

# City of St. Mary

## Water Rate Study

Tom Hyatt, MRWA Management Circuit Rider, November 15, 2016



City of St. Mary's submission of its most recent Capacity Development Survey to the Missouri Department of Natural Resources (MDNR) reflected interest in receiving assistance with a water rate study. City Clerk David Woods confirmed this interest when I, Missouri Rural Water Association Management Circuit Rider Tom Hyatt, stopped to discuss this matter August 9, 2016. Mr. Woods quickly printed needed financial information and provided this to me, including existing rate structures, income and expenses, water usage and customer numbers, loan payments and bond covenant details, and short-lived and old asset reserves.

The rate study additionally accounts for projected capital expenditures for the next 20 years. I returned August 29 to meet with Operator Dennis Bovey who took me to various installations in the system, discussed their maintenance histories and current conditions, and provided cost estimates for repair or replacement of components on the basis of his long-standing history at the city. Although no one can accurately predict the future, it is important to estimate needed components as a way to gauge financial solvency.

If a water system is going to remain financially viable for generations to come, it must have sufficient revenue. Otherwise, the utility will not be able to adequately repair or replace worn parts, lines, and equipment; or pay bills and debts. As regulations change, it becomes more expensive to maintain water; and more challenging to hire competent staff members to meet required regulations. Properly managed water and wastewater systems promote the health of the community, safeguard the environment, serve as the infrastructure upon which economic growth can occur, and provide a source of revenue to local government. These utilities are, therefore, the most critical services provided by the city.

This report reflects income and expenses from October 2014 through September 2015, the most recently completed fiscal year at the time of my visits: 13,598,220 gallons purchased from Wholesaler Ste. Genevieve County PWS 1; and 9,001,685 gallons sold to City of St. Mary residential and commercial customers. This difference represents 34% lost water and a potential revenue loss of \$45,813.53 for drinking water and another \$33,119.12 for wastewater on the basis of the city's existing rate structures. Had the city brought its water loss down to the state-accepted level of 10%, it would

have eliminated *half* of its drinking water deficit and almost *one-third* of its wastewater deficit when budgeting for future capital expenses, necessitating smaller rate adjustments for both.

Additionally, the city has the same rate for residential and commercial customers; and usage is not differentiated between them. Therefore, I have estimated the division of water usage as follows: 6,500,000 gallons for 177 residential customers and the remaining 2,501,658 gallons for 19 commercial customers.

Method Used: Spreadsheets, initially developed by the MDNR and since modified to match the city's billing structure, were used to calculate rates. They will be shared with the city for future reference.

Annual Fixed Expenses: Besides those provided by Mr. Woods, I would usually add one category. Financial sources recommend building an Emergency Fund reserve until it equals no less than 10% of annual operating expenses or the value of the most expensive capital item, whichever is greater. Despite this sound recommendation, I have suspended my usual practice of adding a nominal one percent (1%) dollar value to the annual operating expenses as a means of reducing unnecessary costs when the deficit will already require a substantial rate increase.

Equipment Replacement Schedule: The rate study looks at long term equipment replacement to ensure funds are available when major critical parts wear out or break. The rate spreadsheet calculates future costs of components to determine the system's annual annuity requirements.

**Summary of the Drinking Water Rate Study:**

Water rates should be raised to meet current and future needs of the drinking water system. The rate study provides two options so that the city council can compare these proposed values with existing rates. Option A maintains the existing practice of charging commercial and residential customers the same rate for volume usage exceeding the minimum. Option B adopts a higher charge to commercial users than residential users for volume in excess of the minimum, thereby shifting proportional costs to these large users and minimizing the impact to residential users. (See rate chart on following page).

**Drinking Water Rate Chart:**

	Existing Rates	Option A	Option B
Min Rate (1 <sup>st</sup> 1,000 gal)	\$23.00 both user groups	\$28.00 both user groups	\$24.00 both user groups
Charge per 1,000 gal above min	\$10.75 both user groups	\$18.70 both user groups	\$19.00 res; \$22.26 com
Cost for Avg Usage	\$44.50 3,000 gal res; \$130.50 11,000 gal com	\$65.40 3,000 gal res; \$215.00 11,000 gal com	\$62.00 3,000 gal res; \$246.60 11,000 gal com
Surplus (Deficit)	(\$64K)	\$118	\$121

The deficit for the existing rates does not reflect real account balances. It is rather a projection of financial shortcomings in light of budgeting for future capital expenditures, as identified in the study's 20-year projection.

**Affordability:** The federal and state government funding agencies use 2% of the Median Household Income (MHI) to determine if water rates are affordable for residents. The most recent MHI for the City of St. Mary is \$31,382, provided by the United States Census Bureau. Using this figure, \$52.30 is considered an affordable water bill for residential users, based upon the average number of gallons used each month (3,000 gallons) per household. This is true for both drinking water and wastewater rates, considered separately. While existing water and wastewater rates are less than this threshold, all proposed rate structures would cause the city to exceed this threshold. Government agencies consider it an undue financial burden to a community's customers when a rate increase would place the cost of one or both services in excess of the MHI on the basis of the average monthly household usage. Consequently, if adopting any of these rate increases, the city will become more eligible for grants and low-interest loans for future projects, as available from lending agencies.

**Recommendations:**

In order to make future rate studies more precise, the city may want to consider the following recommendations:

1. Review the city's water rate structure annually and make small, inflationary adjustments as necessary to prevent rate shock for customers.
2. Work vigorously to eliminate water loss. At 34% and totaling nearly \$79,000 in annual lost potential revenue, this represents the city's single largest financial threat to its long-term solvency.
3. Keep separate account of water usage by commercial establishments in order to better track usage and control water loss.
4. Consider applying a higher rate to commercial customers, given their larger water usage and the corresponding costs to the city to purchase this water from the city's wholesaler.
5. Eliminate the \$3,897 annual reserve for the Grinder Fund from drinking water expenses since this item is strictly a wastewater component and should not be financed with drinking water funds. Additionally, this would save the city nearly four thousand dollars in its cash-strained budget for drinking water.
6. When the city has built a reasonable surplus, it is recommended that it designate a specified amount of money be set aside monthly for emergency reserves.

**Summary of the Wastewater Rate Study:**

Wastewater rates should be raised to meet current and future needs of the drinking water system. As with the water rates, this rate study provides two options so that the city council can compare these proposed values with existing rates. (See rate chart on following page).

**Wastewater Rate Chart:**

	Existing Rates	Option A	Option B
Min Rate (1 <sup>st</sup> 1,000 gal)	\$18.05 both user groups	\$27.00 both user groups	\$24.00 both user groups
Charge per 1,000 gal above min	\$7.50 both user groups	\$15.23 both user groups	\$16.35 both user groups
Cost for Avg Usage	\$33.05 3,000 gal res; \$93.05 11,000 gal com	\$57.46 3,000 gal res; \$179.30 11,000 gal com	\$56.70 3,000 gal res; \$187.50 11,000 gal com
Surplus (Deficit)	(\$72K)	\$127	\$125