

# Bond Case Briefs

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## Getting Smart About the Water We Use.

Modern metering systems can save money and make water management more efficient. Local officials are finding ways to overcome obstacles to putting them in place.

Water and wastewater management are among the most challenging issues that local officials across the country must grapple with. It's easy to see why. Costly federal mandates impose a heavy burden on already strapped municipal budgets. Environmental requirements confront half-century-old pipes and facilities, necessitating expensive improvements. Historic drought in the West, particularly in California, forces local leaders to take the lead on managing precious water supplies for drinking, bathing and farming. The results: water bills keep rising.

In this challenging environment, local officials are taking action to minimize water-related costs for their governments and the residents they serve. Some are fashioning creative private-sector partnerships related to leases or contracts for operations and management. Yet whether relying on public or private management, many localities are embracing the solution of wireless "smart" water meter systems to make the measurement of water usage more effective and efficient.

Typically replacing decades-old systems that required city workers to manually read water meters, these new technologies eliminate human error and provide more frequent readings. They generally rely on transmitters attached to meters to wirelessly send precise water usage data to fixed or roaming devices, which then upload the data to a billing office. The wireless metering system that New York City unveiled several years ago provided benefits both to residents (by providing more transparency into their bills and usage) and to the city (by eliminating the need for expensive manual meter reading and by catching leaks and other problems more quickly).

Yet despite the clear advantages of these systems, the technology has faced pushback from groups and individuals, both inside and outside government, in communities across the country. Their concerns tend to focus on perceived pitfalls. Here are some of the most common obstacles that cities face in attempting to improve their water management systems, along with strategies some have used to overcome these challenges:

**Cost:** With price tags in the tens of millions of dollars, the cost of investing in a smart water meter system is often the most significant barrier to modernization. Still, cities have found ways to alleviate these costs. Bismarck, N.D., for instance, saved money with a public-private partnership that allowed its water utility to share a communications network with the electricity and gas provider, the Montana-Dakota Utilities Co. Cities also can build public support for a pricey project by being forthcoming about its benefits, as Pittsburgh did with a campaign focusing on cost savings of about \$120,000 a year. And to alleviate concerns about public-employee layoffs, utilities must also make it clear that there is so much work to be done that meter readers who are not involved in the new system can be placed elsewhere in the utility.

**Accessibility:** A frequently voiced concern is that more frequent data transmission is useless if customers aren't checking their bills more often. Cities can address this issue by tackling billing accessibility alongside meter modernization. In San Francisco, as a part of a larger smart water

meter installation project, city officials launched an online site that allows residents to monitor their water usage in real time and compare their numbers to city averages and their own past consumption.

**Safety:** Although scientists and regulators agree that smart meter systems pose no danger to public health, some individuals and groups have continued to express concerns about radiation exposure. To assuage these fears, cities should clearly and calmly communicate that the technology is safe by citing relevant studies. Baltimore's website, for instance, presents unambiguous language addressing the issue, referencing studies showing that the devices' low-frequency radio waves cause "no harmful side effects."

**Privacy:** As is the case in all data collection efforts, city officials installing smart water meter systems must take care to ensure that privacy controls are in place and properly communicated to the public.

By tackling these potential obstacles head-on, cities can better position themselves for success. At a time when it's important to implement efficient solutions to the challenges surrounding water management, acting proactively on these considerations can go a long way.

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