



Photograph: City of Bryant  
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## CASE STUDY

# City of Bryant's Water System Overhaul with Metron Metering

*Every aspect of Bryant's water operations has been greatly improved through the deployment of smart metering.*

### Background

The City of Bryant, under the leadership of Public Works Director Tim Fournier, faced significant challenges with their existing water meter system. The system, initially installed in 2012, relied on radio read technology but began to fail at an accelerated rate by 2020. This led to substantial operational inefficiencies and financial losses, prompting the city to seek a comprehensive solution.

"At that time, we were losing about 800 reads a month until we got to about 5,000 manual reads," says Fournier.

### Challenges

**System Failures:** The existing meter system was unreliable. In many cases, the meters' internal batteries lasted just one year. This led to up to 5,000 manual reads required monthly due to system failures, which placed a heavy burden on the city's limited resources and was often unachievable.

**Operational Strain:** With only two meter technicians, the city had to borrow staff from other departments to keep up with manual reads, disrupting other essential services.

**Inaccurate Billing:** The city's policy was to apply minimum billing in cases where meters could not be read. They also investigated estimating water usage based on prior months, which lead to inconsistent and inaccurate billing. This caused frustration among residents and substantial revenue losses.

## Solution

To address these issues, the City of Bryant decided to overhaul their water meter system. Instead of immediately opting for a new vendor, they conducted a thorough pilot program involving multiple vendors. After a six-month evaluation period, they selected Metron due to its superior analytics and customer support.

## Pilot Program

**Deployment:** The city installed ten meters from each vendor at council members' houses and other key locations to evaluate performance. "One council member [with a Metron meter] actually had a huge leak during this last winter when she was out of town. She was able to detect it so she could turn it off."

**Evaluation Criteria:** The systems were graded on various factors, including ease of use, accuracy, and the quality of customer portals such as Metron's WaterScope®. The city also considered the vendors' ability to provide billing data and support.

**Selection of Metron:** Metron was chosen for its cellular technology, reliable and accurate metering, and detailed analytics, which provided minute-by-minute water usage data. This feature was particularly valuable for identifying leaks and other issues promptly. Additionally, Metron's customer support was highly responsive.

*Metron's customer support was highly responsive.*

**Other vendors:** In comparison, several other vendors, who – unlike Metron – often work through distributors, were often unresponsive or provided the wrong products during the pilot phase.

## Deployment

**Cellular Coverage:** Metron conducted a survey of cellular coverage under Verizon's network and found it to be satisfactory. There was no need to deploy meters on other carriers' networks, or to install drive-by meters or repeaters. "If we get some catastrophic event that comes through, I'm willing to bet Verizon gets their network up a whole lot faster than a radio-read infrastructure would," says Fournier.

**Scope of Roll-Out:** The deployment of approximately 8,200 meters took about four months to complete using a contracted installation company.

**Smooth Transition:** With daily reports of where meters had been installed, the city could add them immediately to the new billing system.

## Results

**Improved Accuracy:** Metron's system, which is cellular, provided a 100% read rate, eliminating the need for manual reads and reducing operational strain. The meters' accuracy and 1-minute data capture rate also allowed the city to detect and address leaks and losses more efficiently.

**Enhanced Revenue:** The city saw a substantial increase in revenue due to accurate reads leading to comprehensive billing. This also increased sewage revenues as they are tied to water consumption. Furthermore, the identification of unauthorized usage contributed to revenue through fines and fees, which have increased from \$5,000 to \$300,000 annually. This includes levying a \$500 fee for consumers who cut locks off their water service, because it became easy to identify when water is being used on locked-out accounts. “There was no consequence before. We were just flying blind. This helps us track everything,” says Fournier. Since deploying Metron meters, the city’s water department’s cash reserves have been on an upward trend.

**Customer Engagement:** The city made a concerted effort to engage with residents and educate them about the new system. This included providing information about the WaterScope customer portal and how to monitor their own water usage and set up alerts.

**Customer Satisfaction:** The customer-facing features of WaterScope allowed residents to monitor their water usage closely, leading to higher satisfaction and fewer billing disputes. The minute-by-minute usage data helped resolve customer complaints more effectively. “They’re getting an entire month of one-minute reads. It’s really, really hard to argue with,” says Fournier. Leaks were identified too, with the city alerting four customers to major leaks before the customers knew about them. These benefits have gone a long way to establish trust between the utility and its customers, trust which had been eroded previously.

*One-minute reads are really, really hard to argue with.*

**Operational Efficiency:** Metron’s cellular metering system streamlined operations in many areas and improved overall efficiency. The city was able to dramatically reduce the number of manual reads and allocate resources more effectively.

**Losses Reduced:** Water losses were 18 to 30% before deploying Metron. Subsequently, a third-party auditor measured losses at an enviable 4%.

**Reliability:** Metron’s meters have proved reliable. The only units that needed replacement were crushed by trucks.

**ROI:** The estimated ROI on the transition to Metron’s metering was 4%. In practice, it is closer to 7 to 8%.

## Conclusion

The City of Bryant’s proactive approach to addressing their water meter system challenges through a comprehensive pilot program and the selection of Metron has resulted in significant operational and financial benefits. The new system has not only improved accuracy and revenue but also enhanced customer satisfaction and operational efficiency. The detailed analytics provided by Metron’s system have been particularly valuable in identifying and addressing issues promptly, leading to a more efficient and effective water management system. In addition, Metron’s responsiveness, both from sales and support, has been exemplary.

“We’re a year into the system and still learning how it benefits us,” says Fournier.

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