

Attachment 'B'



CITY OF KERMAN

Water, Wastewater, and Storm Drain Rate Study

FINAL REPORT
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SECTION 1: INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Background

The City of Kerman (City) provides water and wastewater service to about 3,900 customers. The City's sole source of water supply is groundwater with some surface water purchased from the Fresno Irrigation District for recharge. The City owns and operates a local wastewater plant to treat and dispose of customer discharge. Kerman last conducted an in-depth water and sewer rate study in 2018. Rate updates are needed for the water and sewer utilities to maintain balanced budgets and fund infrastructure improvements. In particular, the sewer utility has spent down its reserves in recent years to fund deferred maintenance of the wastewater treatment plant. Sewer rate increases are needed to keep up with inflationary operating cost increases, maintain strong debt coverage, and build-up reserves over the next five years. This rate study also includes an analysis of storm drain rates which were not included in the 2018 rate study. The Storm Drain Enterprise Fund is currently operating at a deficit and must increase rates to meet the cost of providing service.

1.2 Requirements of 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 any new or increasing any existing property-related fees and charges. For many years, there was no legal consensus on whether water and sewer service fees met the definition of "property-related fees." In July 2007, the California Supreme Court essentially confirmed that Proposition 218 applies to water and wastewater service fees.

1.2.1 Water and Sewer Rate Adjustments

The City must follow the procedural requirements of Proposition 218 for water and sewer rate increases. These requirements include:

1. **Noticing Requirement** – The City must mail a notice of the proposed rate increases to all affected property owners or utility customers (ratepayers). The notice must specify the amount of the fee, the basis upon which it was calculated, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
2. **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.
3. **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 or customers submit written protests against the proposed rate increases, the increases cannot be adopted.

Proposition 218 also established substantive requirements that apply to water and sewer rates and charges, including:

1. **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”.
2. **Intended Purpose** - Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
3. **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.
4. **Availability of Service** - 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.
5. **General Government Services** - No fee or charge may be imposed for general governmental services where the service is available to the public at large.

Charges for water and sewer collection are exempt from 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.

1.2.2 Storm Drain Rate Adjustments

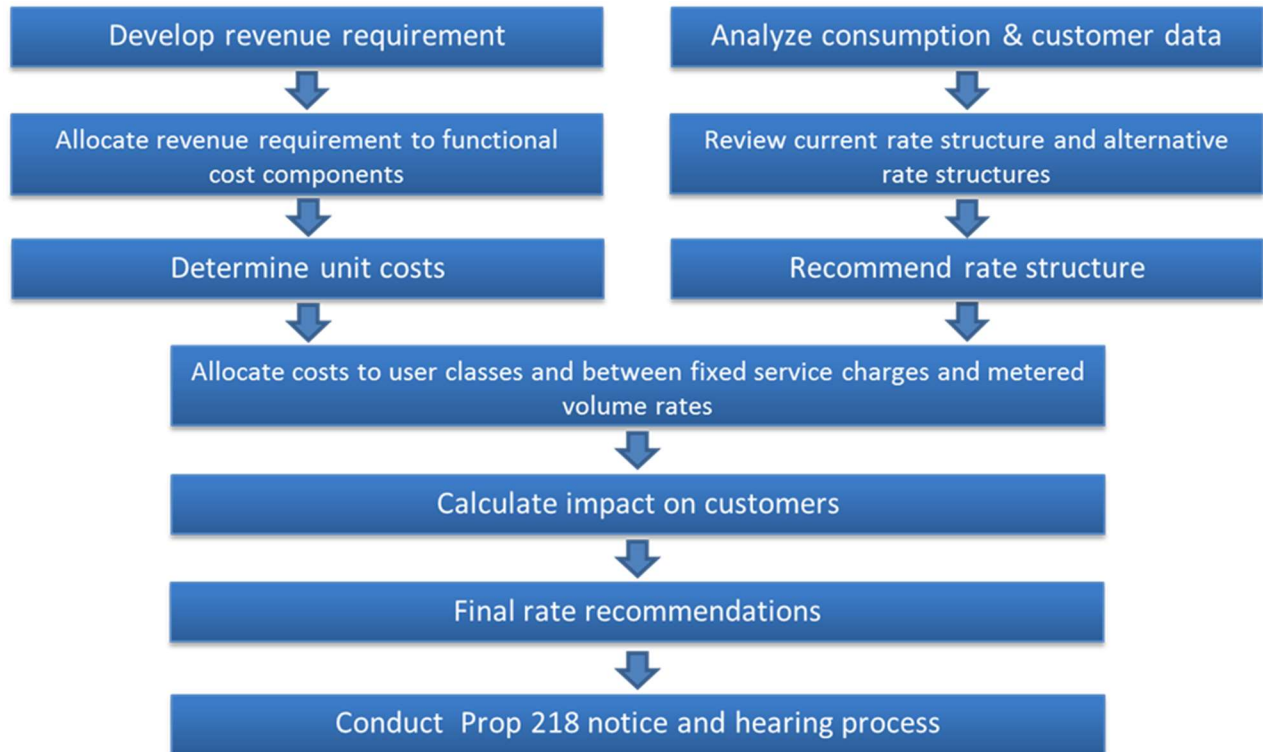
Storm drain rates are also property-related fees subject to the substantive requirements listed above. However, storm drain rates are subject to the following procedural requirements:

1. **Noticing Requirement** - The City must mail a notice of the proposed rate increases to all affected property owners or customers. The notice must specify the amount of the fee, the basis upon which it was calculated, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
2. **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.
3. **Election** - Unlike the process for water and sewer, if there is not a majority protest, then the City must conduct an election of either the affected property owners/customers or the electorate residing in the affected area. The election shall be conducted not less than 45 days after the majority protest public hearing.
4. **Tabulation** - Tabulate ballots and certify the outcome of the election. Each parcel subject to the fee has one vote. No weighted ballot process is required for the adoption of property-related fees such as storm drain service fees. 50% majority approval of received ballots is required to adopt the fee.

1.3 Rate Study Process

This section details the development of the City’s utility rates via the Proposition 218 process as shown in the following figure.

Figure 1: Comprehensive Cost of Service Study Process



The following is a brief description of the rate study process:

- **Revenue Requirements** - Revenue requirements are analyzed via financial plans developed from utility budgets. Based on the best information currently available, the financial plans incorporate projected operation and maintenance costs, capital expenditures, debt service, and growth to estimate annual revenue requirements. The plans serve as a roadmap for funding the City’s future operating and capital programs while maintaining long-term fiscal stability.
- **Cost of Service Allocation** - The cost of service process builds on the financial plan analysis and assigns costs to functional cost components.
- **Rate Design** - Rate design involves developing a rate structure that proportionately recovers costs from customers. Final rate recommendations are designed to (a) fund the utilities’ 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.

1.4 Proposed Rates

The findings and recommendations presented in this report were developed with substantial input from staff and City Council. The proposed water, wastewater, and storm drain rates are provided in Table 1, Table 2, and Table 3 respectively. The first rate changes are proposed to go into effect February 1, 2024, for water and sewer, and April 1, 2024, for storm drain service. It is proposed that rate changes for subsequent years for all three utilities go into effect each January 1 through 2028.

1.4.1 Proposed Water Rates

For water service, the City charges a fixed meter fee based on the size of the meter plus a volume rate billed to each 1,000 gallons of water used. It is proposed that the current meter fee and volume rate be increased to keep up with inflationary cost increases. The proposed water rates also include a schedule of drought rates, which would only be implemented during a water shortage emergency as declared by City Council or the Governor. The City does not currently have a schedule of drought rates. Under drought conditions, the meter charges would remain the same, but the consumption rate would increase according to the level of water cutback. Drought rates are intended to make the City financially whole, cover costs, and avoid a loss of revenues due to lower water sales.

It is also proposed that the City increase the current water meter replacement fee of \$0.50 per month per customer. The cost of meter replacement ranges from a few hundred dollars to thousands based on meter size and the City intends to accumulate funds over time to cover these costs. It is proposed that the 3/4" meter replacement fee be set at \$6.50 per month and the replacement fee for larger meters be scaled up, see Table 1.

1.4.2 Proposed Sewer Rates

For wastewater service, the City bills residential customers a fixed monthly charge which encompasses customer service, capacity, and flow related costs. Commercial customers are charged a fixed base fee plus volume rates based on wastewater pollutant strength. No rate structure changes are proposed for the wastewater rates. The single family residential bill is proposed to increase from \$34.65 to \$36.51 per month on February 1, 2024, see Table 2.

1.4.3 Proposed Storm Drain Rates

Storm drain rates are currently billed as a fixed charge of \$1.60 per month for residential customers and a volume rate of \$0.0736 per 1,000 gallon of metered water use (if over the \$1.60 minimum) for non-residential customers. It is recommended that the City bill for storm services based on land use type and parcel size as these factors are more indicative of each customer's impact on the storm drain system, see Table 3. It is proposed that all single family residential customers be charged the cost of service of an average residential parcel based on 0.19 acres.

Table 1: Current and Proposed Monthly Water Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

		Proposed Proposition 218								
Meter Size	Current *	February 1, 2024			January 1, 2025			January 1, 2026		
		Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee
3/4"	\$28.67	\$29.29	\$6.50	\$35.79	\$30.17	\$6.50	\$36.67	\$31.08	\$6.50	\$37.58
1"	\$43.81	\$44.80	\$7.15	\$51.95	\$46.14	\$7.15	\$53.29	\$47.52	\$7.15	\$54.67
1.5"	\$81.65	\$83.56	\$8.45	\$92.01	\$86.07	\$8.45	\$94.52	\$88.65	\$8.45	\$97.10
2"	\$127.07	\$130.08	\$9.75	\$139.83	\$133.98	\$9.75	\$143.73	\$138.00	\$9.75	\$147.75
3"	\$248.18	\$254.14	\$13.00	\$267.14	\$261.76	\$13.00	\$274.76	\$269.61	\$13.00	\$282.61
4"	\$384.43	\$393.70	\$16.25	\$409.95	\$405.51	\$16.25	\$421.76	\$417.68	\$16.25	\$433.93
6"	\$762.91	\$781.36	\$19.50	\$800.86	\$804.80	\$19.50	\$824.30	\$828.94	\$19.50	\$848.44
Volume Rate (\$/1,000 gallons)	\$1.27			\$1.33			\$1.37			\$1.41
DROUGHT RATES - Volume Rate (\$/1,000 gallons)										
10% Water Cutback		\$1.39			\$1.43			\$1.47		
25% Water Cutback		\$1.51			\$1.55			\$1.60		
40% Water Cutback		\$1.68			\$1.73			\$1.79		
		Proposed Proposition 218								
Meter Size		January 1, 2027			January 1, 2028					
		Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee			
3/4"		\$32.01	\$6.50	\$38.51	\$32.97	\$6.50	\$39.47	* includes \$0.50 meter replacement fee "Meter fee" – proposed meter replacement fee		
1"		\$48.95	\$7.15	\$56.10	\$50.42	\$7.15	\$57.57			
1.5"		\$91.31	\$8.45	\$99.76	\$94.05	\$8.45	\$102.50			
2"		\$142.14	\$9.75	\$151.89	\$146.40	\$9.75	\$156.15			
3"		\$277.70	\$13.00	\$290.70	\$286.03	\$13.00	\$299.03			
4"		\$430.21	\$16.25	\$446.46	\$443.12	\$16.25	\$459.37			
6"		\$853.81	\$19.50	\$873.31	\$879.42	\$19.50	\$898.92			
Volume Rate (\$/1,000 gallons)				\$1.45			\$1.49			
DROUGHT RATES - Volume Rate (\$/1,000 gallons)										
10% Water Cutback		\$1.52			\$1.56					
25% Water Cutback		\$1.65			\$1.70					
40% Water Cutback		\$1.84			\$1.89					

Table 2: Current and Proposed Monthly Wastewater Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Fixed Charges (\$/mo)	Current	Proposed Proposition 218				
		February 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027	January 1, 2028
Residential						
Base	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Flow	<u>\$19.12</u>	<u>\$20.72</u>	<u>\$22.38</u>	<u>\$24.17</u>	<u>\$26.10</u>	<u>\$28.19</u>
Total	\$34.65	\$36.51	\$39.43	\$42.58	\$45.98	\$49.66
Multi-Family Unit						
Base	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Flow	<u>\$10.75</u>	<u>\$15.54</u>	<u>\$16.78</u>	<u>\$18.12</u>	<u>\$19.57</u>	<u>\$21.14</u>
Total	\$26.28	\$31.33	\$33.83	\$36.53	\$39.45	\$42.61
Commercial (Base)	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Commercial Volume Rates (\$/1,000 gal)						
Low Strength	\$2.39	\$2.59	\$2.80	\$3.02	\$3.26	\$3.52
Medium Strength	\$2.75	\$2.98	\$3.22	\$3.48	\$3.76	\$4.06
High Strength	\$3.18	\$3.44	\$3.72	\$4.02	\$4.34	\$4.69

Table 3: Current and Proposed Monthly Storm Drain Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Customer Class	Billing Method	Current	Proposed Proposition 218 ⁺					
			Billing Method	April 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027	January 1, 2028
Single Family	Per dwelling	\$1.60	Per dwelling	\$1.42	\$1.46	\$1.50	\$1.55	\$1.60
Multi-family	Per dwelling	\$1.60	Per acre	\$10.36	\$10.67	\$10.99	\$11.32	\$11.66
Commercial	*	*	Per acre	\$11.85	\$12.21	\$12.58	\$12.96	\$13.35
Industrial	*	*	Per acre	\$13.33	\$13.73	\$14.14	\$14.56	\$15.00
Church	*	*	Per acre	\$7.40	\$7.62	\$7.85	\$8.09	\$8.33
Schools	*	*	Per acre	\$4.44	\$4.57	\$4.71	\$4.85	\$5.00
Parks	*	*	Per acre	\$1.48	\$1.52	\$1.57	\$1.62	\$1.67

* Currently, all non-residential customers are billed based on metered water service. The current rate is \$0.0736/1,000 gallons of non-irrigation water use with a minimum fee of \$1.60 per month.

+ For accounts for which the City cannot determine a parcel size, the minimum fee is 1/5 of the proposed rate per acre

1.4.4 Bill Impacts

The typical monthly water use of a single family customer is 14,000 gallons per month and the most common residential meter size is 3/4". Based on these parameters, the City's current typical combined utility bill (water, sewer, and storm) is \$82.70 per month. After the proposed 2024 increase, the typical residential bill would increase to \$92.34 per month, an increase of about 12%, see Figure 2. A survey comparing the City of Kerman's current and proposed 2024 water and sewer bill with other local utilities is provided in Figure 3.

Figure 2: Combined Average Single Family Residential Bill

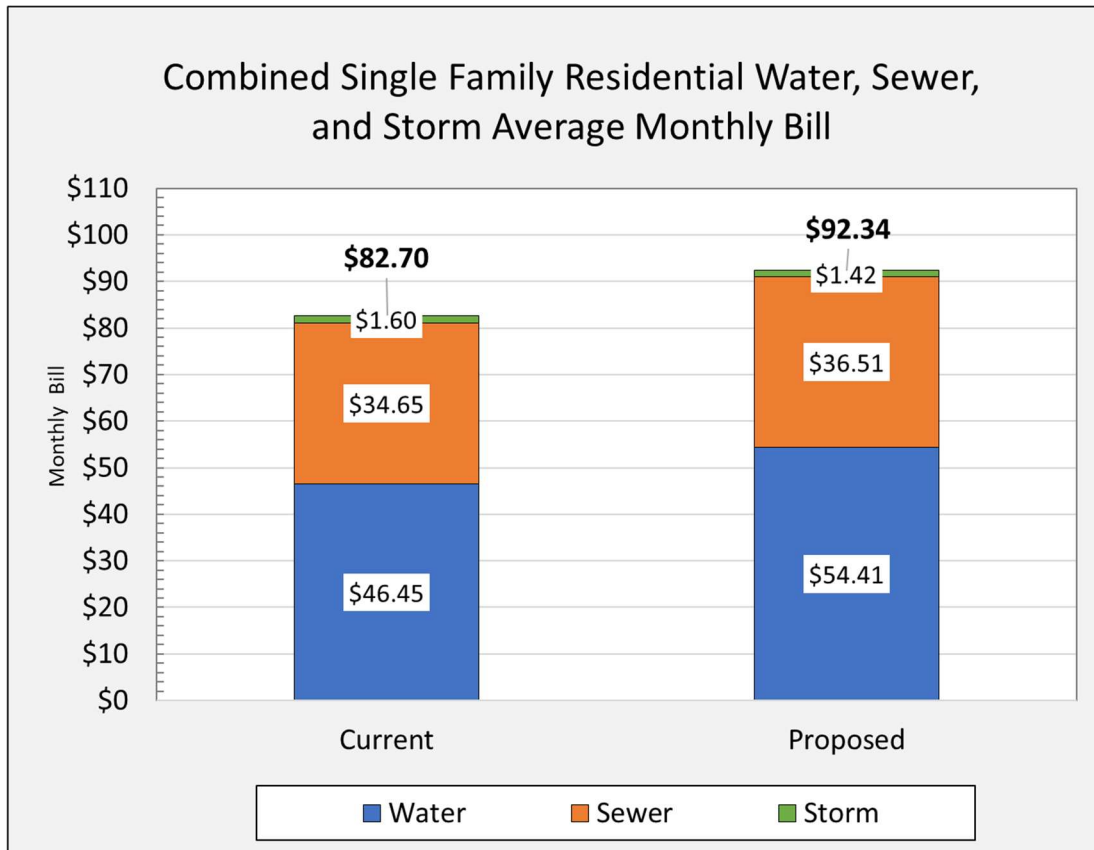
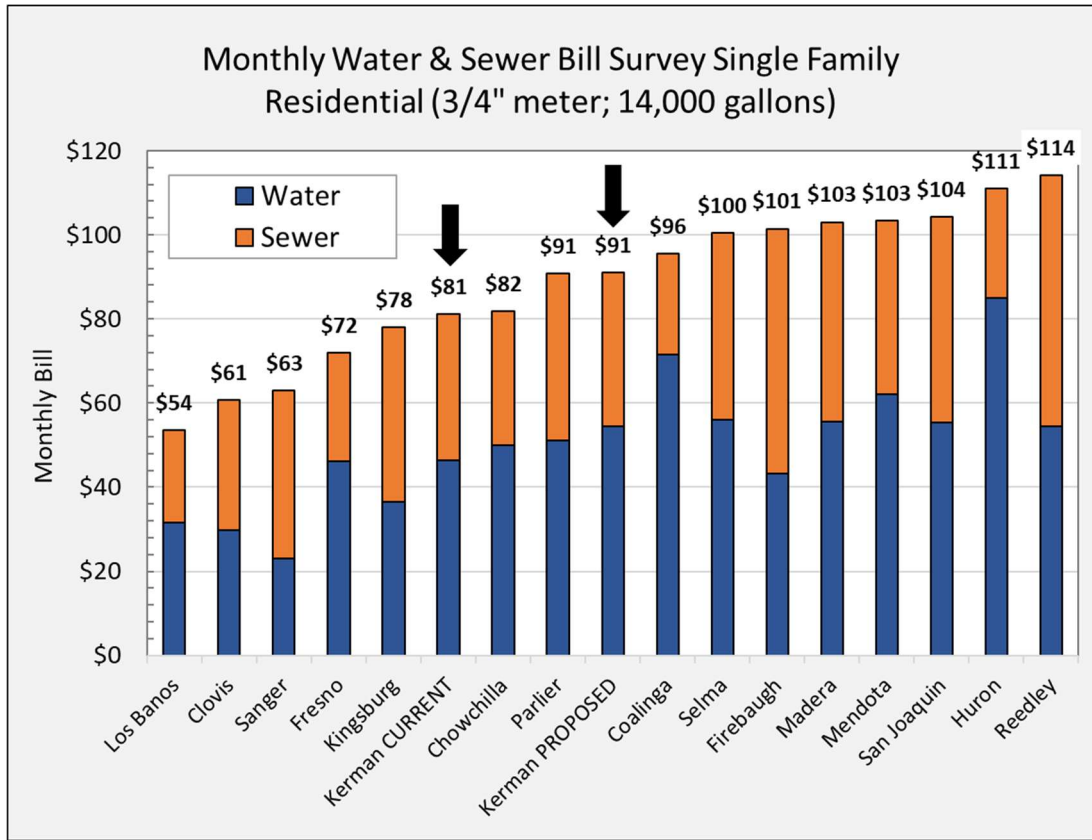


Figure 3: Water and Sewer Bill Survey



SECTION 2: CURRENT RATES AND CUSTOMER BASE

This section provides an overview of the City’s current water, wastewater, and storm drain rates, customer base, water usage statistics, and current rate revenues.

2.1 Current Water Rates and Usage Statistics

The City bills for water, sewer, and storm drain service monthly. Customers are charged based on the size of their water meter ranging from 3/4” up to 6”. In addition, the City bills all customers a \$0.50 fee to accumulate funds for the eventual replacement of the meter at the end of its useful life. The meter replacement fee is estimated to generate about \$23,500 annually. Customers are also billed a uniform volume rate through which all consumption is charged \$1.27/1,000 gallons, see Table 4. At current rates (effective January 1, 2023), it is estimated that the City would collect about \$2.8 million annually not including the meter replacement fee. About two thirds of revenues are collected from fixed fees and about one third of rate revenues are collected from volume rates.

**Table 4: Current Customers by Meter Size and Estimated Water Use
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Meter Size	# of Customers	Current Meter Replacement Fee	Annual Meter Replacement Revenues	Current Monthly Base Fee	Annual Base Fee Revenues	% of total [1]
3/4"	2,979	\$0.50	\$17,874	\$28.17	\$1,007,021	
1"	752	\$0.50	\$4,512	\$43.31	\$390,829	
1.5"	41	\$0.50	\$246	\$81.15	\$39,926	
2"	115	\$0.50	\$690	\$126.57	\$174,667	
3"	12	\$0.50	\$72	\$247.68	\$35,666	
4"	20	\$0.50	\$120	\$383.93	\$92,143	
6"	4	\$0.50	\$24	\$762.41	\$36,596	
	3,923		\$23,538		\$1,776,848	63.6%
Consumption (1,000 gals)	801,627			\$1.27 (\$/1,000 gal)	\$1,018,066	36.4%
				Subtotal	\$2,794,914	100.0%
				Less 1% delinquency	<u>(\$27,949)</u>	
				Total	\$2,766,965	

1 – Does not include meter replacement fee revenues

2.2 Current Wastewater Rates

The City of Kerman has a separate schedule of charges for single family residential, multi-family residential, and commercial sewer customers, see Table 5. Single family and multi-family customers are billed a fixed monthly fee per dwelling unit consisting of a base charge plus a flow charge. The base charge is the same for both residential customer classes, but each class pays a different flow charge. The base charge reflects the common customer service costs while the flow charge accounts for the greater volume of wastewater discharge of single family customers.

Commercial customers are charged different fees based on the different challenges associated with providing wastewater services to commercial customers. The base charge is the same as for the residential customer classes and is used to offset the costs of customer service. Unlike the residential classes, commercial customers are charged one of three different flow rates. These three classes of commercial customers are low, medium, and high strength, which correspond to the wastewater pollutant characteristics (biochemical oxygen demand and total suspended solids) of each group. Per City policy, commercial customers use dedicated irrigation meters for outdoor water use (i.e. use that is not discharged into the sewer). Irrigation water use is not billed for wastewater service.

**Table 5: Current Wastewater Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Customer Class	Current Rate	
Single Family Residential		
Base	\$15.53	
Flow	<u>\$19.12</u>	
Total	\$34.65	\$/month per dwelling unit
Multifamily Residential		
Base	\$15.53	
Flow	<u>\$10.75</u>	
Total	\$26.28	\$/month per dwelling unit
Commercial		
Base	\$15.53	\$/month per account +
Low Strength	\$2.39	\$/1,000 gallons
Medium Strength	\$2.75	\$/1,000 gallons
High Strength	\$3.18	\$/1,000 gallons

Table 6 provides estimated annual Wastewater Fund rate revenues. About 95% of revenues are collected from the fixed residential and commercial customer charges and about 5% of rate revenues are collected from commercial flow rates.

Table 6: Estimated Sewer Revenues at Current Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Customer Category	Customer Count	Fixed Monthly Fee	Fixed Annual Revenue	
Commercial Accounts	188	\$15.53	\$35,036	
Single Family Dwelling Units	3,439	\$34.65	\$1,429,936	
Multi Family Dwelling Units	<u>1,114</u>	\$26.28	<u>\$351,311</u>	
Total Accounts/Dwelling Units	4,741		\$1,816,283	95.3%
	Annual Commercial Flows (1,000 gal)	\$/1,000 gal	Volumetric Annual Revenue	
Low Strength	15,663	\$2.39	\$37,435	
Medium Strength	4,490	\$2.75	\$12,347	
High Strength	<u>12,460</u>	\$3.18	<u>\$39,624</u>	
Total Commercial Flows	32,613		\$89,406	4.7%
Total Annual Revenue			\$1,905,689	100.0%

2.3 Current Storm Drain Rates

Currently, residential customers (single- and multi-family) are charged a flat rate of \$1.60 per month while all other customer classes (commercial, industrial, church, school, and park) are charged a flow-based fee at a rate of \$0.0736 per 1,000 gallons with a \$1.60 minimum charge, see Table 7 below. The storm drain rates currently generate about \$83,000 in annual revenues.

Table 7: Current Storm Drain Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Customer Class	Billing Method	Current
Single Family	Per dwelling unit	\$1.60
Multifamily	Per dwelling unit	\$1.60
Commercial	Flow-based	\$0.0736/1,000 gallons; \$1.60 min.
Industrial	Flow-based	\$0.0736/1,000 gallons; \$1.60 min.
Church	Flow-based	\$0.0736/1,000 gallons; \$1.60 min.
Schools	Flow-based	\$0.0736/1,000 gallons; \$1.60 min.
Parks	Flow-based	\$0.0736/1,000 gallons; \$1.60 min.

SECTION 3: WATER REVENUE REQUIREMENT

Proposition 218 requires that utility rates be based on the reasonable cost of providing service to customers. The cost of service includes annual operating expenses, debt service payments, capital projects, and the accumulation of appropriate reserves. The water, wastewater, and storm drain utility costs of service were developed based on the FY2023/24 adopted budget, capital projects developed by staff, and reserve recommendations based on industry standard practice.

3.1 Cost of Service

In FY2024, the water utility's operating budget is approximately \$1.98 million including costs from both the Water Operations Fund and the Water Administrative Fund. Major line-items include administration, salaries and benefits, groundwater management expenses, utilities (electricity for pumping), and chlorine. Most costs are projected to increase by 3% annually. Operations also funds debt service for the City's 2003 State Water Resources Control Board (SWRCB) loan. The annual cost is \$165,000. The loan has a 20-year term and will mature January 2028. The cost of service also includes repair and replacement projects that correct deficiencies in existing infrastructure. Costs associated with system expansion are funded by impact fees and major facilities fees and are not included in this rate study. In FY2025 and beyond, the cost of service includes funding of \$307,000 of annual capital costs to cover items such as pipeline repairs and replacements, main breaks, replacement of large equipment or vehicles, and other unanticipated needs.

The main revenue source to cover operations is water rate revenues. Current rate revenues are estimated at \$2.8 million excluding meter replacement fee revenues, see Table 4. Other revenue sources include interest earnings, water wasting violations, credit card convenience fees, and miscellaneous revenues. Non-rate revenue sources are projected to generate about \$40,000 annually.

It is recommended that the Operations Fund maintain reserves equal to 50% of annual operating costs (including capital outlay and excluding other capital projects) plus 100% of the annual debt service cost. Fund reserves are a critical tool that allow the City to maintain its financial health and positive credit rating during emergencies. Moreover, funding can be drawn from reserves to supplement rate revenues lost during drought conditions.

3.2 Cash Flow

The Water Fund operating cash flow is provided in Table 8. It is proposed that the City adopt inflationary rate increases of 3% annually keep up with the costs of materials and supplies. This level of rate increase will allow the Water Fund to continue to generate positive net revenues, pay off debt, and accumulate reserves for future capital projects.

Table 8: Water Cash Flow
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Proposition 218				
	FY2024	FY2025	FY2026	FY2027	FY2028
Effective Date	Feb 1	Jan 1	Jan 1	Jan 1	Jan 1
Rate Revenue Increase	3.00%	3.00%	3.00%	3.00%	3.00%
Beginning Fund Balance	\$1,074,000	\$1,547,000	\$1,879,000	\$2,212,000	\$2,544,000
REVENUES					
Water Rates [1]	2,802,000	2,884,000	2,971,000	3,060,000	3,152,000
Interest Earnings	10,000	10,000	10,000	10,000	10,000
Penalties	10,000	10,000	10,000	10,000	10,000
Misc	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
TOTAL REVENUES	2,842,000	2,924,000	3,011,000	3,100,000	3,192,000
Operating Expenses					
Water Admin (Account 410 5005)	525,000	541,000	557,000	574,000	591,000
Staffing	622,000	653,000	686,000	720,000	756,000
Water Conservation Measures	40,000	41,000	42,000	43,000	44,000
Professional Services	97,000	100,000	103,000	106,000	109,000
Utilities	425,000	489,000	513,000	539,000	566,000
Surface Water (Fresno Irrigation District)	58,000	60,000	62,000	64,000	66,000
Chlorine and Supplies [2]	55,000	72,000	74,000	76,000	78,000
State Fees and Permits	25,000	26,000	27,000	28,000	29,000
Groundwater Sustainability	24,000	25,000	26,000	27,000	28,000
Hydrant Meter Replacements	5,000	5,000	5,000	5,000	5,000
Internal Service Funds, Misc., Admin	<u>105,000</u>	<u>108,000</u>	<u>111,000</u>	<u>114,000</u>	<u>117,000</u>
Total Operating Expenses	1,981,000	2,120,000	2,206,000	2,296,000	2,389,000
Net Operating Revenues	861,000	804,000	805,000	804,000	803,000
Debt Service - 2003 Loan	165,000	165,000	165,000	165,000	165,000
Debt Coverage Ratio	5.2	4.9	4.9	4.9	4.9
Capital Funding					
Miscellaneous Repairs	100,000	300,000	300,000	300,000	300,000
Water Conservation Measures	7,000	7,000	7,000	7,000	7,000
Well 12 Repairs	2,500	0	0	0	0
Update PLC/HMI Upgrade/ Flowmeter Compatibility	91,500	0	0	0	0
Well 17 Repairs	10,000	0	0	0	0
500 gal Chlorine Tanks (6)	<u>12,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Capital	223,000	307,000	307,000	307,000	307,000
Total Net Revenues	473,000	332,000	333,000	332,000	331,000
Ending Fund Balance	1,547,000	1,879,000	2,212,000	2,544,000	2,875,000
Recommended Fund Balance (6 month O&M plus debt payment)	1,156,000 YES	1,218,000 YES	1,261,000 YES	1,306,000 YES	1,352,000 YES

Note: meter replacement fee revenues are not reflected in the cash flows. It is assumed that these revenues will be transferred to a designated fund.

1 - Rate revenues for each fiscal year reflect a portion of the year billed at the prior calendar year's rates and a portion of the year reflecting the rate increase shown

2 - Cost increase of 30% in FY2025 for new chlorination expenses for all seven wells

SECTION 4: WATER COST ALLOCATION & RATE DESIGN

The revenue requirement detailed in the previous section determines the amount of revenue to be recovered from water rates. The cost of service allocation determines how revenues will be recovered from customers based on how they use the water system. Proposition 218 requires that agencies providing “property-related services” (including water utility service) set rates and charges that are based on the cost of providing those services.

4.1 Background

The purpose of the cost allocation is to classify costs and to determine the amount of revenue that will be recovered from fixed charges and from volume rates. The American Water Works Association (AWWA) recommends methods to classify costs among various customer including the Base-Extra Capacity Method and the Commodity-Demand Method. These methods are particularly useful for water utilities that assign costs between average and peak use and allocate costs across different customer classes. The City of Kerman has not determined peaking factors and has a simple rate structure consisting of a schedule of meter fees and a single volume rate applicable to all customers. Rates are not differentiated by customer class. Thus, it is recommended that the City continue to use a simplified cost allocation method whereby volume rates recover the costs of expenses related to providing water under average demand and peak demand conditions as well as long-term supply. Meter fees recover fixed costs associated with maintaining water system capacity and customer service fees recover costs associated with administration, billing, and answering customer inquiries, see Table 9. It is proposed that about 36.7% of rate revenues be collected from volume rates and about 63.3% of rate revenues be collected from fixed charges.

Table 9: Water Cost Allocation
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Budget	Cost Allocation		
	FY2024	Cust. Serv	Meter Fees	Volume Rates
Operating Expenses				
Water Admin (Account 410 5005)	525,000	33%	67%	0%
Staffing	622,000	0%	50%	50%
Water Conservation Measures	40,000	0%	0%	100%
Professional Services	97,000	25%	75%	0%
Utilities	425,000	0%	0%	100%
Surface Water FID	58,000	0%	0%	100%
Chlorine and Supplies	55,000	0%	0%	100%
State Fees and Permits	25,000	0%	100%	0%
Groundwater Sustainability	24,000	0%	100%	0%
Hydrant Meter Replacements	5,000	0%	100%	0%
Internal Service Funds, Misc., Admin	<u>105,000</u>	<u>33%</u>	<u>67%</u>	<u>0%</u>
Total Operating Expenses	1,981,000	234,250	857,750	889,000
Debt Service - 2003 Loan	165,000	<u>0%</u>	<u>100%</u>	<u>0%</u>
		0	165,000	0
Capital Funding (5-year avg)				
Miscellaneous Repairs	260,000	0%	100%	0%
Water Conservation Measures	7,000	50%	0%	50%
Well 12 Repairs	500	0%	100%	0%
Update PLC/HMI Upgrade/Flowmeter	18,300	0%	100%	0%
Well 17 Repairs	<u>2,000</u>	<u>0%</u>	<u>100%</u>	<u>0%</u>
Total Capital	287,800	3,500	280,800	3,500
Total Cost of Service	2,433,800	237,750	1,303,550	892,500
Proposed Cost Allocation	100.0%	9.8%	53.6%	36.7%

4.2 Meter Equivalents

Based on AWWA guidelines, it is proposed that the meter fees (and associated costs to maintain capacity in the water system) be scaled to the maximum flow rate in gallons per minute (gpm) of each meter size. The flow of larger meters compared to the 3/4" meter determines the number of meter equivalents. Meter equivalents for FY2024 are calculated in Table 10.

Table 10: Meter Equivalents
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Meter Size	# of Customers	Operating Capacity (gpm) [1]	Meter Ratio	# of Meter Equivalents [2]
3/4"	2,979	30	1.00	2,979.00
1"	752	50	1.67	1,253.33
1.5"	41	100	3.33	136.67
2"	115	160	5.33	613.33
3"	12	320	10.67	128.00
4"	20	500	16.67	333.33
6"	4	1,000	33.33	133.33
	3,923			5,577.00

[1] Gallons per minute (gpm) safe maximum operating capacity for C712-10 singlejet type meter

[2] Meter ratio times number of meters

4.3 Unit Cost Calculation

Table 11 calculates the unit costs for the water rates and charges for FY2024. \$2.85 million is the revenue requirement used for rate design and the amount that would be collected if rates were applied to 12 months, absent any delinquencies. In practice, the rates calculated in Table 11 would go into effect February 1, 2024 and would be in effect for 5 months of FY2024. Thus, the total rate revenue for the fiscal year would reflect 7 months at the old rate and 5 months at the new rates.

Table 11: FY2024 Water Unit Cost Calculation
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Customer Service	Base Fees	Volume Rates	FY2024 Full Year's Rate Revenue [1]
Cost Allocation %	9.8%	53.6%	36.7%	100.0%
FY2024 Rate Revenues	\$278,000	\$1,526,000	\$1,045,115	\$2,849,974
Count	3,845	5,465	785,594	
Billing Units	# of meters	Meter Equivalents	1,000 gals [2]	
Rate	\$6.03 \$/month	\$23.26 \$/month	\$1.33 \$/1,000 gallons	

[1] If the February 1, 2024 rate was in effect for 12 months

[2] Reflects 2% reduction in water use compared to current use shown in Table 4

4.4 Meter Fee Calculation

Table 12 provides the proposed fixed charges for FY2024 based on meter size. The base meter fee calculated in Table 11 is scaled by the meter ratios provided in Table 10. This is added to the customer service fee, which is the same for all meter sizes, to equal the total proposed base fee. In addition, it is proposed that customers pay fixed monthly meter replacement fees to set aside funds to replace water meters at the end of their useful lives. The current water meter replacement fee of \$0.50 per month collects about \$23,500 annually and the proposed water meter replacement fees will collect about \$321,000 annually.

Table 12: Proposed FY2024 Water Meter Fees
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Meter Size	Meter Ratio		\$/equivalent	Base Meter Fee	Customer Service Charge	Total Proposed Base Fee	Meter Replacement Fee
3/4"	1.00	X	\$23.26	\$23.26	\$6.03	\$29.29	\$6.50
1"	1.67	X	\$23.26	\$38.77	\$6.03	\$44.80	\$7.15
1.5"	3.33	X	\$23.26	\$77.53	\$6.03	\$83.56	\$8.45
2"	5.33	X	\$23.26	\$124.05	\$6.03	\$130.08	\$9.75
3"	10.67	X	\$23.26	\$248.11	\$6.03	\$254.14	\$13.00
4"	16.67	X	\$23.26	\$387.67	\$6.03	\$393.70	\$16.25
6"	33.33	X	\$23.26	\$775.33	\$6.03	\$781.36	\$19.50

4.5 Proposed Water Rates

Table 13 provides the five-year schedule of proposed monthly water rates. The February 1, 2024 rate adjustment reflects the cost allocation described in the previous sections. Rates are increased by 3% annually in subsequent years to reflect the cost of service increase shown in Table 8. The schedule of proposed rates also includes drought rates which are described in the next section.

Table 13: Proposed Monthly Water Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Meter Size		Proposed Proposition 218								
		February 1, 2024			January 1, 2025			January 1, 2026		
		Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee
3/4"	\$28.67	\$29.29	\$6.50	\$35.79	\$30.17	\$6.50	\$36.67	\$31.08	\$6.50	\$37.58
1"	\$43.81	\$44.80	\$7.15	\$51.95	\$46.14	\$7.15	\$53.29	\$47.52	\$7.15	\$54.67
1.5"	\$81.65	\$83.56	\$8.45	\$92.01	\$86.07	\$8.45	\$94.52	\$88.65	\$8.45	\$97.10
2"	\$127.07	\$130.08	\$9.75	\$139.83	\$133.98	\$9.75	\$143.73	\$138.00	\$9.75	\$147.75
3"	\$248.18	\$254.14	\$13.00	\$267.14	\$261.76	\$13.00	\$274.76	\$269.61	\$13.00	\$282.61
4"	\$384.43	\$393.70	\$16.25	\$409.95	\$405.51	\$16.25	\$421.76	\$417.68	\$16.25	\$433.93
6"	\$762.91	\$781.36	\$19.50	\$800.86	\$804.80	\$19.50	\$824.30	\$828.94	\$19.50	\$848.44
Volume Rate (\$/1,000 gallons)	\$1.27			\$1.33			\$1.37			\$1.41
DROUGHT RATES - Volume Rate (\$/1,000 gallons)										
10% Water Cutback				\$1.39			\$1.43			\$1.47
25% Water Cutback				\$1.51			\$1.55			\$1.60
40% Water Cutback				\$1.68			\$1.73			\$1.79
Meter Size		Proposed Proposition 218								
		January 1, 2027			January 1, 2028					
		Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee	Base Fee	Meter Fee	Total Fee
3/4"		\$32.01	\$6.50	\$38.51	\$32.97	\$6.50	\$39.47			
1"		\$48.95	\$7.15	\$56.10	\$50.42	\$7.15	\$57.57			
1.5"		\$91.31	\$8.45	\$99.76	\$94.05	\$8.45	\$102.50			
2"		\$142.14	\$9.75	\$151.89	\$146.40	\$9.75	\$156.15			
3"		\$277.70	\$13.00	\$290.70	\$286.03	\$13.00	\$299.03			
4"		\$430.21	\$16.25	\$446.46	\$443.12	\$16.25	\$459.37			
6"		\$853.81	\$19.50	\$873.31	\$879.42	\$19.50	\$898.92			
Volume Rate (\$/1,000 gallons)				\$1.45			\$1.49			
DROUGHT RATES - Volume Rate (\$/1,000 gallons)										
10% Water Cutback				\$1.52			\$1.56			
25% Water Cutback				\$1.65			\$1.70			
40% Water Cutback				\$1.84			\$1.89			

4.6 Drought Rates

It is recommended that the City of Kerman adopt a series of drought rates. Drought rates are only implemented during a water shortage emergency as declared by the Governor or the City Council, allowing for financial stability during periods of reduced water sales. During water shortages, a water utility has two core objectives: 1) to reduce the amount of water customers consume, and 2) to maintain an adequate amount of revenue to continue operations. The two competing objectives work against each other because as less water is sold, it becomes more difficult to maintain adequate revenue to cover an agency's costs. It should be noted that under drought conditions, certain expenses will decrease relative to the decrease in water use such as electricity, supplies, and chemicals. However, other costs to operate the water system such as staffing and maintaining long-term supply remain the same. The reduction in cost during drought conditions is reflected in the revenue requirements shown in Table 14.

Drought rates are designed to cover costs at decreased levels of consumption. The City recognizes that ratepayers are already doing their part to conserve. Therefore, applying the drought surcharge to only the consumption charge component gives customers the increased ability to control a portion of their water bills. The proposed drought rates would be charged on a temporary basis and would be phased out when the City determines that water supply conditions have returned to normal and drought-related costs and revenue reductions have been recovered. Drought rates may be implemented by the City Council's adoption of a resolution with findings that a water shortage emergency has been declared by the Governor or City Council and that an actual shortage is demonstrated through water bills for at least sixty (60) days.

Table 14: Drought Rate Calculation
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	FY2024	FY2025	FY2026	FY2027	FY2028
VOLUME RATE REVENUE REQUIREMENT - 10% Cutback					
Total Volume Revenue Requirement	\$982,116	\$1,011,579	\$1,041,927	\$1,073,184	\$1,105,380
<u>Total Consumption</u>	<u>707,035</u>	<u>707,035</u>	<u>707,035</u>	<u>707,035</u>	<u>707,035</u>
Proposed Rate (\$/1,000 gal)	\$1.39	\$1.43	\$1.47	\$1.52	\$1.56
VOLUME RATE REVENUE REQUIREMENT - 25% Cutback					
Total Volume Revenue Requirement	\$887,616	\$914,245	\$941,672	\$969,922	\$999,020
<u>Total Consumption</u>	<u>589,196</u>	<u>589,196</u>	<u>589,196</u>	<u>589,196</u>	<u>589,196</u>
Proposed Rate (\$/1,000 gal)	\$1.51	\$1.55	\$1.60	\$1.65	\$1.70
VOLUME RATE REVENUE REQUIREMENT - 40% Cutback					
Total Volume Revenue Requirement	\$793,117	\$816,910	\$841,417	\$866,660	\$892,660
<u>Total Consumption</u>	<u>471,357</u>	<u>471,357</u>	<u>471,357</u>	<u>471,357</u>	<u>471,357</u>
Proposed Rate (\$/1,000 gal)	\$1.68	\$1.73	\$1.79	\$1.84	\$1.89

4.7 Bill Impacts

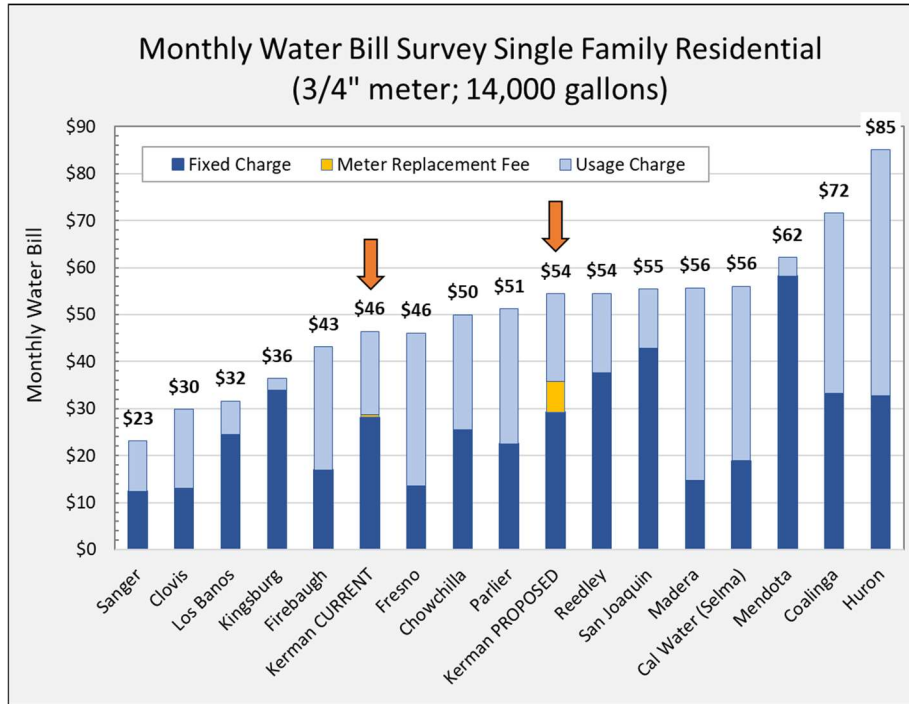
Table 15 provides changes to sample residential bills from the current rate structure to the proposed structure going into effect in February of 2024. The majority of the bill impacts are due to increases in the fixed costs, notably the increase in the meter replacement fees from \$0.50 to \$6.50.

Table 15: Water Bill Comparison
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Monthly Usage (gallons)	Description	Current				Proposed - February 1, 2024				Increase
		Usage Charge	Base Fee	Meter Fee	Total Bill	Usage Charge	Base Fee	Meter Fee	Total Bill	
3,000	2-person home	\$3.81	\$28.17	\$0.50	\$32.48	\$3.99	\$29.29	\$6.50	\$39.78	\$7.30
8,000	Average winter use	\$10.16	\$28.17	\$0.50	\$38.83	\$10.64	\$29.29	\$6.50	\$46.43	\$7.60
14,000	Average monthly use	\$17.78	\$28.17	\$0.50	\$46.45	\$18.62	\$29.29	\$6.50	\$54.41	\$7.96
24,000	Average summer use	\$30.48	\$28.17	\$0.50	\$59.15	\$31.92	\$29.29	\$6.50	\$67.71	\$8.56
30,000	Top 10% of bills	\$38.10	\$28.17	\$0.50	\$66.77	\$39.90	\$29.29	\$6.50	\$75.69	\$8.92

The figure below compares the City’s current and proposed typical water bill with the bills of other local agencies. Even with the proposed FY2024 rate increase, the City of Kerman’s bill will remain in the mid-range of bills charged in the Fresno County/Central Valley region.

Figure 4: Water Bill Survey



SECTION 5: WASTEWATER REVENUE REQUIREMENT

The wastewater revenue requirement was developed in the same manner as the water utility revenue requirement. FY2024 expenses and non-rate revenues were taken from the budget. Later year cost increases were estimated as appropriate. Impact fee and major facilities fund revenues and expenses were not evaluated as part of this rate study.

5.1 Cost of Service

In FY2024, the sewer utility's operating costs are estimated at \$1.8 million. Costs include overhead, administration, staffing, and utilities (electricity) for the conveyance and treatment of flows. The Operations Fund and the Major Facilities Fund split the cost of the annual debt service for the City's 2009 State Revolving Fund (SRF) loan. Operations will pay \$152,000 annually for principal and interest. The Major Facilities Fund's share is \$125,000 annually in principal. The loan was issued to expand the City's wastewater treatment plant. Absent a rate increase, the sewer utility is projected to barely meet its debt coverage requirement of 1.20 times the annual payment amount (i.e. net operating revenues must equal or exceed 120% of the annual debt service amount). If the City does not meet this requirement in future years, the Sewer Fund's credit rating could be negatively impacted, and the utility could face higher interest costs for future debt issuances.

As shown in Table 5, wastewater rate revenues currently generate about \$1.9 million annually. Non-rate revenue sources are estimated to generate \$44,000 annually and consist of interest earnings, penalties, and miscellaneous sources.

5.2 Cash Flow

Similar to the Water Fund, it is recommended that the Wastewater Fund maintain reserves equal to 50% of annual operating costs (including capital outlay and excluding other capital projects) plus 100% of the annual debt service cost. FY2024, the reserve target is about \$1 million but actual cash on hand is about \$652,000. In recent years, the City has spent reserves to fund deferred maintenance projects at the wastewater treatment plant. This fiscal year, the City intends to spend \$152,000 on various projects, see Table 16. In future years, it is assumed that the City will spend \$150,000 annually on projects and/or major repairs.

Although the Operations Fund is currently generating positive net revenues, 8% annual revenue increases are recommended for the next five years to cover operating cost increases, rebuild reserves, and pay off debt, see Table 17.

Table 16: FY2024 Sewer Capital Project Costs
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Project	Cost
Capital Outlay - Upgrade Springbrook Software	\$2,000
Flygt Model Pump for the Screwpress	\$10,000
WWTP Facility Repairs	\$5,000
Sewer Machine	\$83,000
Aluminum Biolac Barge - pontoons for Barge	\$2,000
WWTP Headworks Pump/Motor	\$7,000
WWTP Ras/Was Pump	\$18,000
Goldenrod Lift Station Grundfos Pump (2)	\$17,000
Kearney Blvd./Siskiyou Ave. Lift Station Homa Pump	<u>\$8,000</u>
Total	\$152,000

Table 17: Wastewater Operating Cash Flow
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Proposition 218				
	FY2024	FY2025	FY2026	FY2027	FY2028
Effective Date	Feb 1	Jan 1	Jan 1	Jan 1	Jan 1
Rate Revenue Increase	8.0%	8.0%	8.0%	8.0%	8.0%
Beginning Fund Balance	\$652,000	\$594,000	\$640,000	\$800,000	\$1,087,000
REVENUES					
Rate Revenues	1,969,000	2,124,000	2,294,000	2,477,000	2,676,000
Penalties	7,000	7,000	7,000	7,000	7,000
Interest Income	14,000	14,000	14,000	14,000	14,000
Rent	10,000	10,000	10,000	10,000	10,000
Misc	<u>13,000</u>	<u>13,000</u>	<u>13,000</u>	<u>13,000</u>	<u>13,000</u>
TOTAL REVENUES	2,013,000	2,168,000	2,338,000	2,521,000	2,720,000
EXPENSES					
Personnel/Staffing	729,000	751,000	774,000	797,000	821,000
Contract & Professional Services	213,000	219,000	226,000	233,000	240,000
Utilities	325,000	335,000	345,000	355,000	366,000
Equipment & Supplies	189,000	195,000	201,000	207,000	213,000
O&M Administration	<u>311,000</u>	<u>320,000</u>	<u>330,000</u>	<u>340,000</u>	<u>350,000</u>
Total Expenses	1,767,000	1,820,000	1,876,000	1,932,000	1,990,000
Net Revenue	246,000	348,000	462,000	589,000	730,000
DEBT SERVICE					
2009 Cal. Dept. of Water Resources	152,000	152,000	152,000	152,000	152,000
Debt Coverage Ratio	1.62	2.29	3.04	3.88	4.80
Total Capital	152,000	150,000	150,000	150,000	150,000
Ending Fund Balance	594,000	640,000	800,000	1,087,000	1,515,000
Recommended Fund Balance (6 month O&M plus debt payment)	1,036,000 <i>no</i>	1,062,000 <i>no</i>	1,090,000 <i>no</i>	1,118,000 <i>no</i>	1,147,000 <i>yes</i>

SECTION 6: WASTEWATER COST ALLOCATION & RATE DESIGN

The City proposes to maintain its current wastewater rate structure. Residential customers will continue to be charged fixed monthly fees that include a base and flow charge. Commercial customers will continue to be charged a base charge plus metered volume rates based on pollutant strength. The dollar amount of each rate is proposed to be updated based on the new cost of service and the adjusted allocation to each customer class.

6.1 Cost Allocation

FY2024 was used as the test year for cost allocation purposes, see Table 18. Costs were divided between a capacity category and a flow category. Capacity includes costs for City overhead, administration, and other expenses related to maintaining a high level of service for customers at all times. The flow cost category is composed of non-customer service expenses and expenses that vary with the amount of flow discharged to the system such as electricity, repairs and maintenance, and asset replacement expenses. When customers use the system more heavily, the City incurs greater repair and replacement costs. The capacity costs are proposed to be recovered from the base wastewater charge and the flow category is proposed to be recovered from volumetric flow rates.

Table 18: Wastewater Cost Allocation
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Budget FY2024	Customer Service (Fixed)	Customer Service Allocation	Flow (Volume)	Flow Allocation
Operating Expenses					
Personnel/Staffing	\$729,000	\$364,500	50%	\$364,500	50%
Contract & Professional Services	\$213,000	\$213,000	100%	\$0	0%
Utilities	\$325,000	\$0	0%	\$325,000	100%
Equipment & Supplies	\$189,000	\$94,500	50%	\$94,500	50%
O&M Administration	\$311,000	\$155,500	50%	\$155,500	50%
Total Operating Expenses	\$1,767,000	\$827,500		\$939,500	
Debt Service					
2009 Cal. Dept. of Water Resources Loan	\$152,000	\$76,000	50%	\$76,000	50%
Capital Projects	\$152,000	\$0	0%	\$152,000	100%
Total Allocation	\$2,071,000	\$903,500	43.6%	\$1,167,500	56.4%

The flow cost category is further broken down into a flow component and a strength component. The strength component reflects biochemical oxygen demand (BOD) and total suspended solids (TSS) discharged by sewer customers. The City incurs costs to treat these constituents. However, the City does not have a current wastewater master plan and does not have detailed expense information for the treatment of flow vs. strength. To allocate costs to higher strength customers, industry standard “rules of thumb” were applied. It is assumed that 70% of non-capacity costs are attributable to flow and 30% are attributable to pollutant loading. The pollutant loading estimates for each non-residential customer class are provided in Table 19. Residential flows are assumed to have the same pollutant loading as the low strength customer class.

**Table 19: Allocation to Wastewater Flow and Strength
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Pollutant Strength Category	Flow				Strength				Total Multiplier (Flow + Strength)	
	Factor	Allocation	Multiplier	BOD/TSS mg/l	Factor	Allocation	Multiplier			
Low	1	X	70%	0.7	200	1	X	30%	0.3	1
Medium	1	X	70%	0.7	300	1.5	X	30%	0.45	1.15
High	1	X	70%	0.7	500	2.5	X	30%	0.63	1.33

BOD – biological oxygen demand; TSS – total suspended solids
Mgl – milligrams per liter

6.2 Flow Analysis

Residential sewer flow is not directly monitored by the City. Therefore, winter water consumption is used as a proxy for sewer flow. During the winter, it is assumed that the majority of metered water use is discharged into the sewer and is not used for outdoor irrigation. Table 20 provides an overview of the estimated sewer flow for the different customer types. Based on metered winter water use over the past three years, single family sewer flow is 8,000 gallons per dwelling unit monthly which is the same estimate as the 2018 rate study. Based on records from the same timeframe, multi-family sewer flow per dwelling unit has increased from 4,500 gallons per month (2018) to 6,000 gallons per month (current).

Total single family residential sewer flow is estimated as 8,000 gallons per month times 12 months, times the number of dwelling units and multi-family residential sewer flow is estimated as 6,000 gallons per month times 12 months, times the number of dwelling units. Commercial sewer flow is based on prior year billed flows. The strength multiplier developed in Table 19 is applied to the estimated flow of each customer group.

Table 20: Sewer Flow Estimates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Wastewater Customers	FY2024 Est. Sewer Flow (1,000 gal)	Strength Multiplier	Flow X Multiplier
Low/Domestic			
Low strength commercial	15,663	1.00	15,663
Est. residential sewer flow [1]	330,144	1.00	330,144
Multi-Family winter water use [2]	80,208	1.00	80,208
Medium strength commercial	4,490	1.15	5,163
High strength commercial	<u>12,460</u>	1.33	<u>16,572</u>
Total Estimated Sewer Flow	442,965		447,751

1 - The typical winter water use for metered, single family residential customers is 8,000 gallons per month. This usage was multiplied by the estimated number of single family customers.

2 - The three year average winter water use for metered, multi-family residential customers is 6,000 gallons per month. This usage was multiplied by the number of multi-family dwelling units.

6.3 Unit Cost Calculation

Table 21 provides the FY2024 wastewater unit cost calculation. The FY2024 revenue requirement for rate design is \$2.058 million. The revenue requirement is multiplied by the cost allocation percentages from Table 18 and then divided by the appropriate billing units.

Table 21: Wastewater Unit Costs
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Cost Allocation	Customer Service	Flow	FY2024 Full Year's Rate Revenue [1]
Cost Allocation %	43.6%	56.4%	100%
FY2024 Rate Revenue	\$898,000	\$1,160,000	\$2,058,144
Count	4,741	447,751	
Billing Units	(# of Accounts or dwelling units)	(1,000 gal)	
Rate	\$15.79	\$2.59	
	\$/account/mo	\$/1000 gal	

1 - If the February 1, 2024 rate was in effect for 12 months

6.4 Proposed Wastewater Rates and Bill Impacts

Table 22 provides the wastewater flow rate calculations. The strength multiplier for each customer class is applied to the flow unit cost of \$2.59 per thousand gallons. The single family residential bill is calculated as the base fee plus the flow rate times 8,000 gallons. The multi-family bill per dwelling unit is calculated as the base fee plus the flow rate times 6,000 gallons.

Table 22: Wastewater Rate Design
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Flow Rates	Unit Flow Cost		Strength Multiplier	Flow Rate (\$/1,000 gal)
Low				
Low strength commercial	\$2.59	X	1.00	\$2.59
Residential	\$2.59	X	1.00	\$2.59
Multi-Family	\$2.59	X	1.00	\$2.59
Medium strength commercial	\$2.59	X	1.15	\$2.98
High strength commercial	\$2.59	X	1.33	\$3.44
Customer Service Charge	Unit Customer Service Cost		Factor	Total \$/unit
Multi-Family	\$15.79	X	1.0	\$15.79
Single Family	\$15.79	X	1.0	\$15.79
Commercial	\$15.79	X	1.0	\$15.79
Total Rate Schedule	Rate		Count	Total \$/month
Single Family Residential				
Base (per dwelling unit)	\$15.79	X	1	\$15.79
Flow (avg winter water use)	\$2.59	X	8	<u>\$20.72</u>
Total				\$36.51
Multi-Family Unit				
Base (per dwelling unit)	\$15.79	X	1	\$15.79
Flow (avg winter water use)	\$2.59	X	6	<u>\$15.54</u>
Total				\$31.33

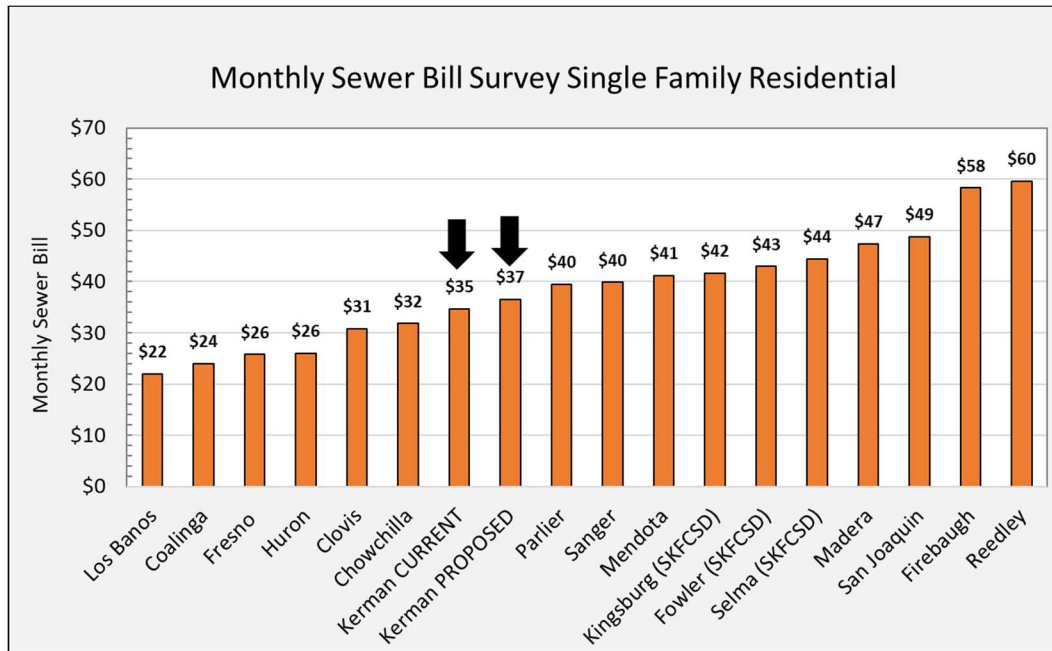
The five-year wastewater rate schedule is provided in Table 23. This rate study allocates customer service costs on a \$/dwelling unit basis for residential customers and a \$/account basis for commercial customers. City staff have observed that single family dwelling units and multi-family dwelling units have the same customer service needs, so it is appropriate that both customer groups are charged the same base charge. Adjustments to the commercial flow rates vary based on pollutant strength. The February 1, 2024 rate adjustment reflects the cost allocation described above and future year rates are increased by 8% annually.

**Table 23: Current and Proposed Sewer Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Fixed Charges (\$/mo)	Current Rates	Proposed				
		February 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027	January 1, 2028
Residential						
Base	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Flow	<u>\$19.12</u>	<u>\$20.72</u>	<u>\$22.38</u>	<u>\$24.17</u>	<u>\$26.10</u>	<u>\$28.19</u>
Total	\$34.65	\$36.51	\$39.43	\$42.58	\$45.98	\$49.66
Multi-Family Unit						
Base	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Flow	<u>\$10.75</u>	<u>\$15.54</u>	<u>\$16.78</u>	<u>\$18.12</u>	<u>\$19.57</u>	<u>\$21.14</u>
Total	\$26.28	\$31.33	\$33.83	\$36.53	\$39.45	\$42.61
Commercial (Base)	\$15.53	\$15.79	\$17.05	\$18.41	\$19.88	\$21.47
Commercial Volume Rates (\$/1,000 gal)						
Low Strength	\$2.39	\$2.59	\$2.80	\$3.02	\$3.26	\$3.52
Medium Strength	\$2.75	\$2.98	\$3.22	\$3.48	\$3.76	\$4.06
High Strength	\$3.18	\$3.44	\$3.72	\$4.02	\$4.34	\$4.69

The figure below provides a bill survey comparing the City of Kerman’s current and proposed FY2024 single family residential wastewater bill with the bills of other local agencies. The City’s bill is currently in the mid-range of surveyed agencies and will remain in the mid-range following the proposed February 1, 2024 increase.

Figure 5: Sewer Bill Survey



SECTION 7: STORM DRAIN REVENUE REQUIREMENT

Storm drain fees are intended to fund capital improvement programs, operations and maintenance, clean water programs to mitigate the pollutants in stormwater, and other environmental services related to storm water. Ongoing maintenance of storm drain pipes is important in reducing risks of flooding and sink holes in local neighborhoods.

7.1 Current Storm Drain Rates

Table 24 shows the current monthly storm drain rates. Residential customers are charged \$1.60 per dwelling unit. Non-residential customers are charged \$0.0736 per 1,000 gallons of non-irrigation water use with a minimum fee of \$1.60.

Table 24: Current Monthly Storm Drain Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

Customer Class	Current Rates		
Residential			
Single Family	per dwelling unit	\$1.60	
Multi-Family	per dwelling unit	\$1.60	
Non-residential			
Commercial			\$0.0736/1,000
Industrial			gallons of
Church	Minimum fee per	\$1.60	or
Schools	account		non-irrigation
Parks			water use

7.2 Cost of Service and Cash Flow

The City’s storm drain rates currently generate about \$83,000 annually in revenues. Non-rate revenues are minimal and amount to a few hundred dollars annually. These revenues are inadequate to meet costs and the utility is operating at a deficit. In FY2024, operating expenses total about \$142,000 and consist of staffing, equipment, supplies, and materials to collect and convey storm runoff. Capital costs for this year total \$368,000 and are estimated at \$37,500 annually into the future. Despite operating at a deficit, the storm drain utility has healthy fund reserves of over \$1 million as of July 1, 2023. It is proposed that the City raise rates to cover annual operating and capital costs and maintain recommended reserves of 50% of operating costs. The storm drain cash flow is provided in Table 25.

Table 25: Storm Drain Cash Flow
City of Kerman
Water, Wastewater, and Storm Drain Rate Study

	Proposition 218				
	FY2024	FY2025	FY2026	FY2027	FY2028
Effective Date	Apr 1	Jan 1	Jan 1	Jan 1	Jan 1
Rate Revenue Increase	130.00%	3.00%	3.00%	3.00%	3.00%
Beginning Fund Balance	\$1,025,000	\$634,300	\$644,200	\$655,500	\$668,200
REVENUES					
User Fees	119,200	193,500	199,300	205,300	211,500
Penalties	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
TOTAL REVENUES	119,600	193,900	199,700	205,700	211,900
EXPENSES					
Personnel/Staffing	76,900	79,200	81,600	84,000	86,500
Contract & Professional Services	8,000	8,200	8,400	8,700	9,000
Utilities	2,500	2,600	2,700	2,800	2,900
Equipment and Supplies	20,500	21,100	21,700	22,400	23,100
O&M Administration	<u>34,400</u>	<u>35,400</u>	<u>36,500</u>	<u>37,600</u>	<u>38,700</u>
TOTAL EXPENSES	142,300	146,500	150,900	155,500	160,200
Net Revenues	(22,700)	47,400	48,800	50,200	51,700
CAPITAL PROJECTS					
Outlays	10,000	12,500	12,500	12,500	12,500
Repairs, Parts, Etc.	<u>358,000</u>	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>
TOTAL CAPITAL EXPENDITURES	368,000	37,500	37,500	37,500	37,500
Ending Fund Balance	\$634,300	\$644,200	\$655,500	\$668,200	\$682,400
Ending Fund Target (50% of operating costs)	\$71,200	\$73,300	\$75,500	\$77,800	\$80,100

SECTION 8: STORM DRAIN COST ALLOCATION AND RATE DESIGN

8.1 Storm Drain Cost Allocation

Proposition 218 requires that municipalities providing “property-related services” (including storm drain service) set rates and charges that are based on the cost of providing those services. The revenue requirements detailed in the previous section determine the amount of revenue to be recovered from the storm drain rates. In this section, the cost of service allocation develops an equitable means of allocating utility costs among its customers based on their estimated runoff burden to the storm drain system.

Impervious area is commonly used as a proxy to estimate the stormwater runoff contributed by a property. Impervious surfaces are surfaces that allow little or no stormwater to permeate into the ground, including rooftops, paved driveways, and walkways. The estimate of impervious area can be used to establish an adequate storm drain fee proportionate with the revenue needed to manage the runoff received from parcels and adjoining streets.

Table 26 provides an estimate of impervious area within the City. Parcels within the City are divided into the following land use categories: single family residential, multi-family, commercial, industrial, church, school, and parks. A runoff coefficient is applied to the acreage of each land use category. The runoff coefficients are estimates of the percentage of the land area that is impervious.

Parcels that meet any of the following conditions are excluded from Table 26 and are not proposed to be charged storm drain fees:

- 1) Parcels that solely comprise a street or roadway (either publicly or privately owned) and are considered to be part of the Storm Water conveyance system.
- 2) Parcels comprised of an area which is part of the City’s storm drain system.
- 3) Parcels that do not receive service.
- 4) Parcels which detain all runoff on site.

**Table 26: Acres and Estimate of Impervious Area
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Service Type	Estimated Acres	Runoff Coefficient	Total Impervious Area	% of Total Impervious Area
Single Family Residential	636.2	0.50	318.1	29.6%
Multi-Family	535.3	0.70	374.7	34.8%
Commercial	262.6	0.80	210.1	19.5%
Industrial	141.0	0.90	126.9	11.8%
Church	18.0	0.50	9.0	0.8%
Schools	111.4	0.30	33.4	3.1%
Parks	<u>40.0</u>	0.10	<u>4.0</u>	<u>0.4%</u>
	1,744.5		1,076.2	100.0%

As shown in the cash flow, it is proposed that the rate revenues increase by 130% from about \$83,000 to about \$191,000 (if collected over 12 months). Table 27, below, allocates the revenue requirement of \$191,000 to each customer class using the percent of total impervious area and to calculate the rates. Single family residential customers will continue to be charged on a “per dwelling unit” basis, with the monthly fee being lowered from \$1.60 to \$1.42. The single family residential fee is based on an average parcel size of 0.19 acres. All other customers will be charged on a “per acre” basis. Parcel size and impervious area are more indicative of how customers impact and use the City’s storm water conveyance system than metered water use under the current billing method.

**Table 27: Storm Drain Rate Calculation
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

		April 1, 2024 [1]
Total Storm Drain Revenue Requirement [1]		\$191,219
Customer Class Allocation	% of Total Impervious Area	
Single Family Residential	29.6%	\$56,516
Multi-Family	34.7%	\$66,574
Commercial	19.6%	\$37,328
Industrial	11.8%	\$22,554
Church	0.8%	\$1,598
Schools	3.1%	\$5,938
Parks	<u>0.4%</u>	<u>\$711</u>
	100.0%	\$191,219
Rate Calculation for Single Family Residential		
Total Revenue Requirement		\$56,516
Total Number of Residential Accounts		3,333
Monthly Single Family Residential Rate (per account)		\$1.42
Rate Calculation for Multi-Family		
Total Revenue Requirement		\$66,574
Total Acres		535.3
Monthly Storm Drain Rate per Acre		\$10.36
Rate Calculation for Commercial		
Total Revenue Requirement		\$37,328
Total Acres		262.6
Monthly Storm Drain Rate per Acre		\$11.85
Rate Calculation for Industrial		
Total Revenue Requirement		\$22,554
Total Acres		141.0
Monthly Storm Drain Rate per Acre		\$13.33
Rate Calculation for Church		
Total Revenue Requirement		\$1,598
Total Acres		18.0
Monthly Storm Drain Rate per Acre		\$7.40
Rate Calculation for Schools		
Total Revenue Requirement		\$5,948
Total Acres		111.4
Monthly Storm Drain Rate per Acre		\$4.44
Rate Calculation for Parks		
Total Revenue Requirement		\$711
Total Acres		40.0
Monthly Storm Drain Rate per Acre		\$1.48

1 – April 1, 2024 rate increase applied to 12 months of billings

8.2 Proposed Storm Drain Rates and Bill Impacts

The proposed five-year rate plan is shown in Table 28. The April 1, 2024 rates reflect the new cost allocation and rate structure described herein. The following years reflect 3% annual increases consistent with the proposed cash flow.

**Table 28: Proposed Monthly Storm Drain Rates
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Customer Class	Billing Method	Current	Proposed Proposition 218+					
			Billing Method	April 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027	January 1, 2028
Single Family	Per dwelling	\$1.60	Per dwelling	\$1.42	\$1.46	\$1.50	\$1.55	\$1.60
Multi-family	Per dwelling	\$1.60	Per acre	\$10.36	\$10.67	\$10.99	\$11.32	\$11.66
Commercial	*	*	Per acre	\$11.85	\$12.21	\$12.58	\$12.96	\$13.35
Industrial	*	*	Per acre	\$13.33	\$13.73	\$14.14	\$14.56	\$15.00
Church	*	*	Per acre	\$7.40	\$7.62	\$7.85	\$8.09	\$8.33
Schools	*	*	Per acre	\$4.44	\$4.57	\$4.71	\$4.85	\$5.00
Parks	*	*	Per acre	\$1.48	\$1.52	\$1.57	\$1.62	\$1.67

* Currently, all non-residential customers are billed based on metered water service. The current rate is \$0.0736/1,000 gallons of non-irrigation water use with a minimum fee of \$1.60 per month.

+ For accounts for which the City cannot determine a parcel size, the minimum fee is 1/5 of the proposed rate per acre

Table 29 illustrates the cost impacts of the new rate structure on the City's customer classes. Under the proposed 2024 rates, single family customers will pay less with costs shifted to other customer classes based on their proportional share of impervious area. The rate proposal assumes that multi-family parcels will be billed based on acreage and the acreage charge will then be subdivided among tenants or various utility customer accounts for each parcel.

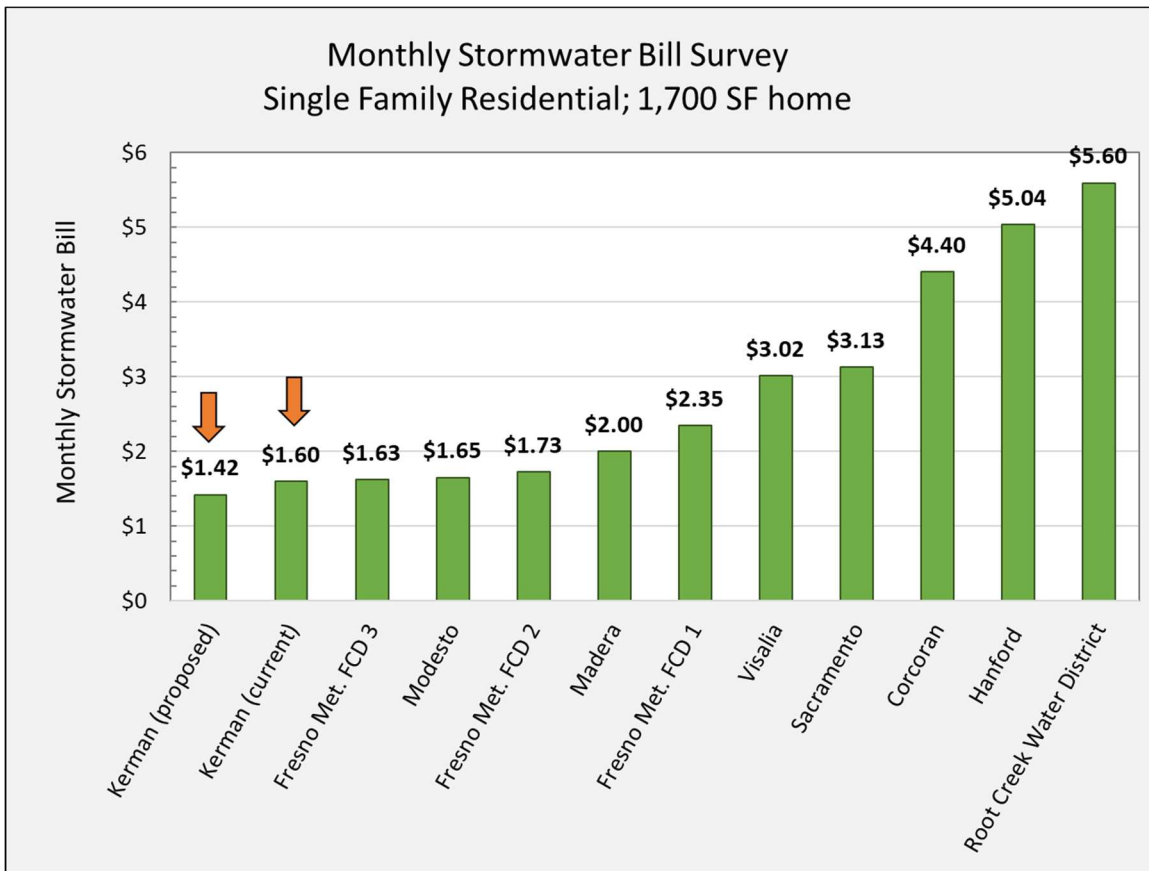
**Table 29: Storm Drain Revenue Recovery
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Customer Class	Current Rate Revenues		Proposed April 1, 2024 Rate Revenues [1]	
Single Family Residential	\$65,492	78.8%	\$56,516	29.6%
Multi-Family	\$10,911	13.1%	\$66,574	34.8%
Commercial	\$5,162	6.2%	\$37,328	19.5%
Industrial	\$207	0.2%	\$22,554	11.8%
Church	\$365	0.4%	\$1,598	0.8%
Schools	\$939	1.1%	\$5,938	3.1%
Parks	\$63	0.1%	\$711	0.4%
	\$83,139	100.0%	\$191,219	100.0%

1 - If billed for 12 months

The figure below provides a bill survey comparing the City of Kerman’s current and proposed storm drain bills with the bills of other agencies. Some agencies in Fresno County choose not to charge storm drain fees so the figure includes bills from other areas of the state. As shown, the rate change keeps the City’s bill at the low end of storm drain rates.

Figure 6: Storm Drain Bill Survey



SECTION 9: CONCLUSIONS AND RECOMMENDATIONS

9.1 Rate Study Conclusions

The rates developed in this report were based on the best available information gathered from City audits, budgets, and input from staff and City Council. The cost allocations proposed herein are based on American Water Works Association methodologies and industry standard practice. The proposed rates are based on the reasonable cost of providing service and are proportional to the benefits received by each customer.

9.2 Rate Impacts

Table 30 shows the combined utility bill for a typical residential customer with a 3/4” water meter and 14,000 gallons of monthly water usage. The total bill is proposed to increase from \$82.70 under current rates to \$92.34 under the 2024 rates.

**Table 30: Combined Bill Impacts
City of Kerman
Water, Wastewater, and Storm Drain Rate Study**

Monthly Utility Charges	Current (January 1, 2023)	Proposed				
		April 1, 2024	January 1, 2025	January 1, 2026	January 1, 2027	January 1, 2028
Water Meter Fee 3/4"	\$28.17	\$29.29	\$30.17	\$31.08	\$32.01	\$32.97
Meter Replacement Charge	\$0.50	\$6.50	\$6.50	\$6.50	\$6.50	\$6.50
Usage Charge (14,000 gallons)	\$17.78	\$18.62	\$19.18	\$19.74	\$20.30	\$20.86
Sewer Charge	\$34.65	\$36.51	\$39.43	\$42.58	\$45.98	\$49.66
Storm Drain Charge	<u>\$1.60</u>	<u>\$1.42</u>	<u>\$1.46</u>	<u>\$1.50</u>	<u>\$1.55</u>	<u>\$1.60</u>
Total Monthly Bill	\$82.70	\$92.34	\$96.74	\$101.40	\$ 106.34	\$111.59
Increase		12%	5%	5%	5%	5%

The chart below compares the City of Kerman’s current and proposed water and sewer bill to the bills of other local agencies. Following the rate increase, the City’s bill will remain in the lower to mid-range of surveyed agencies.

Figure 7: Combined Water and Sewer Average Single Family Residential Bill Survey

