

Drinking Water News For America's Small Communities

On tap



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The Future Starts **NOW**

Setting Rates Helps Systems Today and Tomorrow

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Who Needs What Training?

It's all about the money. It has always been all about the money. If it weren't all about the money, all water and sewer systems would run great all the time. We would have no need for National Environmental Services Centers, grant and subsidized loan agencies, rural water associations, and all the rest. We would have nothing but well-funded, self-sustaining water and sewer systems cranking out great service round the clock. And how would they come to be well funded?

Great rates.

If rate setting were easy, all systems would have great rates. Well, I'm here to tell you that you **can** have great rates and it doesn't have to be hard, on your part.

This article will outline a thought and action process that uses hard facts for making good decisions about how to set rates properly. Maybe you will end up doing the analysis yourself, especially if you represent a very large or a very small system. Otherwise, you will hire a specialist to do the heavy lifting for you.

Just the Facts

Whether you decide to analyze rates yourself or use outside help, here are some facts to consider:

FACT: *Water and sewer utilities are businesses.* If run and financed well, they become invisible wonders providing excellent service. If not, they become very visible sources of trouble for a community.

FACT: *All decisions are investment decisions.* You are making them all the time—sometimes well, sometimes not.

FACT: *All investment decisions boil down to three basic questions: What must I invest? What return do I expect? What is the risk that I won't get what I expect?* Such decisions should be supported with data and estimates of outcomes.

FACT: *According to the U.S. Environmental Protection Agency, water and sewer utilities in the U.S. are facing a funding shortfall of hundreds of billions of dollars by 2020.* The federal and state governments will bail out a few ailing systems, at least temporarily. Some systems will actually fail. (Failures will probably occur over a long time so we won't really notice it.) Some will be gobbled up by other systems or companies. Some will do the gobbling.

Your system is going to (and maybe already has) hit a funding shortfall. Unless you have been calling the shots for your system for 20 or 30 years, it's not all your fault. But the final failure will be blamed on whoever is in charge at the time. Will that be you?

Gaining the Proper Perspective

Accept for now that you, or people who came before you, made decisions to under-invest in infrastructure, management prowess, and financial capability. Why did they do this? Simple, really. On a current cost basis—read “keeping rates low”—it's cheaper to under-fund. We human beings normally give current cost and the risk of losing something plenty of attention. But we give the potential for future gains little attention. That is why a few people got rich investing in Wal Mart, Microsoft, and other big winners while the rest of us haven't invested enough, early enough in our retirement programs so we can just enjoy our golden years. We manage our water and sewer utilities the same way. Some people have figured out how to place investment, return, and risks in proper perspective. Most of us haven't, but we can learn. That brings us to user charge analysis.

What is user charge analysis? It is nothing more than a decision-support tool that places investment, return, and risk in proper perspective. The analysis doesn't set your rates for you, but it does give you the information you need so you can make good investment decisions for your system. While the specific techniques of user charge analysis get very complex, the underpinning is just that simple.

If you analyze your rates regularly, adjust them as needed, manage the systems well, and continually look for opportunities to make improvements, you are headed for success. Do less and you are headed for problems, maybe terminal problems. However, this is not to say you need to learn how to analyze your own rates.



The articles “Proper Rates are Critical for Financial Health” and “Increasing Water Rates: How are Public Service Commissions Involved?” are available on the National Environmental Services Center Web site at www.nesc.wvu.edu/ndwc.

Rate Setting Is Risky Business

If you don't have a strong background in rate analysis, you run a moderate risk of doing the math wrong. More significantly, you run a huge risk of making some wrong assumptions along the way, some of which can be crippling or fatal.

How do you reduce your risk of loss? Control and reduce your big risks by having an experienced analyst do the big, all-encompassing analyses for you. Most small- to medium-sized systems need this level of analysis every two to five years. In years following the big analysis, simply compare your actual financial performance with what the analysis predicted, then adjust your rates accordingly. Voila! You just achieved the best of all worlds: low investment, low risk, and high return.



RISK:

Who Does it Hurt?

If you are a single person with no heirs and no one who would be affected by your death, you really have no need for life insurance. We buy insurance to protect from the risk of loss those we would leave behind.

A father and mother of five small children have a large need to protect their heirs. While they are not at high risk of dying, the potential cost to their children is great. If they happen to be wealthy, they don't need insurance. They are self-insured by their own means. If these same parents and children have little wealth, life insurance is exactly what they need.

Water and sewer systems have much at risk. These systems are expensive to build, operate and maintain. They have many "heirs" (current ratepayers and one or more generations of ratepayers to come) who depend on those systems. Setting your rates incorrectly is not a fatal action in itself but it can lead to other fatal or crippling actions.

Now you're thinking, "OK, what is this high return going to cost me?" Of course, that all depends on your specific situation, but the following should give you a basic idea of what to expect in a professional rate analysis.

A professional rate analysis may result in the fees collected by a 500-user water or sewer system to go from \$150,000 per year to \$202,500 during the year after the analysis. That is an increase of \$52,500 or 35 percent. The system would pay the specialist about \$4,000 for the analysis, or 7.6 percent of the first year's extra revenues. After paying the analyst, the system would net an additional \$48,500 in its first year after rate adjustment and the full \$52,500 each year after that until the next analysis is done.

In this scenario, the first year return on investment would be more than 1,200 percent and would go up by more than 1,300 percent each year after that. These returns do not include any future inflationary increases the analyst would probably recommend. (The first year return on investment for smaller systems is normally a few hundred percent on the low end.) In other words, the system will pay to the analyst for about 28 days the additional rate revenues that the analyst enabled them to collect. From day 29 forward the system will pocket the rest of the additional income.

Of course, there is no free lunch. The ratepayers pay the cost whichever way you go. However, as a result of the analysis, the ratepayers get a system that is more assured of proper funding, and that makes excellent operations and service to them possible.

The Pain Threshold

A few of you got stuck on the "fee increase of 35 percent" statement above. Here is why many systems need to raise their rates and fees about 35 percent.

The typical small- to medium-sized water or sewer system's management operates on the "pain threshold" principle. All people have several thresholds of pain. Water and sewer systems are run by people so they have thresholds, too. Most decision-makers will try to "suck it up" in the form of making their operators scrimp on operating costs, equipment repair and replacement, and the like before they will consider undergoing the pain of pushing through a rate increase. For many small systems that threshold equates to about a 20 percent rate increase. The upper threshold is about 45 percent. Beyond that, most managers just can't stand the pain of scrimping any longer, so they fix the problem: they raise rates.

When management finally succumbs to the pain and raises rates, they usually don't raise rates all the way up to where they need to be. They stop 10 percent or so short in an effort to go easy on the ratepayers, salvage their reelection bid, or whatever. In addition, everyone smarts so badly from the rate increase pain that no one wants to go through that again for several years, if ever. Inflation happens and new things need to be built, and, thus, the downward spiraling cycle never really stops. We need to break this cycle and chart a new rate setting course.

How can you achieve low investment, low risk, and high return in a user charge analysis? You must select the right specialist, invest wisely (pay an appropriate fee), and guide and support them well. Fortunately, this part of the process is easy and pain-free for anyone who has the authority to do it, who has their heart in the right place, who is well reasoned, and who can follow a step-by-step process.

The Politics of Rate Increases

Why don't systems already have great rates? Consider this final fact. Attempting to do the analysis and propose the big catch-up rate increase on your own could end your office tenure or career. This risk is real. The mayor of one of my recent client cities got voted out of office over a rate increase he proposed a few months ago. Trying to serve his city to the end, he hired me to do rate studies to get to the bottom of their rate problems before he left office. I had the benefit of lots of data, number crunching, and experience to determine the proper structure for this city's rates and fees. But the mayor actually got the funding level about right in the adjustment he proposed. Thus, my results proved him to be mostly right on the rate adjustment issue, but he was still wrong on the getting re-elected issue.

How do you get great rates and not get voted out of office or get fired? Try this. (It's weasel but it works.) Get the right specialist with broad shoulders to analyze your rates, then blame him or her for the rate increases they say you have to adopt. Raise your rates all the way up to where the analyst says. At the same time, tell your

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Pine Haven is a small town in the northeast corner of Wyoming near Devil's Tower and the Black Hills. Over the last few years, Pine Haven has been discovered by retirees, summer home buyers, and energy field workers, and the population has grown by a whopping 12 percent per year.

You might think that Pine Haven's water and sewer systems are rolling in the cash: rapid growth to fuel tax receipts and rate revenues, but you'd be wrong. Their rates have been too low for many years. In fact, they are not even high enough to cover all their current operating costs. Twelve percent annual growth also means flow through the water and sewer systems doubles about every six years. Just try to keep your system providing a respectable level of service faced with that kind of growth. Pine Haven's debt service to fund new construction is slated to balloon.

Things looked dire for the town. The ratepayers thought they would really take it on the chin with unaffordable rate increases. A water and sewer rate analysis revealed the facts of the situation and pointed the way to solutions. Recent rate increases generally fixed the financial problems on a gross revenue basis, but they weren't getting the right amount of revenue from users of various sizes. In other words, the rate structures were not very equitable. Rates still needed to go up to the high-end users. But some low-end user's rates actually needed to go down. The analysis proposed new rates that will now be adequate for a long time, fair to the ratepayer classes, and affordable. Best of all, assured adequate funding will enable the city to continue providing good service and accommodate continued growth.

After the analyses were complete, Pine Haven officials remarked that several other towns they know of are worse off than Pine Haven was before rate adjustments, but those towns show no interest in fixing those problems. Alas, they have experienced a most common situation—cities and districts are in bad shape and they don't know it, or they sense it but they don't want to face the cold hard facts. This problem won't fix itself, as another client discovered the hard way.

This city, which will remain nameless, was facing financial ruin, literally. Its total annual budget was about \$12 million. Toward the end of fiscal year 2006 it became clear the city would bring in only about \$10 million. The numbers are big but the math is easy. Emergency analyses showed many things that needed to be changed in this city. Chief among them, their water and sewer rates were too low. Their operating costs were about \$3.5 million per year but revenues only totaled about \$2.6 million. That's a shortfall of about \$1 million every year to cover operating costs and several hundred thousand dollars more to cover debt service for future capital improvements that are needed. So, rates had to go up substantially, but they remained affordable.

Between those rate increases and some cost saving measures, the city will be fine in about two years. Unfortunately, many city employees had to lose their jobs, and lots of needed projects have been postponed to get the city out of this fix. The ratepayers always pay. In this case it will be in reduced service for several years.

Read more about Pine Haven at www.carlbrownconsulting.com/PineHaven.htm.

