalation	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
General Inflation Factor	General			3.0%	3.0%	3.0%	3.0%
No Escalation	None			0.0%	0.0%	0.0%	0.0%
Linked to Calculation	Linked						
Utilities	Utilities			5.0%	5.0%	5.0%	5.0%
Benefits	Benefits			7.5%	5.0%	5.0%	5.0%
Salary	Salary			5.0%	3.5%	3.5%	3.5%

Expenses¹	Category	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
			<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Department 5033-Plant Operations								
ADVERTISING (INCL LEGAL)	Conservation	General	\$0	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126
MAINTENANCE OF VEHICLES & EQUIPMENT	Conservation	General	0	750	773	796	820	844
VEHICLE FUEL	Conservation	General	0	3,500	3,605	3,713	3,825	3,939
PUBLICATION / DUES	Conservation	General	0	250	258	265	273	281
TELEPHONE	Conservation	General	0	500	515	530	546	563
TRAINING / EDUCATION	Conservation	General	0	500	515	530	546	563
TRAVEL & MEETINGS	Conservation	General	0	1,000	1,030	1,061	1,093	1,126
OFFICE SUPPLIES	Conservation	General	1,800	5,000	5,150	5,305	5,464	5,628
POSTAGE/FREIGHT	Conservation	General	400	2,000	2,060	2,122	2,185	2,251
SAFETY/EQUIPMENT/CLOTHING	Conservation	General	0	1,000	1,030	1,061	1,093	1,126
SPECIAL DEPARTMENTAL SUPPLIES	Conservation	General	\$0	\$7,500	\$7,725	\$7,957	\$8,195	\$8,441
Total Operating Expenses			\$2,355,655	\$2,926,503	\$3,027,565	\$3,139,448	\$3,255,548	\$3,376,027
% Change from Previous Year			-6.6%	24.2%	3.5%	3.7%	3.7%	3.7%

¹ Based on City of Imperial FY 17-18 budget

**Table 4
Imperial Water
Projected Operating Revenues**

Cost Escalation	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
General Inflation Factor	General			3.0%	3.0%	3.0%	3.0%
No Escalation	None			0.0%	0.0%	0.0%	0.0%
Demand Growth	Demand			1.8%	1.8%	1.7%	1.7%

Revenue		FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
		<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Rate Revenue	Demand	\$4,048,625	\$4,129,000	\$4,455,914	\$4,807,193	\$5,135,674	\$5,432,746
Additional Rate Revenue^{1,2}			\$123,870	\$267,355	\$240,360	\$205,427	\$217,310
Other Revenue							
WATER CONNECTION FEES	None	\$110,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
WATER TURN ON FEE	None	95,000	75,000	75,000	75,000	75,000	75,000
WATER CONSERVATION FINE	None	3,000	1,000	1,000	1,000	1,000	1,000
INTEREST EARNED	None	6,000	4,000	4,000	4,000	4,000	4,000
INSURANCE CLAIMS	None	0	0	0	0	0	0
NOT OTHERWISE CLASSIFIED	None	2,500	2,500	2,500	2,500	2,500	2,500
OPERATING TRANSFERS IN	None	\$0	\$0	\$0	\$0	\$0	\$0
Total Other Revenue		\$216,500	\$102,500	\$102,500	\$102,500	\$102,500	\$102,500
Total Operating Revenue		\$4,265,125	\$4,355,370	\$4,825,769	\$5,150,053	\$5,443,601	\$5,752,556
<i>% Change from Previous Year</i>		<i>4.0%</i>	<i>2.1%</i>	<i>10.8%</i>	<i>6.7%</i>	<i>5.7%</i>	<i>5.7%</i>

¹Additional revenue based on recommended increase

²Additional adjusted if adopted mid fiscal year

**Table 5
Imperial Water
Capital Improvement Costs**

Project Description	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
CIP (Current Dollars)					
Maintenance Projects	\$600,000	\$500,000	\$500,000	\$500,000	\$500,000
Water pipeline replacements (8 & 12-inch)		210,000	210,000	210,000	210,000
Hwy 86 Crossing at Barioni Ave. (12-inch)		40,000	520,000		
Sandalwood Glen pipeline loop (12-inch)		75,000	975,000		
WTP filter expansion		180,000	2,340,000		
WTP finished water storage tank #2		150,000	1,950,000		
WTP filter to waste improvements		35,000	455,000		
WTP lining raw water storage pond #4		50,000	650,000		
Activated carbon for TTHM reduction		\$300,000	\$300,000	\$300,000	
Total CIP (Current Dollars)	\$600,000	\$1,540,000	\$7,900,000	\$1,010,000	\$710,000
CIP (Inflated Dollars)					
Total CIP (Inflated Dollars)	\$600,000	\$1,586,200	\$8,381,110	\$1,103,654	\$799,111
<i>Projected Annual Inflation Rate</i>		<i>3.0%</i>	<i>3.0%</i>	<i>3.0%</i>	<i>3.0%</i>

Table 6
Imperial Water
Existing and Proposed Debt

Description	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Existing Debt					
2005 COP	\$132,760	\$133,026	\$133,131	\$133,081	\$132,861
2012 COP	1,110,263	1,109,863	1,109,238	1,107,988	939,738
Total Current Debt Service	\$1,243,023	\$1,242,888	\$1,242,369	\$1,241,069	\$1,072,599
Proposed Borrowing					
Net Proceeds Needed			\$7,200,000		
Repayment Term (yrs)			30		
Coupon Rate			5.0%		
Month of Issue			1		
Issuance Cost			\$200,000		
Debt Service Reserve			\$515,000		
Total Debt Issue Size			\$7,915,000		
Prorated Debt Service Payment - Current Yr. Only			\$515,000		
Annual Debt Service Payment (rounded)			\$515,000		
Total Annual Water Debt Service	\$0	\$0	\$515,000	\$515,000	\$515,000

**Table 7
Imperial Water
Cash Flow Projection**

Item	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Reserves					
Beginning Unrestricted Balance	\$1,973,501	\$1,678,279	\$2,051,591	\$1,728,846	\$1,761,498
Revenue Escalation					
Rate Revenue Increase	6.0%	6.0%	5.0%	4.0%	4.0%
Revenues					
Rate Revenue	\$4,129,000	\$4,455,914	\$4,807,193	\$5,135,674	\$5,432,746
Additional Rate Revenue	247,740	267,355	240,360	205,427	217,310
Timing Adjustment*	-123,870				
Other Revenue	216,500	102,500	102,500	102,500	102,500
Interest on Reserves	\$4,934	\$4,196	\$5,129	\$4,322	\$4,404
Total Revenue	\$4,474,304	\$4,829,965	\$5,155,182	\$5,447,923	\$5,756,960
Expenses					
Operating Expense	\$2,926,503	\$3,027,565	\$3,139,448	\$3,255,548	\$3,376,027
Existing Debt Service	1,243,023	1,242,888	1,242,369	1,241,069	1,072,599
New Debt Service	\$0	\$0	\$515,000	\$515,000	\$515,000
Total Expenses	\$4,169,526	\$4,270,453	\$4,896,817	\$5,011,617	\$4,963,626
Net Operating Revenues	\$304,778	\$559,511	\$258,365	\$436,306	\$793,334
Capital					
Debt Revenue**			\$6,500,000	\$700,000	
Capital Expense	\$600,000	\$186,200	\$7,081,110	\$1,103,654	\$579,111
Cash Funded Capital	-\$600,000	-\$186,200	-\$581,110	-\$403,654	-\$579,111
Net Revenues	-\$295,222	\$373,311	-\$322,745	\$32,652	\$214,223
Ending Unrestricted Balance	\$1,678,279	\$2,051,591	\$1,728,846	\$1,761,498	\$1,975,720
<i>Target Balance</i>	<i>\$1,463,252</i>	<i>\$1,513,783</i>	<i>\$1,569,724</i>	<i>\$1,627,774</i>	<i>\$1,688,014</i>
Variance from Target	\$215,028	\$537,808	\$159,122	\$133,724	\$287,707
*Based on January 1 rate adoption					
**Reflects timed use of funds from financing					
Capacity Fund					
Beginning Capacity Balance	\$2,534,787	\$2,611,889	\$1,288,991	\$66,093	\$143,195
Water Capacity Fees	177,102	177,102	177,102	177,102	177,102
Contract Service	100,000	100,000	100,000	100,000	100,000
Cash Funded Capital	\$0	\$1,400,000	\$1,300,000	\$0	\$220,000
Net Capacity Income	\$77,102	-\$1,322,898	-\$1,222,898	\$77,102	-\$142,898
Ending Capacity Balance	\$2,611,889	\$1,288,991	\$66,093	\$143,195	\$297
Debt Coverage					
Ratio (Target 1.25)	1.39	1.59	1.25	1.35	1.61

Table 8
Imperial Water
Cost Allocation

Functional Allocation

Allocation Category	Amount	Customer	Capacity	Volume	Total
Maintenance	\$572,886		30%	70%	100%
Administration	\$1,857,006	15%	15%	70%	100%
Volume Only	\$385,189			100%	100%
Utilities	\$168,000	10%	10%	80%	100%
Conservation	\$44,484			100%	100%
Capital	\$642,930		20%	80%	100%
Debt	\$1,757,369		20%	80%	100%
Functional Allocation \$		\$295,351	\$947,277	\$4,185,236	\$5,427,864
Functional Allocation %		5.00%	17.00%	78.00%	100%
Revenue Requirement		\$218,837	\$744,046	\$3,413,857	\$4,376,740

**Table 9
Imperial Water
2018 Water Rates**

Allocation Units	Customer	Capacity	Volume
	<i>Customer</i>	<i>EDU</i>	<i>HCF</i>
Demand Allocation Units	5,428	6,050	1,017,620
Revenue Requirement	<u>\$218,837</u>	<u>\$744,046</u>	<u>\$3,413,857</u>
Charge	\$40.32	\$122.98	\$3.36

Fixed Charge Calculation	Customer Charge	Capacity Factor	Meter Charge	Annual Charge	Monthly Charge
Meter Size					
1"	\$40.32	1.0	\$122.98	\$163.30	\$13.61
1 1/2"	\$40.32	2.0	\$245.96	\$286.28	\$23.86
2"	\$40.32	3.2	\$393.54	\$433.86	\$36.15
3"	\$40.32	6.4	\$787.07	\$827.39	\$68.95
4"	\$40.32	10.0	\$1,229.80	\$1,270.12	\$105.84
6"	\$40.32	20.0	\$2,459.60	\$2,499.92	\$208.33

APPENDIX B

Sewer Rate Study Tables

City of Imperial

Wastewater Rate Study 2017



September 20, 2017



BARTLE WELLS ASSOCIATES
Independent Public Finance Advisors

Table A
Imperial Wastewater
Recommended Water Rates

Volumetric Rates	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Existing</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>	<i>Proposed</i>
<i>Single-Family Residential</i>						
Volumetric (>36 HCF)	\$0.93					
Fixed	\$48.40	\$56.45	\$60.41	\$64.64	\$67.23	\$69.92
<i>Multi-Family Residential</i>						
Volumetric (>36 HCF)	\$0.93					
Fixed (Per Unit)	\$48.40	\$48.39	\$51.78	\$55.41	\$57.63	\$59.94
<i>Commercial</i>						
Volumetric (>21 HCF)	\$2.42					
Fixed Charge	\$48.40					
Minimum Charge		\$56.45	\$60.41	\$64.64	\$67.23	\$69.92
Volumetric (All Use)						
Low Strength		\$1.57	\$1.68	\$1.80	\$1.88	\$1.96
Domestic Strength		\$2.82	\$3.02	\$3.24	\$3.37	\$3.51
High Strength		\$4.34	\$4.65	\$4.98	\$5.18	\$5.39

Table 1
Imperial Wastewater
Customers Data

Residential		
Rate Code	Customers	Dwelling Units
1	4,900.0	4,900.0
IS	106.0	106.0
R1	2.0	2.0
Total	5,008.0	5,008.0

Multi-Family		
Rate Code	Customers	Dwelling Units
2	37	74.0
3	9	27.0
4	28	112.0
5	2	10.0
6	2	12.0
8	4.0	32.0
Total	82.0	267.0

Commercial		
Rate Code	Customers	Demand (HCF)
9	1	234.8
12	2	2,216.0
14	1	1,164.9
16	3	2,750.9
18	2	2,682.0
20	7	9,325.3
40	3	9,414.5
41	1	1,382.2
C1	139.0	41,663.4
C2	29.0	11,046.1
C3	15.0	8,384.7
C9	8.0	2,389.9
G1	1.0	61.2
Total	212.0	92,715.8

* Customer data as of June 2017 provided by City staff

**Table 2
Imperial Wastewater
Growth Calculations**

Item	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Metered Water Demand							
Customers	4,283	4,283	4,283	4,383	4,483	4,583	4,683
Additional Customers ¹			100	100	100	100	100
Total Customers	4,283	4,283	4,383	4,483	4,583	4,683	4,783
Growth²			2.33%	2.28%	2.23%	2.18%	2.14%
Chemical Cost							
Total Customers	4,283	4,283	4,383	4,483	4,583	4,683	4,783
\$/AF	\$1.39	\$1.17	\$1.37	\$1.41	\$1.45	\$1.50	\$1.54
Cost Escalation				3.0%	3.0%	3.0%	3.0%
Total Chemical Cost	\$5,934	\$5,000	\$6,000	\$6,321	\$6,656	\$7,005	\$7,369
Growth³				5.35%	5.30%	5.25%	5.20%

¹Assumption used in City Budget

²Escelation factor used to escalate revenue (demand growth with no inflation)

³Escelation used in factor including inflation and demand growth

**Table 3
Imperial Wastewater
Wastewater Flows and Loadings**

Wastewater Flows and Loadings	# of Sewer EDUs ¹	Est. Mo Flow HCF Per EDU ²	Projected Water Use HCF ³	Flow Factor ⁴	Projected Wastewater Flow			Strength (mg/l) ⁹			Loadings (lbs)	
					HCF	MG ⁵	GPD ⁶	BOD ⁷	TSS ⁸	BOD	TSS	
Residential												
Single Family	5,008	14.00	N/A		841,344	629.37	1,724,299	250	175	1,313,309	919,316	
Multifamily	267	12.00	N/A		38,448	28.76	78,798	250	175	60,016	42,011	
Total Residential	5,008				879,792	658	1,803,096			1,373,325	961,327	
Nonresidential												
Low Strength		Varies	7,152	80%	5,721	4.28	11,725	130	130	4,644	4,644	
Domestic Strength		Varies	82,656	80%	66,125	49.46	135,520	250	175	103,218	72,253	
High Strength		Varies	2,909	80%	2,327	1.74	4,769	500	300	7,264	4,359	
Total Nonresidential			92,716		74,173	55	152,014			115,126	81,255	
Total					953,965	714	1,955,110			1,488,451	1,042,583	

¹ "EDU" stands for equivalent dwelling unit

² Flow estimate based on average winter use

³ "HCF" stands for hundred cubic feet

⁴ Flow factor based on estimated flow returning to sewer

⁵ "MG" stands for 1,000 gallons

⁶ "GPD" stands for gallons per day

⁷ "BOD" stands for biochemical oxygen demand

⁸ "TSS" stands for total suspended solids

⁹ State Water Resource Control Board (SWRCB) Guidelines for Wastewater Agencies

Table 4
Imperial Wastewater
Projected Operating Revenues

Cost Escalation	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
General Inflation Factor	General			2.5%	2.5%	2.5%	2.5%
No Escalation	None			0.0%	0.0%	0.0%	0.0%
Demand Growth	Demand			2.3%	2.2%	2.2%	2.1%
Interest on Reserves	Interest			1.0%	1.0%	1.0%	1.0%

Revenue		FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
		<i>Estimated</i>	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Rate Revenue	Demand	\$3,336,888	\$3,403,700	\$3,933,933	\$4,544,505	\$4,829,411	\$5,129,839
Additional Rate Revenue^{1,2}			\$221,241	\$511,411	\$181,780	\$193,176	\$205,194
Other Revenue							
CALEMA/FEMA	None	350,000	-	0	0	0	0
INTEREST EARNED	None	9,000	4,000	4,000	4,000	4,000	4,000
NOT OTHERWISE CLASSIFIED	None	500	500	500	500	500	500
OPERATING TRANSFERS IN	None	-	-	0	0	0	0
Total Other Revenue		\$359,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500
Total Operating Revenue		\$3,696,388	\$3,629,441	\$4,449,845	\$4,730,785	\$5,027,088	\$5,339,533
% Change from Previous Year		2.7%	-1.8%	20.4%	6.3%	6.3%	6.2%

¹Additional revenue based on recommended increase

²Additional adjusted if adopted mid fiscal year

**Table 5
Imperial Wastewater
Projected Operating Expenses**

Cost Escalation	Category	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
General Inflation Factor	General				3.0%	3.0%	3.0%	3.0%	3.0%
No Escalation	None				0.0%	0.0%	0.0%	0.0%	0.0%
Linked to Calculation	Linked								
Growth	Growth				5.0%	5.0%	5.0%	5.0%	5.0%
Benefits	Benefits				7.5%	5.0%	5.0%	5.0%	5.0%
Salary	Salary				5.0%	3.5%	3.5%	3.5%	3.5%

Expenses ¹	Category	Inflation	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
			Estimated	Budgeted	Projected	Projected	Projected	Projected	Projected
WATER OPERATIONS EXPENSES:									
TOTAL SALARIES & BENEFITS									
SALARIES-REGULAR	Administration	Salary	410,000	565,255	\$593,518	\$614,291	\$635,791	\$658,044	\$681,075
OVERTIME	Administration	Salary	15,000	30,000	\$31,500	\$32,603	\$33,744	\$34,925	\$36,147
COURT TIME / STANDBY TIME	Administration	Salary	14,500	18,000	\$18,900	\$19,562	\$20,246	\$20,955	\$21,688
CERTIFICATE PAY	Administration	General	1,600	5,200	\$5,356	\$5,517	\$5,682	\$5,853	\$6,028
UNIFORM ALLOWANCE	Administration	General	11,000	13,000	\$13,390	\$13,792	\$14,205	\$14,632	\$15,071
RETIREMENT	Administration	Benefits	26,000	39,744	\$42,725	\$44,861	\$47,104	\$49,459	\$51,932
FICA/MC	Administration	Benefits	33,000	47,412	\$50,968	\$53,516	\$56,192	\$59,002	\$61,952
WORKER'S COMP	Administration	Benefits	65,000	65,000	\$69,875	\$73,369	\$77,037	\$80,889	\$84,933
UNEMPLOYMENT INSURANCE	Administration	Benefits	3,100	3,994	\$4,294	\$4,508	\$4,734	\$4,970	\$5,219
HEALTH INSURANCE	Administration	Benefits	40,000	87,150	\$93,686	\$98,371	\$103,289	\$108,454	\$113,876
VEHICLE ALLOWANCE	Administration	General	900	1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391
TOTAL OPERATING & ADMINISTRATIVE									
ADVERTISING (INCL LEGAL)	Administration	General	2,000	3,300	\$3,399	\$3,501	\$3,606	\$3,714	\$3,826
CONTRACT SERVICE	Administration	General	150,000	210,000	\$187,000	\$192,610	\$198,388	\$204,340	\$210,470
PROGRAMS - BACKFLOW	Administration	General	500	500	\$515	\$530	\$546	\$563	\$580
GENERAL LIABILITY	Administration	General	200,000	200,000	\$206,000	\$212,180	\$218,545	\$225,102	\$231,855
M & O IMPROVEMENTS	Maintenance	General	1,100	1,500	\$1,545	\$1,591	\$1,639	\$1,688	\$1,739
MAINTENANCE OF VEHICLES & EQUIPMENT	Maintenance	General	250,000	414,200	\$250,000	\$257,500	\$265,225	\$273,182	\$281,377
VEHICLE FUEL	Maintenance	General	15,000	30,000	\$30,900	\$31,827	\$32,782	\$33,765	\$34,778
PUBLICATION / DUES	Administration	General	20,000	40,000	\$41,200	\$42,436	\$43,709	\$45,020	\$46,371
RENT OF EQUIPMENT / PROPERTY	Administration	General	1,000	3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$3,478
TELEPHONE	Administration	General	6,500	7,500	\$7,725	\$7,957	\$8,195	\$8,441	\$8,695
TESTING SERVICES	Volume Only	General	18,000	27,000	\$27,810	\$28,644	\$29,504	\$30,389	\$31,300
CHEMICALS	Volume Only	Linked	5,000	6,000	\$6,321	\$6,656	\$7,005	\$7,369	\$7,749
TRAINING / EDUCATION	Administration	General	200	5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
TRAVEL & MEETINGS	Administration	General	2,000	5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$5,796
UTILITIES - ELECTRIC	Utilities	General	200,000	207,000	\$213,210	\$219,606	\$226,194	\$232,980	\$239,970
UTILITIES - GAS	Administration	General	600	1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$1,391
OFFICE SUPPLIES	Administration	General	8,500	8,100	\$8,343	\$8,593	\$8,851	\$9,117	\$9,390
CUSTODIAL SUPPLIES	Administration	General	100	2,500	\$2,575	\$2,652	\$2,732	\$2,814	\$2,898
BANK CHARGE	Administration	General	30,000	25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
POSTAGE/FREIGHT	Administration	General	8,000	8,000	\$8,240	\$8,487	\$8,742	\$9,004	\$9,274
SAFETY/EQUIPMENT/CLOTHING	Maintenance	General	2,500	4,400	\$4,532	\$4,668	\$4,808	\$4,952	\$5,101
SMALL TOOLS	Maintenance	General	5,000	10,000	\$10,300	\$10,609	\$10,927	\$11,255	\$11,593
SPECIAL DEPT SUPPLIES	Maintenance	General	15,000	50,000	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964
Total Operating Expenses			\$1,561,100	\$2,145,155	\$2,026,938	\$2,096,342	\$2,168,207	\$2,242,623	\$2,319,686
% Change from Previous Year			-23.9%	37.4%	-5.5%	3.4%	3.4%	3.4%	3.4%

¹ Based on City of Imperial FY 17-18 budget

**Table 6
Imperial Wastewater
Capital Improvement Costs**

Project Description	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
CIP (Current Dollars)					
WWTP Upgrade	\$1,100,000	\$4,766,667	\$4,766,667	\$4,766,667	
WWTP outfall undergrounding				144,000	360,000
Gen-Ox system for Sandalwood Glen Lift Station			50,000	650,000	
Lift Station pump retrofit for de-ragging		60,000	60,000	60,000	60,000
Sewer collection system lining (CIP)		350,000	350,000	350,000	350,000
Sewer manhole rehabilitation		70,000	70,000	70,000	70,000
Maintenance Projects	\$683,000	\$600,000	\$600,000	\$600,000	\$600,000
Total CIP (Current Dollars)	\$1,783,000	\$5,846,667	\$5,896,667	\$6,640,667	\$1,440,000
CIP (Inflated Dollars)					
Total CIP (Inflated Dollars)	\$1,783,000	\$5,879,067	\$6,255,774	\$7,256,436	\$1,620,733
<i>Projected Annual Inflation Rate</i>		3.0%	3.0%	3.0%	3.0%

Table 7
Imperial Wastewater
Existing and Proposed Debt

Description	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
	<i>Budgeted</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>	<i>Projected</i>
Existing Debt					
2005 COP	\$178,160	\$174,800	\$176,360	\$177,620	\$178,570
2012 COP	808,350	809,350	808,850	808,050	814,950
Total Current Debt Service	\$986,510	\$984,150	\$985,210	\$985,670	\$993,520
Proposed Borrowing					
Net Proceeds Needed		\$14,500,000			
Repayment Term (yrs)		30			
Coupon Rate		5.0%			
Month of Issue		1			
Issuance Costs (% of Net Proceeds)					
Issuance Cost		\$200,000			
Debt Service Reserve		\$1,025,000			
Total Debt Issue Size		\$15,725,000			
Prorated Debt Service Payment - Current Yr. Only		\$1,023,000			
Annual Debt Service Payment (rounded)		\$1,023,000			
Total Annual Water Debt Service	\$0	\$1,023,000	\$1,023,000	\$1,023,000	\$1,023,000

**Table 8
Imperial Wastewater
Cash Flow Projection**

Item	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Reserves					
Beginning Unrestricted Balance	\$3,982,501	\$3,924,965	\$4,071,467	\$3,627,105	\$2,874,947
Revenue Escalation					
Rate Revenue Increase	13.0%	13.0%	4.0%	4.0%	4.0%
Revenues					
Rate Revenue	\$3,403,700	\$3,933,933	\$4,544,505	\$4,829,411	\$5,129,839
Additional Rate Revenue	442,481	511,411	181,780	193,176	205,194
Timing*	-221,241				
Other Revenue	359,500	4,500	4,500	4,500	4,500
Interest on Reserves	\$9,956	\$9,812	\$10,179	\$9,068	\$7,187
Total Revenue	\$3,994,397	\$4,459,657	\$4,740,963	\$5,036,155	\$5,346,720
Expenses					
Operating Expense	\$2,145,155	\$2,026,938	\$2,096,342	\$2,168,207	\$2,242,623
Existing Debt Service	986,510	984,150	985,210	985,670	993,520
New Debt Service	\$0	\$1,023,000	\$1,023,000	\$1,023,000	\$1,023,000
Total Expenses	\$3,131,665	\$4,034,088	\$4,104,552	\$4,176,877	\$4,259,143
Net Operating Revenues	\$862,732	\$425,569	\$636,411	\$859,278	\$1,087,577
Capital					
Debt Revenue**		\$4,000,000	\$5,000,000	\$5,500,000	
Capital Expense	\$1,783,000	\$4,279,067	\$6,080,774	\$7,111,436	\$1,475,733
Cash Funded Capital	-\$1,783,000	-\$279,067	-\$1,080,774	-\$1,611,436	-\$1,475,733
Net Revenues	-\$920,268	\$146,502	-\$444,362	-\$752,157	-\$388,156
Ending Unrestricted Balance	\$3,924,965	\$4,071,467	\$3,627,105	\$2,874,947	\$2,486,792
<i>Target Balance</i>	<i>\$1,072,578</i>	<i>\$1,013,469</i>	<i>\$1,048,171</i>	<i>\$1,084,104</i>	<i>\$1,121,312</i>
Variance from Target	\$2,852,387	\$3,057,998	\$2,578,934	\$1,790,844	\$1,365,480
*Based on January 1 rate adoption					
**Reflects timed use of funds from financing					
Capacity Fund					
Beginning Capacity Balance	\$2,594,466	\$1,542,052	\$89,638	\$62,224	\$64,810
Water Capacity Fees	147,586	147,586	147,586	147,586	147,586
Contract Service	1,200,000				
Improvements Other Than Buildings		1,600,000	175,000	145,000	145,000
Net Capacity Income	-\$1,052,414	-\$1,452,414	-\$27,414	\$2,586	\$2,586
Ending Capacity Balance	\$1,542,052	\$89,638	\$62,224	\$64,810	\$67,396
Debt Coverage Ratio (Target 1.25)	2.02	1.29	1.39	1.50	1.61

**Table 9
Imperial Wastewater
Cost Allocation**

Functional Allocation

Allocation Category	Amount	Flow	BOD	TSS	Total
Maintenance	\$348,777	60%	20%	20%	100%
Administration	\$1,429,584	60%	20%	20%	100%
Treatment	\$34,131		50%	50%	100%
Utilities	\$214,446	60%	20%	20%	100%
Capital	\$1,143,602	60%	20%	20%	100%
Debt	\$1,904,210	60%	20%	20%	100%
Functional Allocation \$	\$3,024,372	\$3,024,372	\$1,025,189	\$1,025,189	\$5,074,751
Functional Allocation %		60%	20%	20%	100.00%
Revenue Requirement	\$2,307,709	\$2,307,709	\$769,236	\$769,236	\$3,846,181

Allocation Units	Flow	BOD	TSS
Demand Units	953,965	1,488,451	1,042,583
Revenue Requirement	<u>2,307,709</u>	<u>769,236</u>	<u>769,236</u>
Unit Rate	\$2.42	\$0.52	\$0.74

Class	Flow	BOD	TSS	Requirement
Residential	841,344	1,313,309	919,316	\$3,392,281
Multi-family	38,448	60,016	42,011	\$155,022
Nonresidential				
Low	5,721	4,644	4,644	\$19,666
Medium	66,125	103,218	72,253	\$266,613
High	2,327	7,264	4,359	\$12,599

**Table 10
Imperial Wastewater
Rate Calculation**

Residential	Revenue Requirement	Customers	Annual Fixed	Monthly Fixed			
	\$3,392,281	5008	\$677.37	\$56.45			
	\$155,022	267	\$580.60	\$48.39			
Nonresidential	Revenue Requirement	Customers	Volumetric Revenue Requirement	Volume Over Minimum	Volume Over Minimum	Rate (HCF)	
Low Strength	\$19,666	23	\$4,086.22	37%	2,610	\$1.57	
Domestic Strengt	\$266,613	184	\$141,971.30	61%	50,420	\$2.82	
High Strength	\$12,599	5	\$9,211.82	100%	2,909	\$4.34	