OP-EDS

The Unforgiving New Landscape for Water Utilities

Officials and regulators need to work together to help water managers face new challenges, says Max Gomberg, water conservation and climate change manager at the State Water Resources Control Board.

WRITTEN BY
Max Gomberg

PUBLISHED ON
Jul. 19, 2016

READ TIME
Approx. 5 minutes

Homes back up against dry brown hills in Rancho Santa Margarita, California. Water officials in the state face new challenges planning for climate change and population growth. Chris Carlson, AP

LOCAL OFFICIALS ARE judged on how well their governments provide basic services from transportation to trash collection. So it has been with drinking water: if the water was safe to drink and reliably delivered, water managers were doing their job. Moreover, when water managers thought about long-term planning, the answer was always the same: increase supply.

Climate change, new economic realities and population growth in the Sun Belt (from California to Florida) has made water management much more complex. Water managers are now held responsible for a much broader set of outcomes, including conservation, reducing system leakage, local supply development (like water recycling and storm-water capture) and keeping rates affordable in an era of

rapidly rising costs.

Some have risen to the occasion, but the industry as a whole has been slow to adapt in a few key areas. Local officials and state and federal regulators must work together on these topics to build a more resilient future.

Business Models Addressing Shifting Water Use

Los Angeles Department of Water and Power crews work to repair a water main that ruptured on Sunset Boulevard in July 2014. The pipe was 93 years old. (Damian Dovarganes, AP)

Water managers must adopt new business models that address the multifaceted challenges of running a 21st-century utility. Like any business, water utilities must generate revenues to meet their expenses. In the past, water utilities relied on increasing water sales to meet rising expenses. Now, however, water sales are flat or declining in many

communities due to droughts, use of more efficient appliances and fixtures, behavioral changes and an uneven recovery from the recession.

Some water utilities have adapted to this shift by embracing a service provision model that encourages conservation, carefully manages expenses, plans for droughts and diversifies revenue streams. Unfortunately, many utilities have not effectively "decoupled" sales from revenues and suffer financial hardship every time there is a drought or an economic downturn that depresses water consumption.

Furthermore, many utilities have not adequately planned for infrastructure maintenance and replacement, resulting in systems with excessive leakage and the need to spend unbudgeted millions when pipe failures occur.

Rate-Setting for Conservation and Fiscal Stability

A well-managed water utility is financially sound, resilient to water scarcity and able to provide affordable service to low-income customers. Thus, water managers must strive for balance between conservation, affordability and fiscal stability. However, water utilities have high fixed costs, and their financial managers are inclined to cover those costs through fixed charges on customer bills.

The problem with fixed charges is that they are regressive; meaning they disproportionately impact customers with the least ability to pay. In addition, fixed charges are fixed, meaning they stay the same regardless of how much water a customer uses, and therefore do not provide customers with price signals to conserve.

Volume-based rates (like tiered rates) are effective at incentivizing conservation, and many water utilities have switched to them over the past few decades. However, volume-based rates that account for a majority of a utility's revenue create financial risk because if water use drops (due to a drought or economic downturn, for example), revenues drop as well.

Water managers that prioritize fiscal stability over conservation and affordability are doing a triple disservice to their customers: they are harming their low-income customers with high fixed charges, they are not providing adequate conservation price signals, and they are acclimatizing their high-use customers to near-constant water bills, making it harder to secure their support when rate increases are needed. Moreover, less conservation means higher costs to develop new water supplies that could otherwise have been postponed or avoided.

As many great thinkers have stated, societies should

be judged on how they treat their most vulnerable populations. A missing element of many water utilities' pricing structures is rate assistance to make water affordable for low-income customers. Where these rate assistance programs do exist, they are often undersubscribed and may not provide a sufficient subsidy to make water service affordable for low-income families.

In California, low-income rate assistance programs are under threat from a constitutional amendment (proposition 218) and subsequent court decisions. However, water utilities that do not provide affordable water to all of their customers are failing in their responsibilities as stewards of an essential resource.

In 2015, the California Legislature passed AB 401, which requires the State Water Resources Control Board to develop recommendations for a statewide low-income rate assistance program. Implementing such a program is a critical step to ensuring our obligations under earlier "human right to water" legislation are met. In the world's largest economy, we must do a better job of making our most precious resource affordable to all.

Maintaining Infrastructure

According to the U.S. Environmental Protection Agency, the cost of infrastructure necessary to

provide safe and reliable drinking water through 2030 is $384 billion. This astronomical figure stems in part from decades of deferred and inadequate maintenance, repair and replacement of the treatment plants, pipes, tanks and pumps that provide Americans with high-quality drinking water.

Many local elected officials in charge of water utilities did not sufficiently communicate the costs associated with maintaining safe drinking water systems, preferring to keep rates low to ease their path to re-election. This lack of leadership means that water utilities in drought-stressed areas are losing far more valuable water to leaks than they would if utilities had invested in maintaining their infrastructure.

In response to the infrastructure crisis, California, Texas and Georgia have passed legislation and regulations designed to reduce leaks through improved infrastructure assessments, reporting, leak detection and repair.

California is leading the way through legislation (SB 555 in 2015) that requires the State Water Resources Control Board to set enforceable standards for water utility distribution system water loss by 2020. In an era of increased water scarcity throughout much of the country, water utilities must do their part to conserve water by making cost-effective

investments in leak detection, pressure management, pipeline repair and, where necessary, pipeline replacement.

Paying for these actions requires customer engagement and support, and local officials must invest the time and resources necessary to build public trust.

As we have seen from the recent tragedy in Flint, Michigan, the decisions water managers make have profound consequences. With increased challenges from climate change, the decisions water managers make today on fiscal management and rate setting will have far-reaching impacts. As a society, we must raise the bar for what constitutes effective leadership by our water managers.

The views expressed in this article belong to the author and do not necessarily reflect the editorial policy of Water Deeply.

About the Author

Max Gomberg

Max Gomberg is the water conservation and climate change manager at the State Water Resources Control Board, where he has led development of emergency water conservation regulations among other initiatives. Previously, he was a senior analyst for the Office of Ratepayer Advocates at the California Public Utilities Commission. He holds a Masters degree in Public Policy from UCLA and a BA in Environmental Studies from the University of Chicago.