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LARGEST CITIES RATE SURVEY 2016

Building Financial Resilience



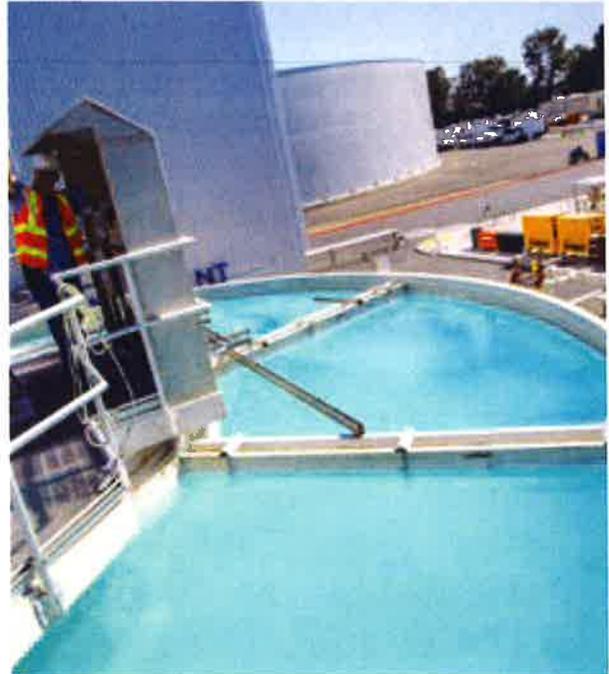
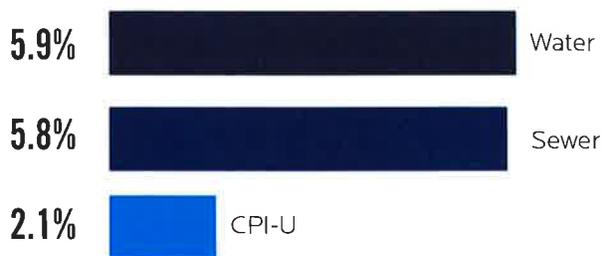
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Prepared by
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Cost of Water and Sewer Services

Since 2001, typical residential water and sewer bills have seen an increase that outpaces the rate of inflation, per the Bureau of Labor & Statistics' Consumer Price Index-U (CPI-U) as shown in FIGURE 2 below.

FIGURE 2: Compound average rate of change in surveyed typical bills 2001 - 2015.



MARKET DYNAMICS

Higher water and sewer bills are a reflection of several dynamics impacting the industry:

- **Aging Infrastructure** represents the industry's greatest challenge. Funding infrastructure is a top priority and many utilities have developed charges specifically for capital projects or ongoing replacement and rehabilitation (R&R) needs.
- **Operational Costs** associated with labor, pension obligations, contract services, materials and supplies, have increased at a faster pace than the CPI-U, which has driven the need to increase rates.
- **Capital Funding** for water and sewer projects is increasingly scarce. With tightening financing requirements for long-term debt, many utilities have had to cash finance projects through cash reserves and rate increases.
- **Regulatory Requirements** have driven the need for significant capital programs for developing new water supply sources or to comply with clean water requirements. These programs come with significant costs that have triggered rate increases.

Affordability

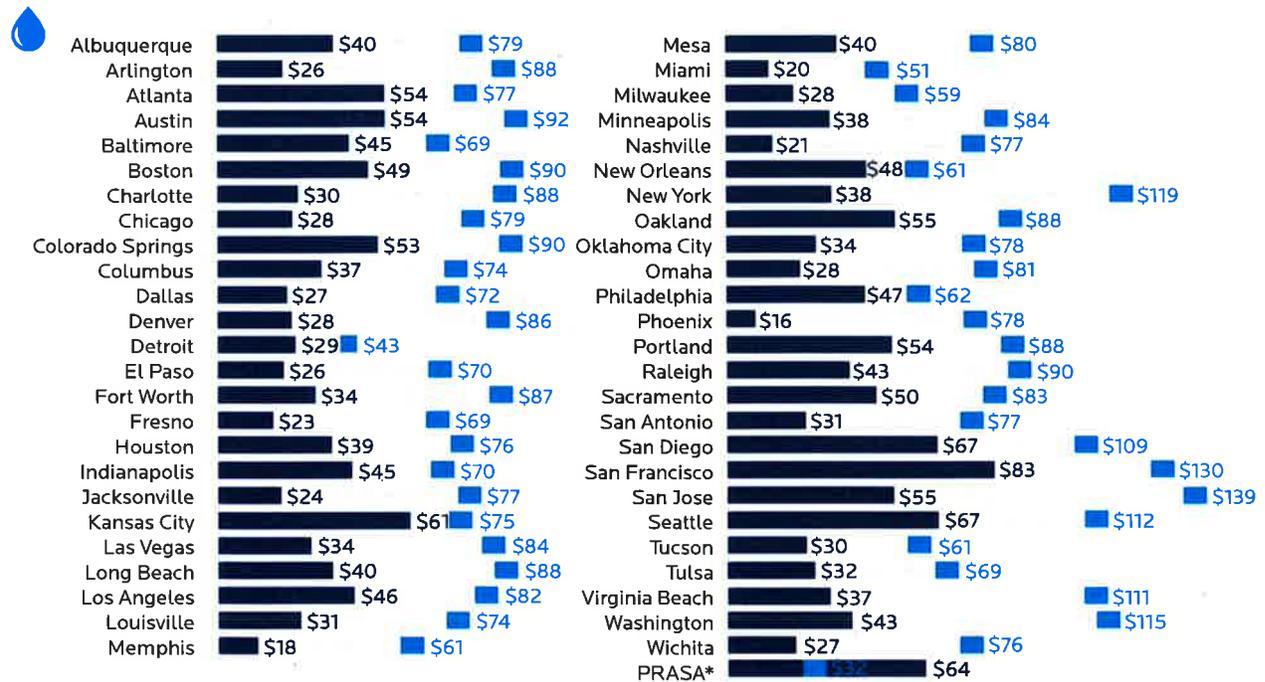
Rising rates are a direct result of cities and utilities grappling with the effects of aging infrastructure, rising operational costs, evolving capital funding mechanisms and regulatory requirements. Despite upward rate pressure, water and sewer services within each of the 50 cities remain largely affordable.

According to U.S. Census data, the national median household income in 2014 was approximately \$53,000, which places the average U.S. affordability target for water and sewer services at \$90 and \$115 per month, respectively. The affordability target is based on applying the average CPI-U increase and the U.S. Environmental Protection Agency's (EPA) affordability guidelines at 2 percent for water and 2.5 percent for sewer of median income.

FIGURE 4 below and FIGURE 5 on the next page, show the average monthly water and sewer bills for typical residential customers using 7,500 gallons per month compared to each city's affordability target.

Despite increasing water and sewer bills, water and sewer services continue to be a good value compared to other household bills. FIGURE 6 on the next page provides average water and sewer bills for typical residential customers as compared to average monthly bills for other services.

FIGURE 4: Typical residential water bill versus affordability target.

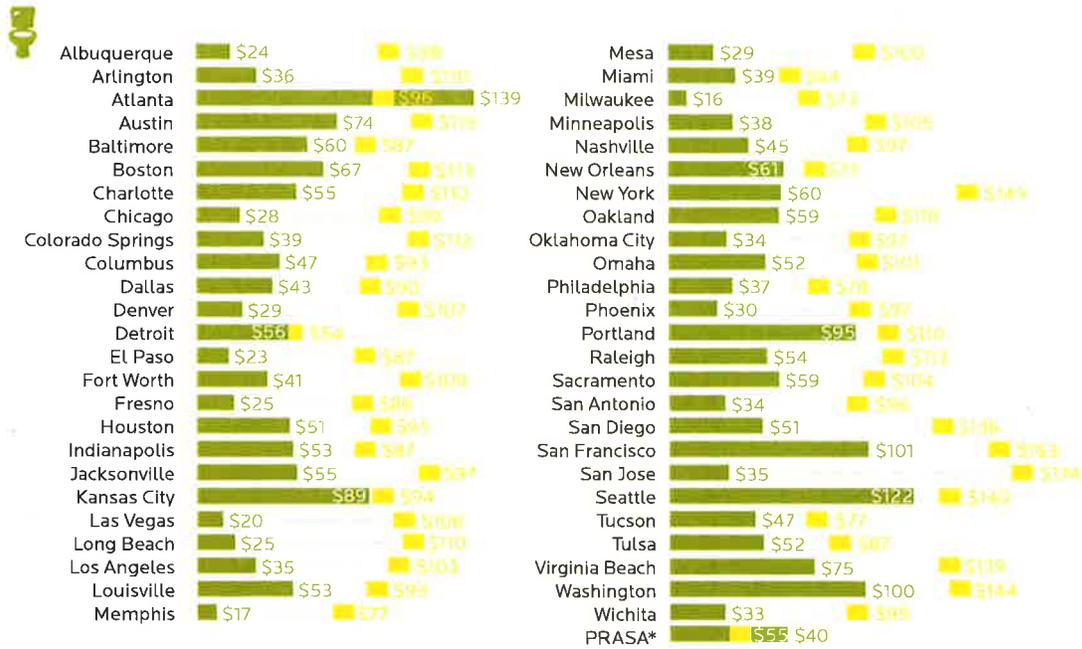


■ = current average monthly bill for typical residential water services (7,500 gallons per month).

■ = each city's affordability target as defined by the U.S. EPA affordability guidelines.

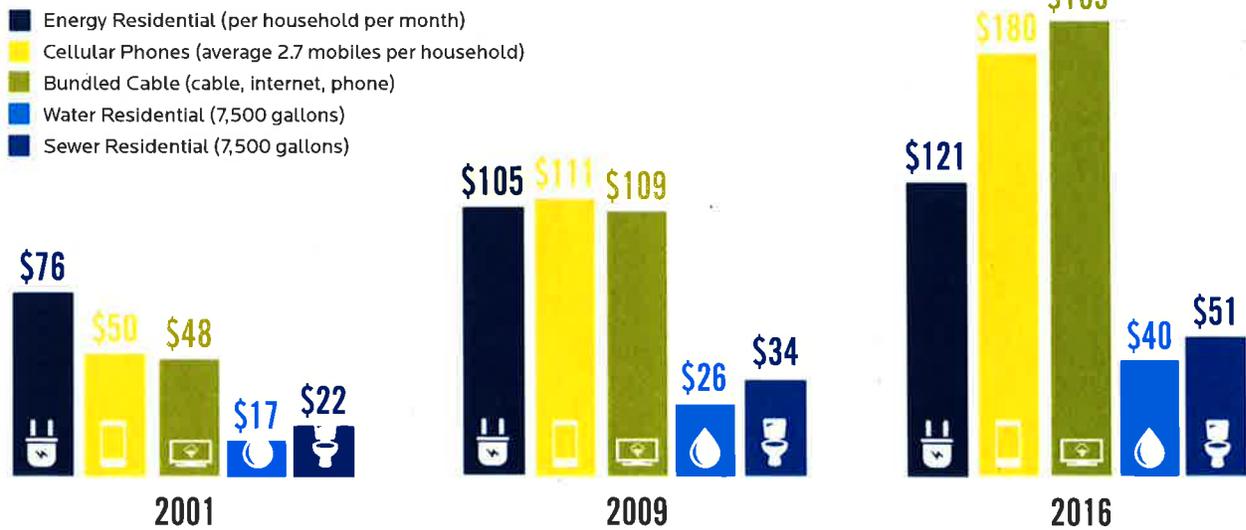
*Puerto Rico Aqueduct and Sewer Authority

FIGURE 5: Average monthly residential sewer bill versus affordability target.



■ = current average monthly bill for typical residential sewer services (7,500 gallons per month).
 ■ = each city's affordability target as defined by the U.S. EPA affordability guidelines.
 *Puerto Rico Aqueduct and Sewer Authority

FIGURE 6: Average monthly residential utility bills across the United States.



SOURCE: U.S. Census Bureau, Table H - 8 for bundled cable, energy bill and cellular bill.