

# Good water and sound operations essential to your water system's health

**I** In the daily routine of operating a public water system, I often think that too many of us, myself included, can easily get caught up in the day to day operation and maintenance of the system. There are pumps to maintain, tanks to control, meters to read. Sometimes we complain of this new regulation and that new regulation. When we fall into that sort of rut, we miss the bigger picture: water systems are critical to providing for

Jon Steele  
Tech Assistant



public health, welfare and safety.

You've undoubtedly listened to Paul Harvey advocate the virtues of water. But do you, as public water system operators, managers and elected officials

need to hear Paul Harvey peddling the virtues of some philosophy? I don't think so. The fact is that water is the key to all life and is second only to oxygen for human existence. We know that water is made up of 2 atoms of hydrogen and 1 atom of oxygen. By weight, I've read that water is 1 part hydrogen to 8 of oxygen or 11.1 percent hydrogen and 88.9 percent oxygen. The human body is 25 percent solid matter and 75 percent water. Human brain tissue is 85 percent water. Water covers 70 percent of the planet's surface and groundwater and fills much of

the voids beneath the earth's surface.

As professionals in the waterworks industry we too often take water for granted and dismiss the vital role water plays in maintaining good health. We do get caught up in the production, distribution, conservation and regulation of it.

And yes, we too often fail at promoting water as a vital key to life and health. As industry professionals, it should be our responsibility to promote the health benefits - and to make



The ongoing battle: Operators and new regs

In my work for the past 10 years with Kansas Rural Water, and in my former employment with two cities, I know that one of the biggest hurdles facing many water utilities is lack of finances. Who's to blame? Well,

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sure those benefits are delivered safely and as efficiently as possible to the customers of your system. If you look at it that way, with the focus on providing public health FIRST, then the complaints about having a small leak on a fire hydrant can be put into more appropriate perspective.

Ensuring public health means running a good system

it's not the federal government or the State of Kansas. Who sets the rates for your system? A better question might be, when was the last time your system reviewed rates?

The responsibility of reviewing and possibly increasing rates is something that most water system staff members or board/council members do not want to do. That's apparent. I have worked

with many systems that have not reviewed their rates in 10 to 15 years! Folks, this is not rocket science and you do not need to have an accounting degree to use some of the tools that are available to help you to at least get a rough calculation of the adequacy of your water rate structure.

**KanCap will help**

As you have read in previous issues in The Kansas Lifeline and as you may have heard at various training sessions, there's a new board/council training program coming soon. It's called KanCap. KRWA is developing that program under contract with KDHE and in association with many other organizations and people. An entire section of that training program is devoted to financial aspects of owning, operating and maintaining a public water system. One of the tools that the KanCap training will include is a financial reporting template. I hope you will watch for KanCap training opportunities later this year. I encourage you to check out the tools such as the financial template to help you better manage and monitor your city or RWD's financial aspects.

**Make sure rates are equitable**

Water rates should be set in such a way to make sure that all customers pay for the service received. I have seen what I think are somewhat biased rate structures. Here are a few examples:

- A city has water supply problems and asks customers to conserve water; rates are increased to the users to curtail usage. This same community provides nearly an uncontrolled and below cost charge on water to the local golf course.

- A RWD has a declining block rate structure that favors 2 of the 5 board members. What

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makes this doubly wrong is that the system is on an increasing block rate structure from its supplier. This amounts to a double financial whammy for the water system.

- A rural water district purchases water from a city. That city purchases water from another city. The contract from the first city to the second city is a reducing block rate structure. The second city sells the highest cost water to the purchasing RWD, plus covering their costs.

Anyone can play politics with water rates - in fact, many cities and RWDs do just that. Whatever rate may be imposed may be legal, but it doesn't necessarily make it right. Sooner or later, enough other people will find out about the schemes and things will be changed. New people will be in charge!

**Rate increases not always needed**

The decision to "review water rates" too often sparks an immediate opinion that water is going to end up costing more. That's not necessarily always the case.

In order to conduct a rate review, the system must have credible financial data. That means knowing what operating expenses the utility has and which of those are variable and which are fixed such as debt service, insurance, etc. It needs to know the revenues. The number of customers and what unique categories they might fall in must be considered. The annual water sales need to be known. There should be a prioritized listing of anticipated costs for repairs and maintenance or to fund capital improvements.

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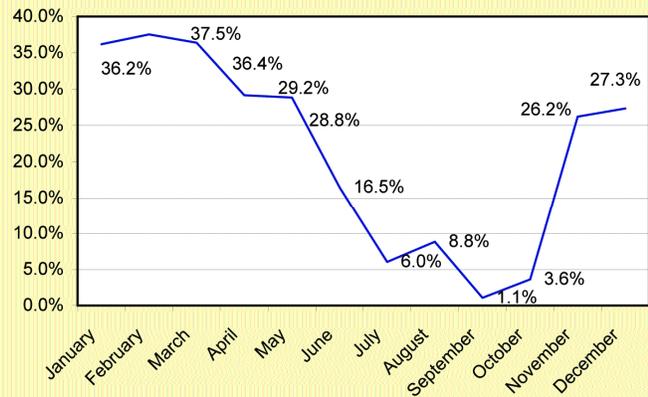
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## Water loss: Real or not?

I've helped many city clerks and RWD bookkeepers and operators sort through records to more correctly determine the variable costs. Thanks to computers and spreadsheets, there have been a lot of improvements by utilities in recordkeeping. One of the basic uses of such tools can be to help system managers and boards/councils better determine where they might first reduce expenses vs. just complaining, "we don't have enough money" and then attempt to increase rates.

The one place that nearly every system can improve its efficiency is in water loss reduction. I have included a chart that clearly demonstrates that this water system does not have a bunch of water leaks that are contributing to their high water loss. What is hurting their finances is the way that the system is operated. So what's their problem? If you look at the chart, you see these high water losses during the winter and spring months. This system is not

reading meters with any consistency during those months. As a result, the revenues of this utility are more likely to be on the short side of meeting the budgetary needs.



The above chart was made directly from one of the "Special Focus" water loss projects that KRWA is monitoring. Notice how the water loss ratio dramatically decreases during the summer months. The range is 1.1% in September to a high of 37.4% in February. Why look for leaks? This system's problem is that it does not read meters in the winter months.

### Are you Ready for the Ground Water Rule?

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### Help with rate reviews

KRWA is available to provide assistance with water and wastewater rate reviews. As I mentioned earlier, KRWA is soon going to have a great new resource in the KanCap board/council training program. I hope that you will watch for the training opportunities that will become available using the new KanCap program that is being sponsored by the Kansas Dept. of Health & Environment. The agency, KRWA and other technical assistance providers are here to help your system; KanCap will help us all.

If KRWA can be of assistance, call us at 785/336-3760.