

Adequate Rates versus Affordability

Can we charge enough to cover expenses?

BY BARRY E. MATTHEWS, P.G., DEPARTMENT OF HEALTH CAPACITY DEVELOPMENT MANAGER

THE TWO CONCEPTS of Rate Adequacy and Water Affordability have been around the utilities industry for a long time. However, our aging water infrastructure and the nature of our current economy bring these two philosophies into more direct and deeper conflict. Can a water utility ensure that rates are affordable for its service population while at the same time charging enough to cover expenses, not to mention funding future reserves for capital improvements, maintenance and unexpected costs?

First, we must define what we are talking about, even though you probably have a good idea of both concepts. What do we mean by adequate utility rates?

The American Water Works Association (AWWA) provides the following: “Water utilities’ revenues from water service charges, user rates, and capital charges (e.g., impact fees and system development charges) should be sufficient to enable utilities to provide for:

- annual operation and maintenance expenses;
- capital costs (e.g., debt service and other capital outlays); and
- adequate working capital and required reserves.”

Next, what is affordable and who determines affordability? This is a much more complex and challenging issue. A 2 percent water bill burden was utilized by the Environmental Protection Agency (EPA) in its 1993 assessment of the affordability of water service.² However, this is not where the discussion started; the affordability of Safe Drinking Water Act (SDWA) regulations on waterworks and variances granted by states based on the affordability of the treatment technology, is really where this conversation started. The initial conversations weren’t so much that we care if Mr. and Mrs. Jones can afford to purchase water, as the conversation was, can the Town of Jonesville afford to implement a treatment technology that achieves an EPA mandated compliance standard?



These two issues are not the same, although many assume them to be analogous and therefore utilize a percent of the Mean Household Income (MHI) as a measure of affordability for households. While this may be useful in the question of: “can the Town of Jonesville afford the treatment technology?” The question of Mr. and Mrs. Jones affording their water bill is entirely different. By the very nature of MHI, Mr. and Mrs. Jones have a 50/50 chance of being above the MHI or below the MHI.

Further this does not consider the number of individuals dependent on that MHI. Do Mr. and Mrs. Jones have

0.59 children? Hopefully not, so should a family of 6 be charged differently than a family of 3? You might say “of course not”, but most water rates will charge a different amount because a family of 6 utilizes more water. So if Jonesville charges \$20.00 for 2000 gallons, and \$3.50 per 1000 additional gallons, and Mr. and Mrs. Jones with their 4 children use 6000 gallons a month, their water bill is \$34.00. If the Jones’ household income is \$36,000, their water bill represents 1.1 percent of their income. Is this affordable, would it be more affordable if the Jones family was only Mr. and Mrs. Jones and two children?

If the Town of Jonesville has an MHI of \$41,000, and using the EPA affordability burden of 2 percent, a monthly bill of \$68.33 is affordable, but is it realistic? Compare that to the \$34.00 the Jones pay. As you can see from this scenario, determining household affordability, and therefore community affordability can be a messy business. No matter the methodology used, water rates are going to place a disproportionate burden on some families relative to other families.

From the above scenario, 2 percent sounds like too much of a water bill burden. Utilizing the Draper-Aden study for water rates across Virginia and then using the Virginia MHI of 2010, it can be calculated (roughly), that the average affordability ratio is approximately 0.55 percent. So, assuming again the \$41,000 MHI and a 0.55 percent affordability rate, the monthly cost is approximately \$18.79. So, the 2 percent monthly water bill is approximately 3.6 times higher. However, \$18.79 seems rather low. So

what is a good affordability rate; somewhere between 0.55 percent and 2.0 percent? If you are lost in all the computations, you are in good company.

The point here is not to get to an affordability rate, but to suggest that affordability is so dependent on the individual economy of a household that it has no value as a variable when discussing municipal water rates. Cox Cable does not worry about affordability rates, and their services are not “required.” J.C. Penney’s does not consider the MHI of the area in which their customers live to determine the cost of a shirt.

Yes, I know that this isn’t an absolute comparison; again the point is that waterworks have expenses associated with the delivery of a certain quantity of water. Clean water is a basic human need, not a want – like cable TV or a comfortable shirt.

If a waterworks can’t recover the cost to distribute safe clean drinking water to their customers, they will ultimately:

- 1) deliver inferior quality water,
- 2) deliver insufficient quantity of water,
- 3) deliver inferior water quality and quantity, or
- 4) stop water delivery service to its customers.

If your community, municipality or water association is concerned that water rates are too high for some of your customers... consider a “rate break” or individual “needs reduction” on the monthly bills. This can address the concern for those that truly need financial assistance, while at the same time bring in the revenue required to maintain the waterworks in the manner addressed by AWWA’s three fiscal requirements for adequate water rates.

So, yes ... you can charge enough to cover your expenses, and at the same time ensure that those most in need are subsidized by a local water bill reduction program. If you want assistance with getting started on setting rates, or other financial matters related to your waterworks, contact the Virginia Rural Water Association or the author at (804) 864-7515. 💧



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