

Taking the long view on water conservation in Texas

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Photo by Paddy Murphy

Utility customers in drought-afflicted areas in Texas have lately been faced with what appears, on the surface, to be a paradox: watching their water bills go up even as they use less.

The immediate math is simple. When utilities encourage conservation, customers use less water, which means less revenue for those utilities. But what few utilities and officials — not to mention increasingly frustrated headlines in Texas and across the country — point out is that in actuality, customers who conserve water are using less *to pay less over time.*

A study out of Westminster, Colorado, cuts to the heart of this issue. Thirty years of conservation kept rates 91 percent lower than they would have otherwise been. Conservation reduced Westminster's demand, effectively extending the life of its water supply. This in turn helped avert the need to develop costly new water sources and large infrastructure projects.

In other words, conservation was actually the key to keeping rates as low as possible because it eliminated or delayed the need for even more expensive investments.

This should be good news for Texas since conservation and reuse efficiency methods amount to 40.7 percent of the 2017 State Water Plan's Water Management Strategies. And yet, many are unable to tear their eyes from their water bills long enough to see that water management is a long game and that conservation is the MVP.

Instead, conservation is quickly becoming the scapegoat for rising rates, even when operational costs are a significant contributor. A 2015 survey conducted by Black & Veatch indicates that 64 percent of water utilities aren't generating enough revenue to cover needed infrastructure improvements, such as replacing aging distribution pipes and adding leak detectors.

Despite these challenges, balancing resource conservation, water revenue and operational costs can be achieved through resilient and sustainable rate structures. Rate design to address today's challenges should consider the following:

1. **Water use is declining nationwide**, even without active utility conservation programs. Knowing what savings to expect from the natural replacement of fixtures and appliances (as well as conservation programs) enables utilities to remove some uncertainty from revenue projections. Rates may need to rise to cover utility costs in the short term, but these rate increases will be smaller than those we face in the long term should water use increase.
2. **Drought is a possibility**. In drought conditions, the cost to secure, import and deliver water may increase, and each unit of available water may cost more than the last. However, resilient rates can be an important tool to combat immediate shortages and communicate the value of strained resources. Specific drought rates for nonessential water use, drought-induced surcharges and other features can be used to help utilities weather the impacts of seasonal, short-term or long-term changes in consumption.
3. **Resilient and sustainable rates are difficult to design** because they must account for all the unpredictable forces that impact sales, such as population growth, weather and reliance on large customers whose needs may change or who might leave the service area. Importantly, there are resources to help utilities design rates. For example, AWE's Financing Sustainable Water initiative offers a free rate design handbook and sales forecasting model. The model simulates the impact of the uncertainties water managers face, and through sales forecasting and rate adjustment modeling, helps managers identify rates that are more likely to lead to fiscal stability regardless of what the future brings.
4. **Customer involvement in the rate design process is vital**. Communities with a better understanding of their water sources, the true cost of water service and the investments needed to ensure reliable service into the future will be supportive of changes that protect their water supplies and the utilities that manage them.

Yes, designing rates is complex. But avoiding rate revisions and blaming conservation for financial woes is a disservice to the utility and its customers. In light of increasing uncertainties, continued conservation combined with resilient rates is the best strategy for balancing financial and water resources in the long term. If utilities fail to find this balance, they are likely to need even higher rates in the future.

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