

Home Gardens Sanitary District



Sewer Rate Study

DRAFT

May 12, 2023



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS



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May 12, 2023

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Re: Sewer Rate Study

Bartle Wells Associates is pleased to submit to the Home Gardens Sanitary District the attached Sewer Rate Study. The report presents BWA's analysis of the capital and operating costs of the sewer system. It lists the assumptions and rate design objectives used in BWA's analysis.

BWA finds that the sewer rates and charges proposed in our report to be based on the cost of service, 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 District's customers.

We enjoyed working with you on the rate study and appreciate the assistance and cooperation of District staff throughout the project. Please contact us if you have any questions about this study and the rate recommendations.

Yours truly,

Doug Dove, PE
Principal

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Executive Summary

Bartle Wells Associates (BWA) was engaged by the Home Gardens Sanitary District (District) to review the sewer rates and to recommend updates to better reflect the cost of providing service to the District's customers. In this report, BWA presents the scenario selected by the District Board which funds recycled water projects and a portion of the replacement cost of the District's assets. This scenario results in increases in rates over the course of the five years.

Key Findings

- The District's current monthly sewer rate of \$36.00 per residence is one of the lowest in western Riverside County.
- District's primary revenue source is the sewer service rates. However, current revenues are not sufficient to meet annual costs.
- Over the next five years, costs will increase due to inflation, needed capital replacement projects for existing infrastructure, and as well as contributions to the Western Riverside County Regional Wastewater Authority (WRCRWA) treatment plant recycled water improvements. Rate increases are needed to provide sufficient funding.

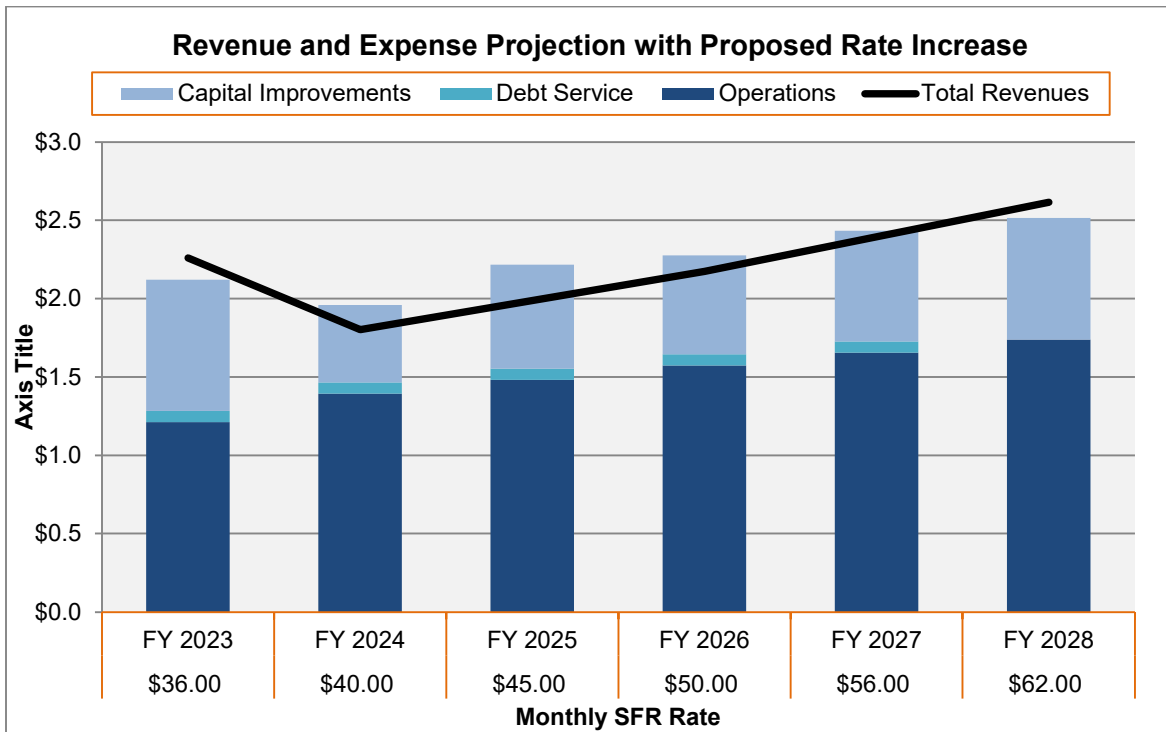
Key Recommendations: Financial Planning

- The District should continue to maintain emergency operating reserves of at least 180 days of operating expenses and reserves for emergency pipeline replacements.
- The District should meet or exceed the debt coverage legal requirement of 1.10 times the annual State Revolving Fund loan debt service payment.
- The District should set aside about \$333,000 annually for repair and replacement capital improvements to maintain the sewer collection system.

Key Recommendations: Sewer Rates

- BWA finds the District's rate structure of flat monthly sewer rates differentiated by customer type to be reasonable.
- The monthly residential sewer rate should be increased from \$36.00 to \$62.00 over the next five years to fund cost increases and maintain District reserves.
- The proposed rate increases will be able to sufficiently fund the capital projects that will support expansion of recycled water facilities.
- When adopting rates and charges through the Proposition 218 process, public agencies essentially adopt a maximum rate increase. Agencies have the legal option to adjust the rates lower than the Prop 218 level at their discretion without having to conduct additional public hearings.
- BWA's recommended funding levels and rate increases are shown below:

Figure 1: BWA Recommended Recycled Water Rate Scenario



Rate Setting Legislation and Principles

In conducting this sewer rate study, BWA adheres to the Proposition 218 requirements as described in this section. Subsequent sections provide the detailed, cost of service basis for BWA’s rate recommendations.

Proposition 218

Proposition 218, the “Right to Vote on Taxes Act,” was approved by California voters in November 1996 and is codified as Articles XIIC and XIID of the California Constitution. Proposition 218 establishes requirements for imposing or increasing property related taxes, assessments, fees and charges. For many years, there was no legal consensus on whether water and sewer rates met the definition of “property related fees”. In July 2006, the California Supreme Court essentially confirmed that Proposition 218 applies to water and sewer rates.

BWA recommends that the District follow the procedural requirements of Proposition 218 for all sewer rate changes. These requirements include:

- Noticing Requirement:** - The District 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 District 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 more than 50% of affected property owners submit written protests against the proposed rate increases, the increases cannot be adopted.

Proposition 218 also established a number of substantive requirements that are generally deemed to apply to utility service charges, including:

- **Cost of Service** - Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the “cost of service”.
- **Intended Purpose** - Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
- **Proportional Cost Recovery** - The amount of the fee or charge levied on any customer shall not exceed the proportional cost of service attributable to that customer.
- 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. Standby charges shall be classified as “assessments” which are governed by Article 13D Section 4.

Charges for water, wastewater, and refuse collection are exempt from the additional voting requirements of Proposition 218 provided the charges do not exceed the cost of providing service and are adopted pursuant to procedural requirements of Proposition 218.

Rate Development Principles

In reviewing the District’s current rates and finances, BWA used the following criteria in developing our recommendations:

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. *Proportional:* 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.
5. *Provide Incentive:* Rates provide price signals which serve as indicators to preserve the sewer system and minimize wastewater flow.

Home Gardens Sanitary District

The District provides sewer collection to a population of about 11,500. The District’s customer service area covers about 1.1 square miles and is primarily residential with some manufacturing, industrial, and commercial land use. The Cities of Corona and Riverside border the service area. Wastewater flow is transported to the WRCRWA Treatment Plant, of which the District is a member, for treatment and disposal.

Customers

Table 1 shows the District’s current number of accounts, equivalent dwelling units, and annual revenues of each customer class. An equivalent dwelling unit (EDU) is defined as the average single family residential customer. Commercial and industrial customers are assigned EDU counts based on their wastewater flows and loads as compared to a single family residential customer. The District’s customer base is primarily residential with 56% of revenues collected from single family and multifamily customers.

Table 1
Customer Account and Annual Revenues

Customer Class	# Accounts	# Units	FY 2022 Revenue per
			Bimonthly Billing Cycle
Residential	1,404	1583	\$113,976
Apartments	12	122	\$8,784
Motel	1	24	\$913
Mobile Home Parks	5	608	\$44,784
Church	8	17	\$1,344
Commercial	100	220	\$45,057
Schools	4	4	\$2,176
Library	1	1	\$215
Fire Station	1	1	\$104
Total	1,570	2,590	\$217,353
Annual Revenue			\$1,304,121

The District’s service area currently produces an average dry weather wastewater flow of 0.6 million gallons per day (MGD) which is about 80% of the District’s 0.75 MGD contractual capacity at the regional treatment plant.

Current Sewer Rates

Table 2 provides a summary of the District’s current monthly sewer rates by customer type. All customers are billed a fixed monthly rate. The rate per single family dwelling is \$36 per month or \$72 per bimonthly billing period. Commercial customers are charged a base rate per establishment plus a charge per additional employee. Similarly, schools are charged a base rate plus a charge per pupil.

BWA evaluated the rate structure used by the District and found it to be consistent with cost of service principles and industry standard practice. For example, high strength customers such as restaurants, cafes, and service stations are charged a higher rate than domestic strength customers.

Table 2
Current Sewer Rates – Est. 1/1/2019

Customer Type	Monthly Rate	per
Single Family Dwelling	\$36.00	housing unit
Apartment Unit	\$36.00	housing unit
Hotel, motel, auto court with cooking facilities	\$36.00	housing unit
Hotel, motel, auto court w/o cooking facilities	\$18.00	per room
Hotel, motel, auto court water closet	\$24.74	per water closet
Rooming house, plus	\$36.00	per establishment
each room	\$9.01	per room for rent
Restroom in cemetery or park	\$54.00	per facility
Laundromat, plus	\$36.00	per establishment
each washing machine	\$9.01	per washing machine
Trailer park, plus	\$36.00	per space
Office within the park	\$22.50	per facility
Laundry room	\$22.50	per facility
Washing machine	\$9.01	per washing machine
Additional room with water service	\$18.00	per room
Beauty shop, plus	\$54.00	per establishment
each employee	\$9.01	per employee
Café or restaurant w/seating of 30 or less	\$112.50	per establishment
each additional 5 seats or part thereof	\$18.00	per 5 seats
Commercial establishment	\$36.00	per establishment
each employee	\$5.41	per employee
Service station w/convenience store	\$117.01	per establishment
Service station w/o convenience store	\$72.00	per establishment
Industrial establishment or manufacturing business	\$72.00	per establishment
each employee (domestic sewage only)	\$5.41	per employee
Schools - per pupil	\$0.30	per pupil
Schools - per employee	\$0.30	per pupil

Bar, tavern, cocktail lounge, billiard hall, pool parlor, or game room serving beverages and/or sandwiches or snack foods w/seating of 30 or less
 each additional 5 seats or part thereof

\$72.00 per establishment
 \$2.24 per 5 seats

Operating Revenues and Expenses

BWA developed a cash flow projection based on the District’s FY2023 budgets and a set-aside for capital improvements. Over the past year, the District’s rate revenue has been stable and generated over \$1,300,000. Property tax revenue was \$275,000 in FY2023. Interest earnings on the District’s investments will contribute around \$75,000.

Operating costs include legal, engineering, administration and overhead, electricity, repairs and maintenance, and treatment fees paid to WRCRWA.

Capital Improvements

BWA reviewed the District’s sewer collection system plan and worked with the District’s engineer and staff to develop capital funding scenarios.

Table 3
HGSD Replacement Cost Scenarios

HGSD Theoretical Annual Replacement Cost	\$1,330,442
	100%
HGSD Actual Capital Spending 2021-22	\$378,916
HGSD Budget Capital Spending 2022-23	\$58,740

Source: 11/1/22 memo on replacement cost, Jeff Sims, District Engineer

BWA Recommended Funding Scenarios for HGSD Asset Replacement

	% Total	Annual Replacement
	Funded	Funding
Scenario 1 (25%) - Recommended	25%	\$333,000
Scenario 2 (40%)	40%	\$532,000
Scenario 3 (70%)	70%	\$931,000

Over the rate study period, the District should focus on replacing high priority pipe. BWA recommends setting aside a capital improvement allowance of \$333,000 per year through FY2028. This level of annual capital funding will allow the District to complete high priority improvements.

The capital improvement projects are revenue requirements that the District must account for while calculating rate increases. The rate increases proposed in this study represent rates that cover all projected capital improvement project expenses.

Cash Flow Projection

The District is fortunate to currently have adequate fund reserves, but these will be spent down if revenues are not increased. Fund reserves are estimated to be about \$4.4 million at FY2023 year end, which is adequate for an agency of this size. BWA typically recommends that agencies maintain fund reserves of 6 months of operating costs, equal to about \$2.3 million in FY2023 for the District, plus make allowances for the cost of capital projects and major emergency repairs. The District has opted to participate with WRCRWA in certain recycled water projects. Table 4 shows the Cash Flow projection funding the District's share of these projects.

Table 4
Cash Flow Projection

	Current	Rate Study Projection				
	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Beginning Balance	\$4,274,781	\$4,413,227	\$4,256,352	\$4,002,559	\$3,851,809	\$3,764,684
Effective Date		7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/2/2026
Rate Increase		11.1%	12.5%	11.1%	12.0%	10.7%
Residential Rate per Month	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00
Rate Increase - \$ per month	-	\$4.00	\$5.00	\$5.00	\$6.00	\$6.00
Revenues						
Sewer Service Charges	1,304,121	\$1,449,000	\$1,630,000	\$1,811,000	\$2,029,000	\$2,246,000
Fund Balance Contributions from LAIF	530,000					
Property Taxes	275,000	278,000	281,000	284,000	287,000	290,000
Interest	75,000	76,000	77,000	78,000	79,000	80,000
Total Revenues	2,259,121	\$1,803,000	\$1,988,000	\$2,173,000	\$2,395,000	\$2,616,001
Total Operating Expenses	1,211,713	\$1,393,000	\$1,507,720	\$1,602,000	\$1,685,000	\$1,771,000
Net Operating Revenue	1,047,408	\$410,000	\$480,280	\$571,000	\$710,000	\$845,001
Debt Service						
WRCRWA Payment - SRF Loan	70,887	\$70,887	\$70,887	\$70,887	\$70,887	\$70,888
Northerly R/W Pipeline loan	0	\$0	\$0	\$19,500	\$19,500	\$19,500
Total Debt Service	70,887	\$70,887	\$70,887	\$90,387	\$90,387	\$90,388
Net Revenues (Operating and Debt)	976,521	\$339,113	\$409,393	\$480,613	\$619,613	\$754,613
CIP						
WCRWA CIP	\$779,335	\$162,988	\$330,185	\$298,363	\$373,738	\$442,899
HGSD CIP	58,740	72,950	72,950	333,000	333,000	333,000
HGSD Share R/W Pump Station	0	260,050	260,050	0	0	0
Total CIP	\$838,075	\$495,988	\$663,185	\$631,363	\$706,738	\$775,899
Total Net Revenues	138,446	(\$156,875)	(\$253,792)	(\$150,750)	(\$87,125)	(\$21,286)
Ending Balance	\$4,413,227	\$4,256,352	\$4,002,559	\$3,851,809	\$3,764,684	\$3,743,398
<i>Recommended Minimum</i>	<i>\$2,348,577</i>	<i>\$2,348,577</i>	<i>\$2,405,937</i>	<i>\$2,453,077</i>	<i>\$2,494,577</i>	<i>\$2,537,577</i>

Functional Allocation

To ensure that costs of providing wastewater service to each customer class are apportioned correctly and no class subsidizes any other, this study implements a two-step process. First, all O&M and all capital costs are broken down according to whether they pay for wastewater Flow in general, Biochemical Oxygen Demand (BOD), or Total Suspended Solids (TSS). Table 5 shows the complete breakdown of annual costs between each of the three above categories.

Table 5
Allocation of
Operating and
Capital Expenses

	Total 23/24	Rate Funded 23/24	Allocation			Totals
			Flow	BOD	TSS	
HGSD O & M	\$707,000	\$522,708	261,354	130,677	130,677	522,708
WRCRA O&M	\$686,000	\$507,182	126,796	190,193	190,193	507,182
HGSD Capital	\$333,000	\$246,198	172,339	36,930	36,930	246,198
WRCRA Capital	\$162,988	\$120,502	30,126	45,188	45,188	120,502
WRCRA Debt Service	\$70,887	\$52,410	13,103	19,654	19,654	52,410
Total Annual Cost	\$1,959,875	\$1,449,000	\$603,716	\$422,642	\$422,642	1,449,000
\$ Funded by Rates	\$1,449,000					
% Funded by Rates	74%					

Second, using industry standard assumptions about the quantity and content of each customer class's respective wastewater, the above Total Annual Flow, BOD, and TSS costs are allocated to each customer class. Table 6 depicts this functional allocation for a Single-Family Dwelling account. See appendix for the functional allocation for each customer class.

Table 6
Functional Allocation

			23/24	23/24					
			Cost	Unit					
			Allocation	Cost					
Total Flow	0.6	mgd	\$603,716	\$0.9636	\$/gpd				
Total BOD	1910	lb/day	\$422,642	\$221.28	\$/lb/day				
Total TSS	1780	lb/day	\$422,642	\$237.44	\$/lb/day				
			\$1,449,000						
			Flow	BOD	TSS	Flow	BOD	TSS	Total
Single-Family Dwelling:			250 gpd	250 mg/l	250 mg/l	\$20.075	\$9.612	\$10.313	\$40.000

Proposed Rates

Under the Recycled Water scenario, the monthly rate per EDU increases by \$4.00 in FY 2024, \$5.00 in FY 2025 and FY 2026, and by \$6.00 in FY 2027 and FY 2028. The maximum proposed rate is \$62.00 per month in FY 2028, see Table 7.

Table 7 Proposed Rates		Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
			7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/1/2027	
			11%	13%	11%	12%	11%	
Single Family Rate Increase - \$ per month			\$4.00	\$5.00	\$5.00	\$6.00	\$6.00	
			(COS Adjustment)					
Single Family Dwelling	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per housing unit	
Apartment Unit	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per housing unit	
Hotel, motel, auto court with cooking facilities	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per housing unit	
w/o cooking facilities	\$18.00	\$20.00	\$22.50	\$25.00	\$28.00	\$31.00	per room	
water closet	\$24.74	\$20.00	\$22.50	\$25.00	\$28.00	\$31.00	per water closet	
Rooming house, plus each room	\$36.00 \$9.01	\$40.00 \$10.00	\$45.00 \$11.25	\$50.00 \$12.50	\$56.00 \$14.00	\$62.00 \$15.50	per establishment per room for rent	
Restroom in cemetery or park	\$54.00	\$60.00	\$67.50	\$75.00	\$84.00	\$93.00	per facility	
Laundromat, plus each washing machine	\$36.00 \$9.01	\$40.00 \$10.00	\$45.00 \$11.25	\$50.00 \$12.50	\$56.00 \$14.00	\$62.00 \$15.50	per establishment per washing machine	
Trailer park, plus	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per space	
Office within the park	\$22.50	\$25.12	\$28.26	\$31.40	\$35.17	\$38.94	per facility	
Laundry room	\$22.50	\$25.12	\$28.26	\$31.40	\$35.17	\$38.94	per facility	
Washing machine	\$9.01	\$10.00	\$11.25	\$12.50	\$14.00	\$15.50	per washing machine	
Additional room with water service	\$18.00	\$20.00	\$22.50	\$25.00	\$28.00	\$31.00	per room	
Beauty shop, plus each employee	\$54.00 \$9.01	\$60.00 \$10.00	\$67.50 \$11.25	\$75.00 \$12.50	\$84.00 \$14.00	\$93.00 \$15.50	per establishment per employee	
Café or restaurant w/seating of 30 or less	\$112.50	\$125.11	\$140.75	\$156.39	\$175.15	\$193.92	per establishment	
each additional 5 seats or part thereof	\$18.00	\$19.90	\$22.39	\$24.88	\$27.87	\$30.85	per 5 seats	
Commercial establishment	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per establishment	
each employee	\$5.41	\$6.08	\$6.84	\$7.60	\$8.51	\$9.42	per employee	

Service station w/convenience store	\$117.01	\$130.40	\$146.70	\$163.01	\$182.57	\$202.13	per establishment
w/o convenience store	\$72.00	\$80.00	\$90.00	\$100.00	\$112.00	\$124.00	per establishment
Industrial establishment or manufacturing business each employee (domestic sewage only)	\$72.00 \$5.41	\$80.00 \$6.08	\$90.00 \$6.84	\$100.00 \$7.60	\$112.00 \$8.51	\$124.00 \$9.42	per establishment per employee
Schools - per pupil	\$0.30	\$0.33	\$0.37	\$0.41	\$0.46	\$0.51	per pupil
per employee	\$0.30	\$0.33	\$0.37	\$0.41	\$0.46	\$0.51	per employee
Bar, tavern, game room w/seating of 30 or less each additional 5 seats or part thereof	\$72.00 \$2.24	\$80.00 \$0.00	\$90.00 \$0.00	\$100.00 \$0.00	\$112.00 \$0.00	\$124.00 \$0.00	per establishment per 5 seats
Car Wash, automatic		\$1.22	\$1.37	\$1.52	\$1.70	\$1.89	water consumption basis
per bay	\$51.84	\$60.87	\$68.48	\$76.09	\$85.22	\$94.35	per bay
Gym or training Facility		\$60.00	\$67.50	\$75.00	\$84.00	\$93.00	water consumption basis
per 1,000 sqft over 2,500	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per 1,000 sqft
Medical/Dental, plus	\$54.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00	per establishment
each employee	\$9.01	\$6.08	\$6.84	\$7.60	\$8.51	\$9.42	per employee

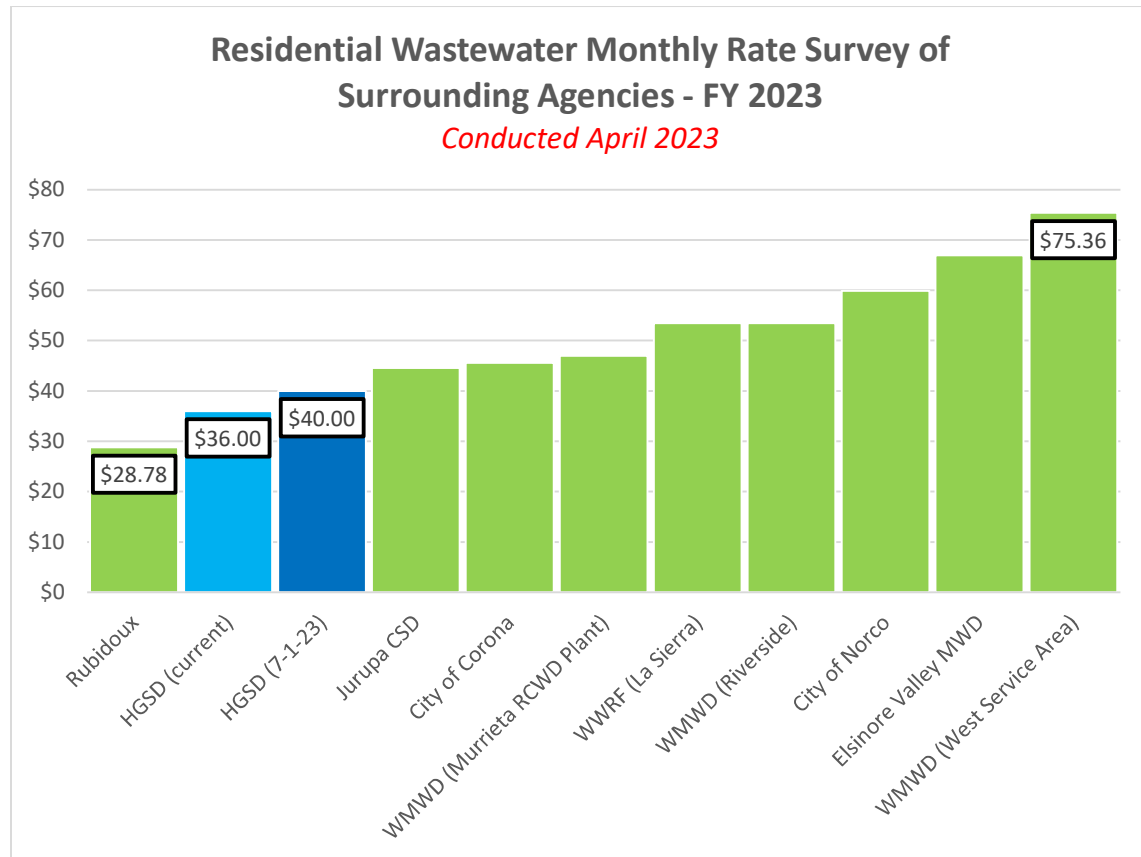
Minimum charge equal to SFR applies to all accounts. Subject to proposed annual rate increases.

Cost of Service/Rate Structure Update to Follow in Subsequent Draft

Rate Survey

Figure 2 shows a sewer rate survey for Riverside County. The District's current rate of \$36.00 per month is the second lowest in the region. After the final rate increase, the District's rate will continue to be competitive with other local agencies.

Figure 2



Recommendations

Sewer Rates

BWA recommends that the District adopt a five-year phase-in of rate increases with a 5-year maximum rate of \$62.00 per month. The recommended rate increases are shown below.

Single-family Residential Rate, FY	Current 2023	Proposed 1-Jul-24	Proposed 1-Jul-25	Proposed 1-Jul-26	Proposed 1-Jul-27	Proposed 1-Jul-28
Rate Increase		\$4.00	\$5.00	\$5.00	\$6.00	\$6.00
Total Residential Monthly Sewer Rate	\$36.00	\$40.00	\$45.00	\$50.00	\$56.00	\$62.00

When adopting rates through the Proposition 218 process, public agencies adopt a maximum rate. Agencies have the legal option to implement rates lower than those approved via the Proposition 218 process.

The detailed cost of service analysis is summarized in the attached appendix.