



ASSOCIATION OF
METROPOLITAN WATER AGENCIES

WATER UTILITY EXECUTIVE

JANUARY – FEBRUARY 2019



Special Edition: 2018 INSIGHT Survey Results

Financial Survey Provides Biennial Update to Top Management Resource

With more than 100 AMWA member utilities participating, AMWA's 2018 INSIGHT utility financial survey provided a robust update to the unique database that was established in 2008 to provide drinking water system managers a wealth of information on the financial practices and operations of comparable utilities throughout the country.



The INSIGHT initiative was conceived by AMWA members and designed specifically for the nation's largest water systems. AMWA engaged Raftelis Financial

Consultants, Inc. (Raftelis) to assist with refining the concept, executing a comprehensive national survey, and continuing the effort on a biennial basis. Last September, the sixth iteration of the INSIGHT survey was distributed to all AMWA members, and the survey officially closed with participation from 109 utilities.

Following the wrap-up, Raftelis compiled and analyzed the raw survey data and provided the following key analyses with brief editorial comments. Some graphs include results from the prior surveys to help identify industry trends. It is important to note that since the trending analyses are not based on the same group

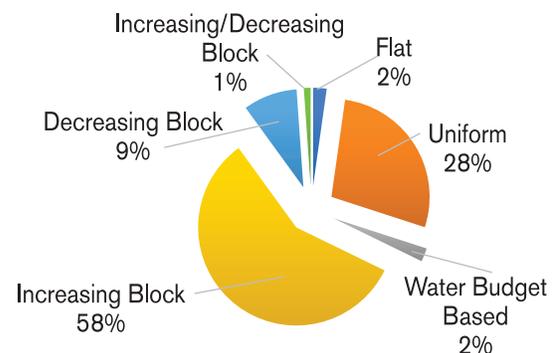
of utilities from survey to survey these analyses are intended only to indicate potential trends for the industry as a whole. This selection demonstrates the breadth and depth of possible analyses and represents a wide variety of data for comparison. It is, however, only a small fraction of the analyses possible.

The full 2018 INSIGHT database will be available to survey participants by February 1, and the INSIGHT dashboard will also be updated and available by that date. On February 21 at 2:00 p.m. ET, AMWA will host a webinar featuring Raftelis representatives who will present important findings from the 2018 survey and demonstrate how the database and dashboard can be used as valuable management tools.

Data Analyses

1. Utility Rate Structure

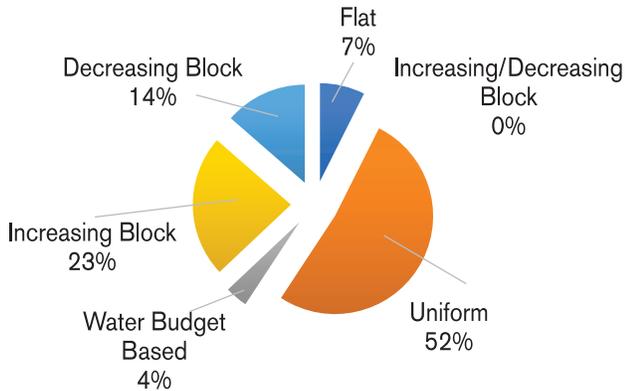
Residential Rate Structure





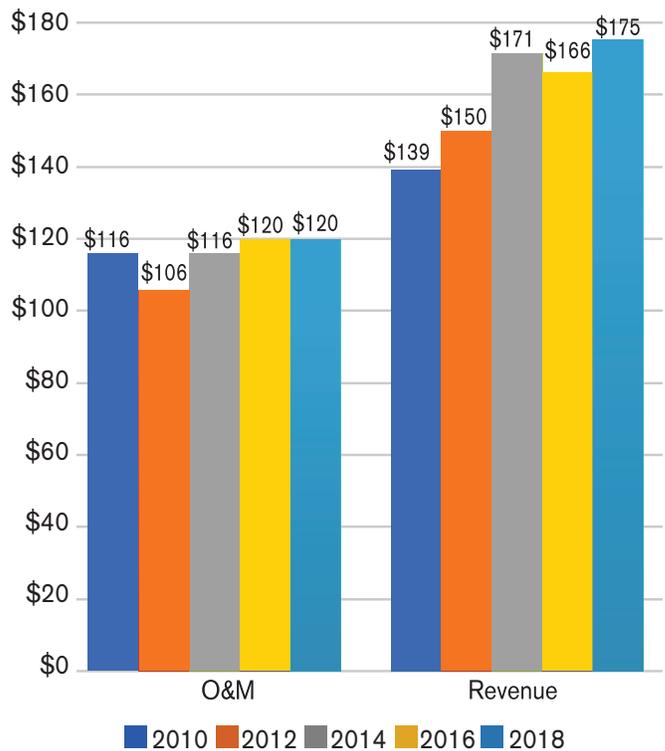
For residential customers, most respondents utilize increasing block rate structures (58%), with uniform structures (28%) being the second most common type. For those respondents with distinct charges for commercial customers, uniform rates were most common (52%), followed by increasing block structures (23%).

Commercial Rate Structure



For the responding utilities, revenue per capita increased from 2016 to 2018, while O&M costs per capita remained constant. This trend of rising revenue per capita accompanied by unchanged O&M per capita may indicate that utilities are raising rates for increased capital spending while maximizing efficiency to prevent increases in operating expenses.

Median Operating Costs and Revenue per Capita



2. Operating Costs and Revenue

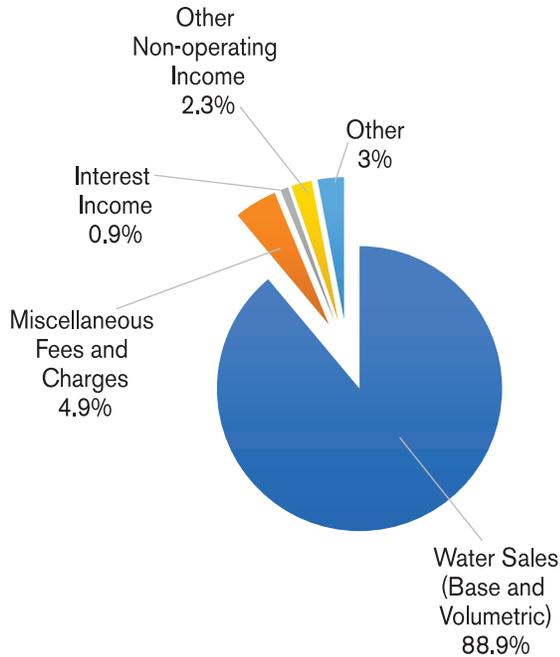
Median Operating Costs and Revenue per Capita



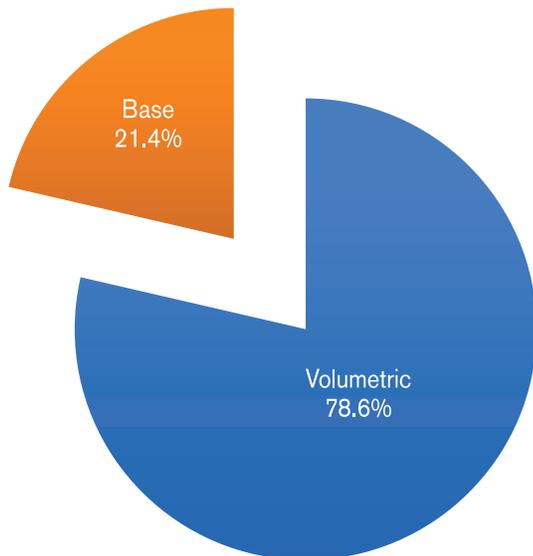
3. Water Revenue

On average, nearly 89% of a utility's water revenue is generated from base and volumetric charges, while approximately 6% is collected from miscellaneous charges and interest income. Of this 89%, 21.4% is composed of base charge revenue, while the remaining 78.6% is composed of volumetric revenue. Generally, high base charges provide reliable revenues but afford the customer little control over their bill. In contrast, high volumetric charges provide more volatile, less reliable revenue, but incentivize the customer to conserve water.

Average Percentages of Water Revenue



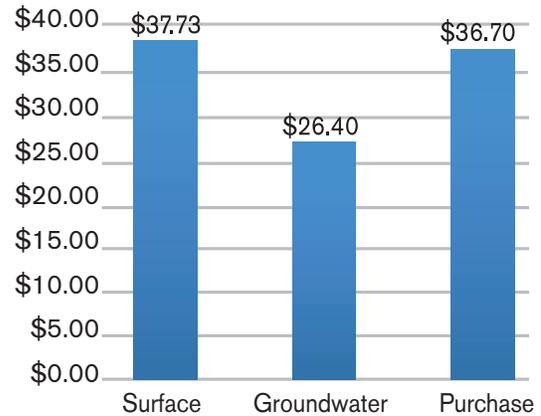
Average Breakdown of Water Sales Revenue



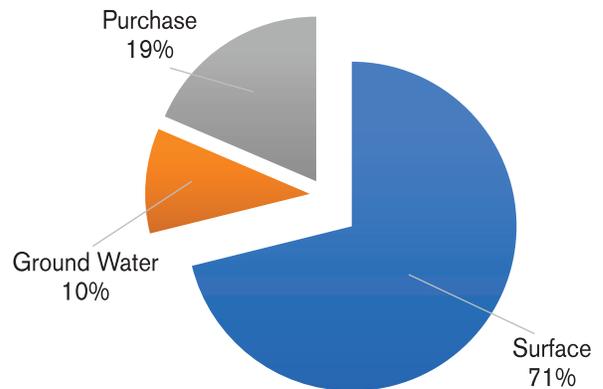
4. Water Source

In 2018, utilities using surface water and purchased water had similar customer monthly bills (medians of \$37.73 and \$36.70, respectively), whereas utilities utilizing more groundwater tended to produce lower customer bills (median of \$26.40). The median monthly bill is based on 10 hundred cubic feet (Ccf) or approximately 7,480 gallons. To classify utilities, it was assumed a utility must obtain over 75% of its water from a single source to fall into the respective category (groundwater, purchase, or surface). Most utilities in the survey utilized surface water as their primary source.

Impact of Water Source on Median Customer Bill

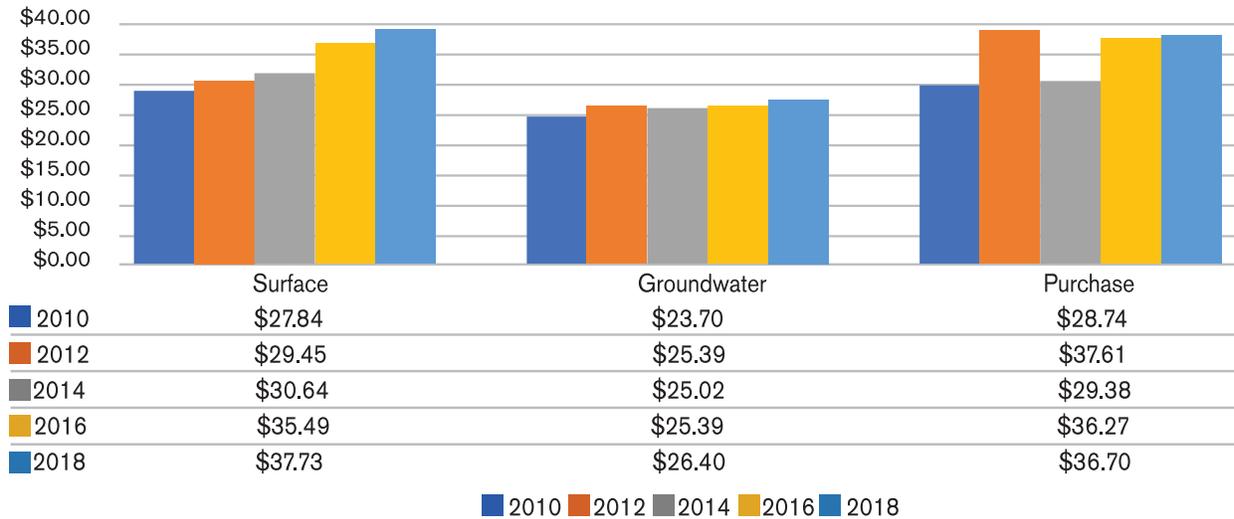


Percentage of Utilities by Water Source





Impact of Water Source on Median Customer Bill

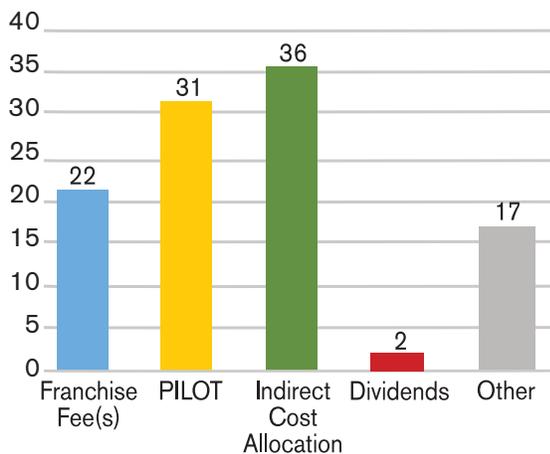


The trending analysis shows a relatively flat trend for median groundwater bills from 2010 to 2018, increasing by only 11.4% over the eight-year period. In contrast, for utilities using surface and purchased water sources, median customer bills increased from 2010 to 2018, with overall increases of 35.5% and 27.7%, respectively.

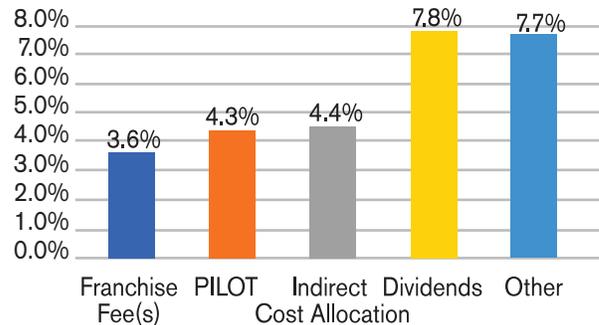
5. Budgeted Transfers

Many utilities must include transfers to governing municipalities in their overall revenue requirements. PILOTs (payments in lieu of taxes) and indirect cost allocations are the most prevalent types of transfers. While dividends appear to be the second largest type of transfer, only two respondents included dividend payments. Consequently, though not insignificant, dividends are less commonly used among the responding utilities.

Number of Utilities with Type of Transfer



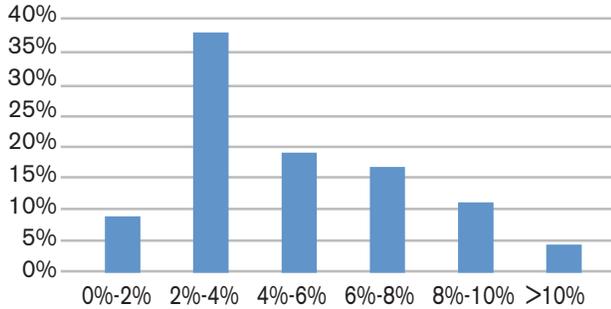
Average Percentage of Transfers of Total O&M



6. Previous Rate Increases

The following chart indicates the distribution of the average annual rate increases experienced by utilities from 2008 to 2018. Note that the responses were collected as the cumulative increases over this time period (2008-2018). For this analysis, the average annualized increases were calculated for the last ten-year period. The distribution centers on 4-6% per year increases, with the modal response in the 2-4% category. There may be a significant amount of rate increase variability from year to year for each utility. To illustrate, a utility could have a one-time increase of 20% during the 10-year period or increase rates 1.85% each year for 10 years, and either way arrive at the same cumulative 10-year increase.

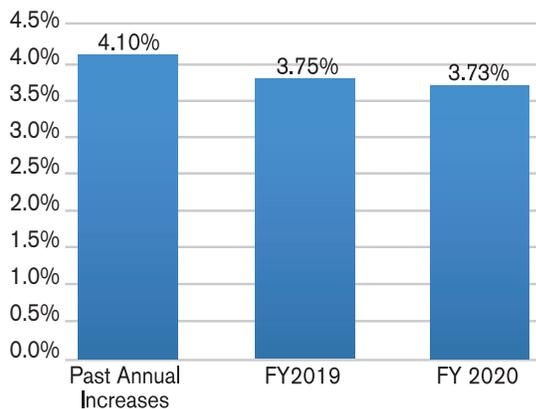
Percentage of Utilities with Average Annualized Rate Increases Since 2008



7. Previous and Projected Future Rate Increases

In the 2018 survey, respondents enacted rate increases that were less than past annual increases. This trend is similar to that recorded in the 2014 and 2016 AMWA surveys.

Median Past vs. Median Future Rate Increases

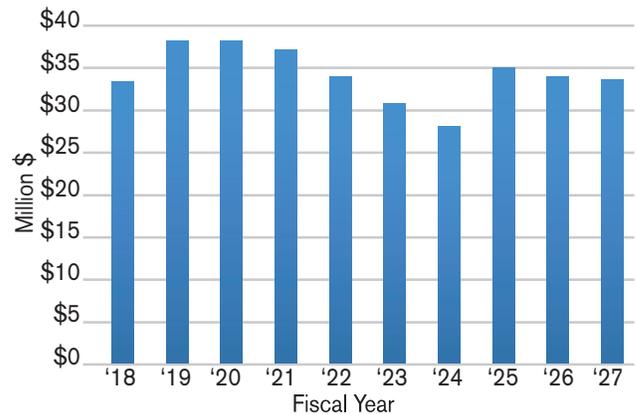


8. Capital Improvement Costs

This chart shows a general trend of consistency in projected capital improvement program (CIP) expenditures over the 10-year horizon, with some fluctuation observed near the midpoint of the time period. This fluctuation suggests that long-term

forecasting may be difficult due to the uncertainty surrounding the types and timing of capital projects.

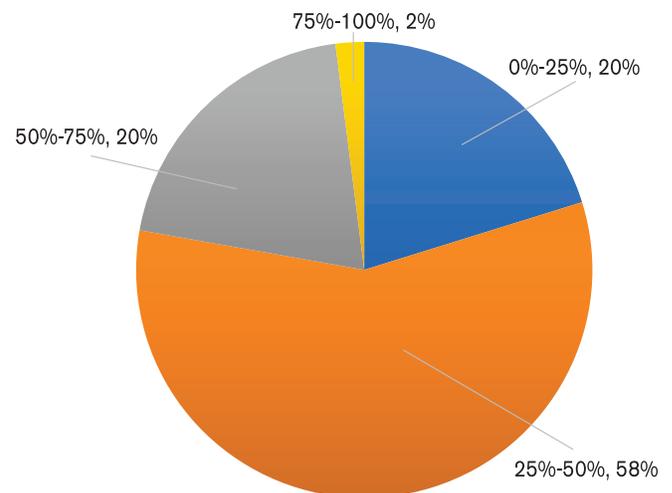
Trend of Median Projected CIP Costs



9. Ratio of Capital Cost to Total Budgeted Costs

Most respondents earmarked 25%-50% of their budget for capital projects or payments. However, among the remaining respondents, the trend in capital spending was split. Twenty percent of respondents allocated the majority of their budget (50%-75%) to capital spending, while another 20% allocated a much smaller portion of their budget (0%-25%) to capital spending.

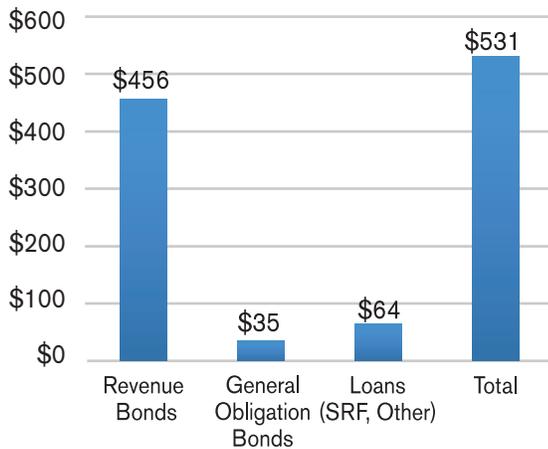
Capital Spending % of Total Budget



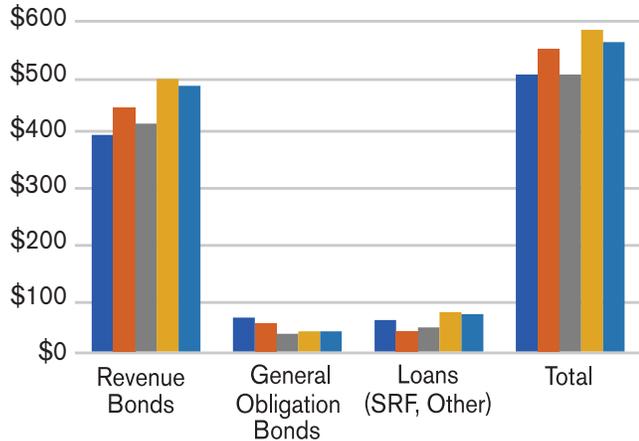


10. Utility Debt

Median Debt per Capita



Median Debt per Capita (by Survey Year)



■ 2010	\$372	\$58	\$54	\$475
■ 2012	\$420	\$48	\$35	\$520
■ 2014	\$391	\$30	\$41	\$475
■ 2016	\$468	\$35	\$67	\$552
■ 2018	\$456	\$35	\$64	\$531

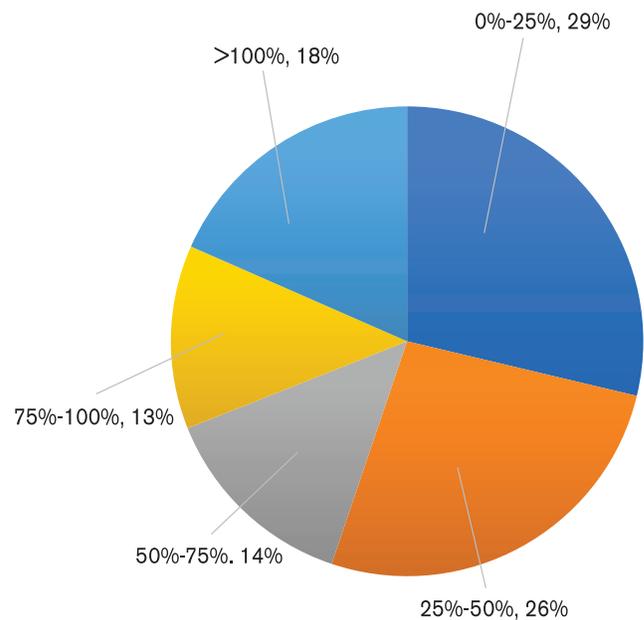
■ 2010 ■ 2012 ■ 2014 ■ 2016 ■ 2018

Revenue bonds are the primary means of funding for capital projects. General obligation bonds and loans account for only a small percentage of capital funding utilized by respondents. In general, median debt per capita decreased slightly in 2018 as compared to 2016 levels.

11. Utility Unrestricted Reserves

Half of the utilities responded as having 41% or less of total annual costs in unrestricted reserves, an improvement as compared to the 2016 survey, which reported a median of 29% of total costs in reserves. Though the circumstances which drive reserve policies are particular to individual utilities, 25% is generally a minimum reserve level that most utilities target. Rating agencies prefer to see utilities with reserves that exceed 25% of total costs.

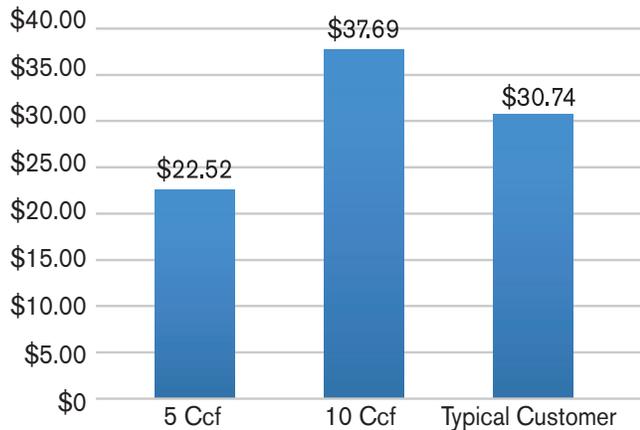
Reserves as Percentage of Total Costs



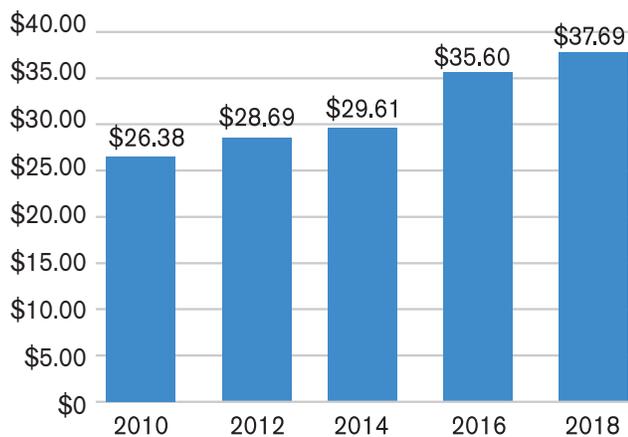
Median % = 41%

12. Customer Monthly Bills

Median Customer Monthly Bill



Median Customer Monthly Bill (10 Ccf)

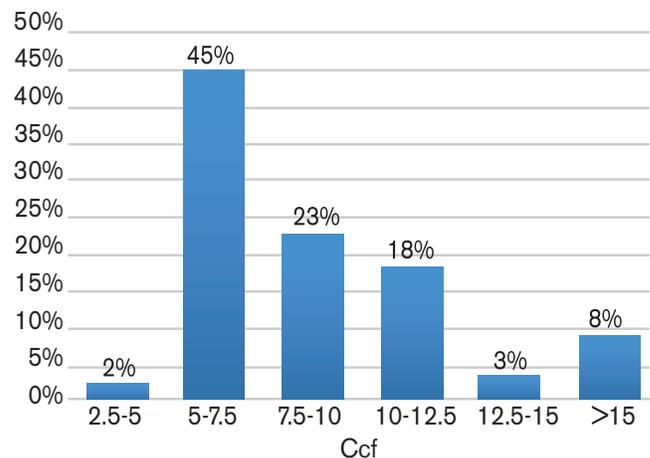


Utilities were asked to provide the monthly bill for their typical customer. The median typical customer bill, along with the median monthly bills at 5 Ccf and 10 Ccf, are shown. As the median typical customer bill (\$30.74) falls between the median bills for 5 Ccf (\$22.52) and 10 Ccf (\$37.69), the consumption for this median typical customer is likely between 5 and 10 Ccf, a deduction that aligns with results shown in Figure 13. Based on responses from the past five AMWA surveys, the median bill at 10 Ccf has steadily increased over time.

13. Typical Customer Consumption

While 10 Ccf (7,480 gallons) is commonly used in the industry to represent a typical customer's consumption, the reality is that the "typical" customer's consumption varies depending on the utility. Pricing, local conservation efforts, availability of water, and many other factors influence customer consumption. The results of this survey show that the median level of consumption among typical customers is 7.8 Ccf (5,845 gallons). Most utilities (69%) reported typical customer consumptions between 5 and 10 Ccf.

Typical Customer Monthly Consumption



AMWA Welcomes New Member and Affiliate

AMWA is pleased to welcome the **City of Garland**, Texas as a new member, represented by Wes Kucera, Managing Director, Water and Wastewater, and **Willows Water District** of Centennial, Colorado as an affiliate, represented by District Manager Joshua Baile.

At www.amwa.net/insight, utilities that participated in the 2018 survey can access the updated INSIGHT database and dashboard. Members without access can contact Carolyn Peterson (peterston@amwa.net) about current options for completing the survey.

WATER UTILITY EXECUTIVE

AMWA Launches 2019 Awards Program with Updated Criteria

In January, all eligible AMWA members were invited to apply for recognition in the association's 2019 awards programs: the Gold Award for Exceptional Utility Performance, Platinum Award for Utility Excellence and Sustainable Water Utility Management Award. The criteria for all three awards were updated this year to require additional metrics, and the program was expanded to allow past winners of the Sustainability Award to apply for the award again, three years or more after originally winning the award.

Winners will be recognized at AMWA's 2019 Executive Management Conference in Newport, Rhode Island, October 20-23. The deadline for submitting Gold and Platinum Award applications is June 7, and Sustainability Award applications are due by June 14, 2019.

Additional information is available online at www.amwa.net/awards.

EPA Publishes EUM Case Studies Featuring AMWA Member Utilities

Three AMWA member utilities were featured in one of EPA's newest management publications, *Effective Utility Management in Action, Utility Case Examples*. The case examples inform utilities about how their peer water service providers have integrated Effective Utility Management (EUM) into their day-to-day operations and future planning initiatives.

Featured utilities include Boston Water and Sewer Commission, Columbus Water Works and Scottsdale Water. Each case study describes the utilities' EUM-driven strategic initiatives, their approaches to EUM's five Keys to Management Success, and lessons learned after years of implementing EUM. In each case, the EUM timeline highlights the milestone of recognition with AMWA's Platinum Award for Utility Excellence, which employs criteria based on the 10 EUM Attributes.

The report can be found online at www.epa.gov/sustainable-water-infrastructure/effective-utility-management-action-utility-case-examples.

Savvy Political Analyst Amy Walter to Open AMWA Policy Conference



Amy Walter

Water utility leaders attending AMWA's 2019 Water Policy Conference in Washington, D.C. April 7-10 will benefit from the insights of one of the nation's top political analysts. Amy Walter, National Editor of the non-partisan *Cook Political Report*, is scheduled to lead off the conference program. Walter also makes weekly appearances on the popular "Politics Monday" segment on the *PBS NewsHour* and is a regular Sunday panelist on NBC's *Meet the Press* and CBS's *Face the Nation*. The former political director of ABC News, Walter can be seen frequently on *Special Report with Bret Baier* on FOX.

The conference agenda will also feature top federal officials who will provide news of developments on a host of water issues. Key policy leaders have been invited from EPA, the Department of Homeland Security, the U.S. Army Corps of Engineers, and the Bureau of Reclamation. Specialists on cybersecurity, climate programs, WIFIA, and lead service lines will have the opportunity to provide updates.

From the U.S. Congress, legislative professionals with water interests and portfolios will be on hand to share their views on the national legislative agenda for infrastructure, sustainability, regulatory oversight, and other issues of concern to drinking water utilities.

Register online at www.amwa.net/2019WPC.



ASSOCIATION OF
METROPOLITAN
WATER AGENCIES

LEADERS IN WATER

1620 I Street, NW, Suite 500
Washington, DC 20006

P 202.331.2820 F 202.785.1845
amwa.net