

By **Michael Schrader, P.E.**

If you are reading this article, you are at least a little concerned about the ability of your existing water or sewer rate structures to cover your future needs. While you already have a sense of whether your rates can financially support your utility, getting rates increased can be political, unpopular, and difficult to achieve. Maintaining artificially low water and sewer rates is unfortunately a point of pride in some communities, even though it is a false economy.

3 Sure Fire Signs that it's Time to Evaluate Your Rates

- 1. There's no money for capital expenses.** One of the reasons that the infrastructure of the United States is in such poor shape is our failure to fund infrastructure renewal and replacement. All infrastructure has a serviceable life, and every day each component moves closer to failure.
- 2. You're living on cash transfusions.** Transferring funds from retained earnings is not inherently bad, however if you're taking from reserves with no replenishment, or worse, taking in funds from the general fund, it's a sure sign that your revenue model is not sustainable.

- 3. You're concerned about revenue stability.** Last year was a record drought in many parts of New England, what if this year is a cold wet summer? Will your existing rate structure provide sufficient revenue?

If this describes your situation, then you should look at your rates more closely. The critical success factor in getting rate increases approved is communication with your stakeholders and decision makers. Start now. Tell them you are concerned and are looking into this, especially if you suspect that a crisis looms.

6 Best Practices for Evaluating Water & Sewer Rates Effectively	
1. Include all expenses	To determine the revenue needed to fund your utility programs, collect all associated expense data. After reviewing historic expense data, you can project future expenses and better understand your financial needs.
2. Take the long view	By projecting expenses and revenue over a 10-year "look forward" period, you will have a stronger decision making basis for rates and projects. Based on this, you can project rates for the next 3 to 5 years with greater confidence.
3. Take a hard look at water use	Water consumption is the basis for both water and sewer billing, and a primary source of revenue. Projected consumption and anticipated changes in your customer base are key to anticipating future revenues.
4. Set appropriate reserves	An important element in rate making is determining and maintaining an appropriate level of reserves. Once you have projected your full cost of services and expected revenues, you can determine rates that will maintain your desired reserve level.
5. Develop a Capital Improvement Plan (CIP)	Upcoming capital improvements are most often the impetus for raising rates. A logical, well thought out and well-presented capital plan that outlines capital needs over the next 5 or 10 years is likely to gain more acceptance than a laundry list of needs.
6. Evaluate customer impacts	Be prepared to describe the incremental cost impacts to a typical residential customer. Expressing rate increases as percentages is logical, but expressing rates in annual dollar amounts may be easier for customers to comprehend.

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6 Key Strategies for Rate Evaluation Success

- 1. Include ALL expenses.** When determining the amount of revenue needed to adequately fund your programs, make sure to collect all expense data associated with your utility - this is known as the "full cost of service". This includes operating expenses, direct and indirect labor costs, debt service, raw water or disposal fees (if appropriate) as well as any indirect costs transferred to the general fund. Once you have reviewed historic expense data, you should next project future expenses based upon observed trends and anticipated escalation factors. (Remember, not all expense categories will increase at the same rate.) From this analysis, you will have a much clearer idea of your financial needs.

2. Take the long view. Some utilities set their rates each year based upon what they project for the coming year. This can lead to rate instability and result in unexpected increases – nobody likes surprises. Projecting expenses and revenue over a 10-year “look forward” period provides a better basis for decision making about rates and projects. Based on this, you should be able to project rates for the next 3 – 5 years with an acceptable degree of confidence.

3. Take a hard look at water use. Water consumption is the basis for both water and sewer billing, and your primary source of revenue. As such, future revenues should be based upon projected consumption and anticipated changes in your customer base. Three things to look for in your historic consumption data include:

a. Influence of Precipitation. A cold, wet summer has caused financial duress for many water systems. A quick way to determine the influence of precipitation on your water system is to compare residential water uses for December vs. July over the last five years. If you determine that there is a strong influence from precipitation, consider setting your projected consumption (which drives rates) at a level that coincides with what you expect in a wet summer. This way you will cover your expenses during a wet summer and add to reserves during a hot dry summer.

b. Inactive or seasonal accounts. Most of the expenses in a water or sewer utility are fixed costs. If your rate structure is based solely upon consumption (no base charge) then each zero or near-zero meter reading results in a low or zero-dollar water or sewer bill. However, your costs associated with meter reading, readiness to serve, and basic operating costs persist. If this describes your utility, adding a base fee that recovers all your administrative costs plus a portion of your operational fixed costs can help stabilize revenue.

c. Declining water use. Water use has been trending down for the last 25 years due to many factors including decreasing family size and the increasing efficiencies of appliances and plumbing fixtures. While this trend has slowed, we still see water use dropping 1% to 3% annually in most cases. Revenue projections should be based upon projected water use, and the factor applied to future water use is important. If you estimate future water use too low, it will drive higher rate increases; too high, and the revenues may not materialize at all.

4. Set appropriate reserves. Determining and maintaining an appropriate level of reserves is perhaps the most important element in rate making. Once you have projected your full cost of services and your expected revenues, your way is clear to determine rates that will maintain the desired reserve level. There are many considerations that determine what the appropriate level of reserves should be for each utility. A good rule of thumb is between

15% and 25% of operating costs. Reserves are also frequently misunderstood by stakeholders who see them as unnecessary or excessive. However, maintaining suitable reserves allows a utility to respond to unforeseen equipment failures, and stabilizes rates over time. The best approach is to establish a reserve policy and stick to it.

5. Develop a Capital Improvement Plan (CIP). Upcoming capital improvements are most often the impetus for raising rates. A well thought out, well-presented capital plan that outlines capital needs over the next five or ten years is much more defensible than a laundry list of needs. Remember that you will have to “sell” your rate increases, so make sure that your CIP is logical, and ideally, risk based. Be prepared to explain and defend why each capital improvement item is necessary.

6. Evaluate customer impacts. At a minimum, be prepared to describe the incremental cost impacts to a typical residential customer. Understand that expressing rate increases as percentages is logical but also inflammatory. For example, a 10% sewer increase sounds high until you explain that for a typical family it represents a total increased cost of \$30 per year. The longstanding standard of 2% of Median Household Income is another way to determine (and defend) affordability.

Summary

Data driven rate evaluations provide a clear and transparent basis for informed decision making—for utilities, for elected officials, for commissioners, and the public. Showing your stakeholders how you developed future needs, explaining what you need to do, and why you need to do it as well as showing the economic impacts to users is a proven way to gain support for rate increases. While most people will not want to dig into the details of your evaluation, they will be reassured by your thorough and thoughtful approach.



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