

# Kansas Water Plan pays for assistance to reduce high water loss

**I**n 2004 Kansas Rural Water worked with 30 water systems that were identified by the Kansas Water Office (KWO) as having unaccounted for water loss greater than 30%. What does this mean? First, it means there are systems that have significant problems. Second, it means that, thanks to funding through the Kansas Water Plan, there is “FREE” assistance available to these and other water systems. The projects are referred to as “Special Focus” and they get special attention under a contract that KRWA operates and which is administered by the Kansas Water Office. To be removed from the list requires the system to maintain a

Greg Duryea  
Tech Assistant



water loss percentage less than 20% for two consecutive quarters.

The “Special Focus” program provides unique benefits to Kansas water systems. Water conservation and educational efforts by the Kansas Water Office and others

over the past 10 to 15 years have made a marked improvement in the operation and efficiency of public water systems. Having a reasonable water loss ratio is the ‘default litmus test’ in KRWA’s opinion. Determining which systems have high losses requires the tabulation of the information from the annual Water Use Reports by state staff. It’s largely because systems are proactive in reducing water loss that there are no headlines reading that “Anytown, Kan. was without water for a day” because of broken pipes or other problems. The

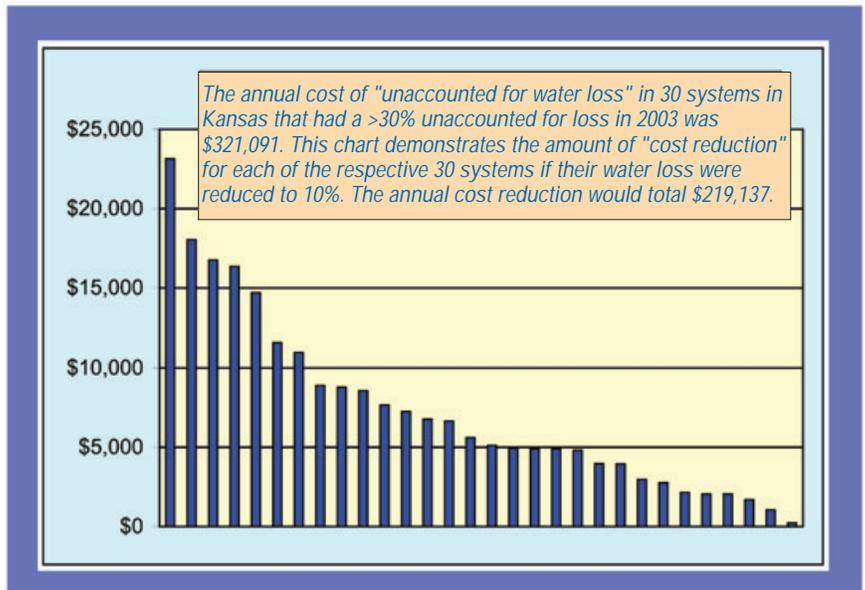
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Kansas Water Office’s efforts to educate and provide help on water loss and water conservation have brought tremendous benefits to cities and RWDs. If that sounds like a sales pitch, grab your boots and a flashlight and join us on the next leak detection survey.

### Find and fix

Identifying contributors to high water loss is only half the solution.

breaks. Some people suggest that the deciding factor is money. I disagree. It’s often the lack of willingness of the city or RWD to make a decision to fix the problem. There are numerous funding options available – we are often not talking about more than a few thousand dollars to correct some of these problems. If there’s one thing that may be needed is a small, emergency loan program that



The other half, which always seems more difficult, is for the city or RWD to make the improvements to correct the problem. Improvements may range from plumbing modifications so that master meters can be tested to replacing problem pipelines that have a history of line

would have very low fees. Such a public finance program does not exist, at least in Kansas.

I’ve helped conduct water loss surveys for nearly 12 years at KRWA. It is personally gratifying to me when I can work with a city or RWD and, together, we unravel

the problem until the cause of the loss is apparent. The first contact or visit to the system is often revealing. You've heard of "body language?" Well, it happens all the time with operators, city clerks or RWD staff. It's easy to tell a 'ho-hum' approach from one that is serious. There are actually people who have taken offense to KRWA staff trying to help them. One system simply did not want the assistance. No, they don't know better – their malfeasance is costing themselves and their customers money. It's a very rare exception when such an attitude can't be changed. The system will continue to go downhill – and then someone will ask for a grant to fix it. Heads up! There's less and less "free money" is available.

Among the 30 Special Focus projects in 2004, we found that nine cities and RWDs had and continue to have pipeline leakage. Nearly all these systems have solvent weld PVC pipeline. One of these, a RWD, typically repairs more than 100 leaks per year. Invariably, every leak is at a glue joint. Faulty or improperly adjusted controls on tanks also contribute to water loss. Almost every system had more than one contributor to their high unaccounted for water loss.

#### **Inaccurate metering**

Of the 30 systems that were identified for assistance we found that inaccurate metering was a major contributor in 19 systems. The metering problems ranged from inaccurate master meters to the utility not recording the water used for flushing distribution lines. Several of the systems were not reading the customer meters on a regular basis. Typically customers of a rural water district read their own meters monthly and send the payment to the district office or bookkeeper's home. That person then records the payments and water used. The problem with this

procedure is there is no guarantee that the meters were actually read. The readings may have been estimated. Also if there is snow covering the meter pits in the winter, there is a big chance the meters will be estimated until the snow has melted. There have also been many accusations, sometimes confirmed, of meter readers who filled out meter cards at their kitchen table.

Master meters will not be accurate forever, regardless of how good a quality of water the systems has. I have actually had a person from a large water system in Kansas who has worked for the system for more than 20 years tell me that meters will not over-register and that he has never seen one that has. I disagree.

Well, master meters will over-register. If iron builds up on an impellor in a meter, the jetting of

water through the meter can cause over-registration. Improper plumbing can also cause over-registration. Installing a two-inch meter on a one-inch pipeline is almost guaranteed to over-register. The main supply of the water is only going through the center of the meter and still turning the impellor.

*I encourage you to attend the KRWA Annual Conference March 29 – 31 at Century II Convention Center in Wichita, Kansas. There are 56 concurrent training sessions for operators, administrative personnel and board/council members. A training session Thursday morning titled "Large Flow Meter Technology: Operation, Installation and Accuracy" is one that I recommend you try to attend. See you there!*



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