

The Hidden Value of Low Flow: Revolutionizing Smart Water Management

Kamstrup, a leader in water metering solutions, has conducted an eye-opening study that reveals the surprising significance of low flow measurements. Based on a random sampling of 1,088 meters across five customers, with an average installation time of 575 days (approximately 1.5 years), the results are compelling:

- The average water usage across these meters is 180 gallons per day.
- More than 6 gallons per day were measured at flow rates below 1/10 of a gallon.
- This low flow usage represents about 3% of daily consumption.

These findings suggest that utilities could increase their billing consumption by 3% by accurately measuring low flow rates. The implications are profound, especially when scaled up to the level of an entire utility.

Consider a small utility with 1,000 customer accounts:

- 6 GPD of low flow multiplied by 365 days equals 2,190 gallons per customer annually.
- This amounts to 2,190,000 gallons of unbilled water each year.
- This volume is equivalent to about 4.5 Olympic swimming pools.

The environmental impact is equally significant:

- The energy required to treat and distribute this water is approximately 3,285 kWh annually.
- This wasted energy could power an average household for roughly 1/3 of a year.
- The carbon footprint is about 0.33 metric tons per year, approaching the emissions from a month of driving a car.

To illustrate the potential financial impact, let's examine a large city, roughly the size of Los Angeles:

- With 681,000 water customers (assuming 95% are residential), we're looking at 646,950 customers.
- At current water and sewage rates (\$15.20 per 748 gallons), the uncaptured low flow represents \$78,879.47 per day in missing revenue.
- Annually, this amounts to a staggering \$28,791,004.81 in potential lost revenue.



These findings suggest that utilities could increase their billing consumption by 3% by accurately measuring low flow rates.

These figures underscore the critical importance of accurate low flow measurement in modern water management. The ability to capture this data not only represents a significant revenue opportunity but also aligns with broader sustainability goals:

- **Financial Impact:** Recouping nearly \$29 million annually could fund substantial improvements in infrastructure, customer service, or conservation programs.
- **Water Conservation:** Accurately measuring low flow helps identify leaks and inefficiencies, supporting targeted conservation efforts.
- **Energy Savings:** Utilities can significantly decrease the energy required for treatment and distribution by reducing water waste.
- **Environmental Stewardship:** Lower energy consumption translates to a reduced carbon footprint, aligning water management with climate action goals.
- **Customer Engagement:** Precise usage data, including low flow information, empowers customers to better understand and manage their consumption.
- **Infrastructure Planning:** Comprehensive flow data informs more accurate capacity planning and infrastructure investments.

The impact of measuring low flow extends beyond mere numbers. It represents a fundamental shift in how utilities approach water management. By leveraging advanced metering technology capable of accurately measuring all flow rates, utilities can:

- Detect and address leaks more quickly, preventing water loss and property damage.
- Implement more effective water conservation strategies based on comprehensive usage data.
- Improve operational efficiency through a better understanding of system-wide water flow patterns.
- Enhance customer service by providing more accurate and detailed consumption information.

As water scarcity becomes an increasingly pressing global issue, the ability to account for every drop of water becomes paramount. Kamstrup's focus on low flow detection highlights a critical area where utilities can make significant strides in water management and conservation.

In conclusion, the message is clear: low flow is not inconsequential. It can have a significant impact, especially on residential water meters. As utilities continue their water journey, embracing advanced metering technology capable of accurately measuring low flow will be vital to unlocking new levels of efficiency, sustainability, and financial performance. The future of smart water management lies in the details, and those utilities that recognize the value of every drop will be best positioned to lead the industry into a more sustainable future. ■

Annually, this amounts to a staggering \$28,791,004.81 in potential lost revenue.



Learn more about the impact of reliable accurate metering to utility operations and financial goals at kamstrup.com/en-us/insights/accurate-metering

ABOUT KAMSTRUP

For over 70 years, utilities around the world have trusted Kamstrup to deliver reliable meter solutions. Here in North America, Kamstrup is focused on supporting water utilities with ultrasonic metering solutions, network communications, and software applications. Kamstrup is a leader in ultrasonic technology, with over 30 years dedicated to innovating and engineering ultrasonic meters. The flowIQ® 2200 residential water meter is the only meter in the industry that features embedded acoustic leak detection. This revolutionary meter is helping utilities to reverse water loss, manage aging infrastructure, and save valuable resources.