



Replacing Water Meters Creates Revenue Gain for Osage City

The city of Osage City is located 25 miles south of the Topeka. The population of 3,400 people is served through 1,300 water meters. With no recent upgrade the city determined several years ago it was time to change out their water meters.

Osage City has not had any recent increase in water loss prior to purchasing and replacing the water meters. Water loss between 2008 and 2017 averaged approximately ten percent annually. While that degree of loss is below average among water systems in Kansas, the city determined it was in the best interest of the city and the residents to replace the meters before higher unaccounted for water became an issue.

The city has an approximate annual revenue of \$1.3 million in water sales. The city council did a review and voted to replace the meters over a three-year period of time beginning in 2017. The project was recently completed. According to city officials, the meter change-out has led to a revenue gain of \$65,000 per year on average since installation.

The old meters were billed out in thousands of gallons. The new meters bill in hundreds with less error in readings which eliminated

the wide increments. Utilizing the new radio read meters the city was able to bring the water loss down to less than five (5) percent. The new meters have codes that assist in determining when water is not flowing as expected. Such as there is a ‘Tamper Code’ that will assist the operator to know there has been tampering with the meter and not necessarily a leak. Prior to the new coding assistance it could take many man-hours to determine the issue. The

meters are also equipped with codes to determine a burst line, a leak or a reverse water flow issue.

The leak code indicates that water has stopped flowing through the meter for the last few days. This can be a sign of a leaky faucet or failing toilet tank valve. The burst code indicates that water has flowed in excess of a programmed limit for more than 30 minutes, which is a sign of a pipe burst. The dry code means the meter contains no water, and the reverse code shows the water is flowing through the meter in the wrong direction, meaning the meter was installed backwards.

The city did substantial research in finding meters that would fit the needs of residential customers and the city’s needs. After much consideration and research the city determined that the Kamstrup flowIQ 2100 meters would be the best for this small city and its residents.



The city installed ultrasonic meters, which have no moving parts.



KRWA Tech Tony Kimmi and Osage City Utilities Director Joey Lamond discuss the city's new meters and benefits the city has documented.

In order to fund the project, the council voted to utilize internal funds and have the city employees install the meters. The cost of the project is estimated at \$275,000. Utilizing city employees helped reduce installation costs.

Prior to installation of the new meters, the typical meter readings required two to three days and bill out correctly. The new meters can now be read by one operator in less than four hours. This frees up staff time for other needs of the city without hiring more staff to attend to water meter reading.

City Utilities Director Joey Lamond reports that clerical errors have all but been eliminated with the new meters and the city is very pleased with the coding that the meters are capable of. These features have saved much time and effort in re-work for the clerical and billing staff.

This project in Osage City is an example where the council and staff evaluated the water system and then by being proactive, now have full confidence that its metering and billing procedures are accurate. Because of the additional revenue that has been documented, this proactive replacement of water meters has been a win-win situation for the city and its residents.

Tony Kimmi has worked as a Tech Assistance for KRWA since October 2009. He has extensive experience in the operation of construction equipment. He has assisted in the construction of several rechlorination stations and ongoing monitoring of water quality issues. Tony enjoys providing assistance to public water systems.



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