

Water Meter Replacement Project

General Information

The amount of water that is currently produced at the Russellville water system when compared to the amount of water sold to the customers of the Russellville water system yields a difference of approximately 15% on average. This “Unaccounted For Water” can financially impact the system through lost revenues and increased pumping and treatment costs. The industry standard is set at 10% for most systems and we also strive to stay at or below that number. City Corporation staff has begun addressing the two main factors that contribute to this number, leaking pipes and inaccurate meters.

In an effort to assess the accuracy of our 12,000+ water meters, a firm was hired to sample 199 of our existing meters ranging from 5/8” residential meters to 6” industrial meters. The results of the study showed that the majority of our meters were past their guaranteed accuracy period of 10 years as some were as old as 20+ years. Based on the results of the study, it is projected that replacement of all meters in the water system with newer, more accurate technology which includes a totally remote cellular transmitter would produce an annual financial benefit of \$689,191, which includes a projected revenue increase of \$499,000 annually due to the installation of more accurate meters. It should also be noted that, with the exception of a very small number of meters installed in the last year, our meters do not meet the federal low-lead rule enacted on January 4, 2014, and cannot legally be re-installed if removed from service for any reason.

City Corporation is currently budgeting approximately \$200,000 annually to systematically replace all of our water meters. Doing so in this manner makes it very difficult to transition to a new technology as we would have a hybrid system of old metering technology and new metering technology for the next 10 to 15 years. By implementing a project to replace all of our meters now versus gradually over the next 10 to 15 years would allow us to take advantage of much better pricing, realize immediate benefit of the full revenue increase from the new meters, eliminate the costs of manually reading a good portion of our existing meters, and provide a much improved level of customer service.

The new meters being proposed would be ultrasonic meters with a higher degree of guaranteed accuracy for a period of 20 years versus the 10 years guaranteed with the mechanical displacement meters that we currently have. The meters would also be equipped with cellular based communications that would allow two-way communications with the meters and eliminate the need to manually visit these meters for readings, re-reads, etc. This technology would also provide staff and customers with a portal via the internet that would allow for the monitoring of the customer’s water usage which could be used to notify the customer of leaks, increased usage, etc. This tool will provide the customer with the ability to manage their water usage, and ultimately their water bill, which has not been possible in the past.

This project will be funded through the issuance of municipal bonds made possible by the recent rate ordinances approved by the Russellville City Council. Based on the revenue projections cited above, the payback for this project is projected to be 5.82 years.