

Kansas Water Office contract does not leave any system “in the middle of nowhere”

Since 1992, the Kansas Water Plan has provided funding which in turn provides direct assistance to cities and rural water districts across the state. That technical assistance has been provided through a contract arrangement between the Kansas Water Office and the Kansas Rural Water Association; supplemental funding was provided for two years by the Kansas Department of Health and Environment. In state fiscal year 2009, KRWA provided assistance to 431 individual systems. Regardless of size or location, the contract left no system feeling like they were “in the middle of nowhere.”

A requirement of the contract is to make the results known to the public; that’s the intent of this article. It’s also to provide an awareness to public water systems of the services that are provided through the Kansas Water Plan and Clean Drinking Water Fee. A complete listing of systems which is sortable by system name or river basin, is also available on KRWA’s Web site at www.krwa.net, then under “technical assistance” and then “Focus on Water Loss.”



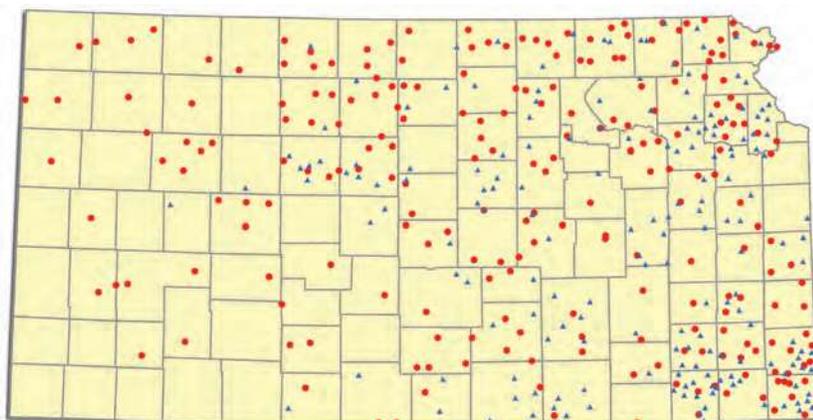
The “on-site assistance” provides invaluable help with operational, maintenance, financial, management, health concerns, regulatory and safety issues.

Whether it’s a request for an Emergency Water Supply Plan to a Water Conservation Plan, an emergency leak or loss of disinfection, KRWA staff pitch in and deliver.

Here’s a quick summary of the work that was provided through the FY 09 contract:

- ◆ Provided assistance to 248 different cities and 183 rural water systems or others, providing 3,345.5 hours of onsite assistance and 2,547.5 hours of travel, phone and support. The total time allocated to training, agency contact, outreach, etc. was 10,667 hours.

● = cities ▲ = rural districts, others



From July 1, 2008 to June 30, 2009, KRWA provided assistance to 248 different cities and 183 rural water systems or others under the contract funded through the State Water Plan.

Water Loss Surveys conducted, FY 92 - FY 09

	FY 92	FY 93	FY 94	FY 95
Surveys	64	55	38	26
GPM detected	530.25	285.25	457.5	137.5
GPY detected	278,699,400	149,927,400	240,462,000	72,270,000
\$ Cost Savings	\$280,981	\$270,011	\$340,610	\$92,176
	FY 96	FY 97	FY 98	FY 99
Surveys	23	29	25	54
GPM detected	268.25	238	151.75	632.75
GPY detected	140,992,200	125,092,800	79,759,800	332,573,400
\$ Cost Savings	\$180,985	\$192,555	\$150,771	\$572,037
	FY 00	FY 01	FY 02	FY 03
Surveys	50	49	49	38
GPM detected	393.25	448.75	454	275
GPY detected	206,692,200	235,863,000	238,622,400	144,540,000
\$ Cost Savings	\$339,137	\$607,989	\$423,858	\$225,522
	FY 04	FY 05	FY 06	FY 07
Surveys	40	44	40	53
GPM detected	246	256.5	261	463
GPY detected	129,297,600	134,816,400	137,181,600	243,352,800
\$ Cost Savings	\$421,953	\$278,814	\$253,846	\$650,564
	FY 08	FY 09	Total 92 - 09	
Surveys	65	87	829	
GPM detected	674	1009.5	7,182	
GPY detected	354,254,400	530,593,200	3,774,859,200	
\$ Cost Savings	\$888,549	\$1,497,122	\$7,667,480	

Since 1992, KRWA has conducted 829 water loss surveys, locating 7,182 gpm or nearly 3.8 billion gallons of loss which would have cost systems \$7.667 million to produce or purchase. Any emergency leak is reduced by at least 50 percent for purposes of this report.

- ◆ Conducted 87 water loss surveys, locating 530,856,000 gallons of loss on an annual basis. The cost of this production or purchase of water on an annual basis is \$1,497,121. Any leakage detected which is considered an emergency leak is reduced by a minimum of 50% for reporting purposes.
- ◆ Worked with 38 “Special Focus” systems to reduce unaccounted for water loss of 30% or more.
- ◆ The Kansas Water Office assigned 95 systems for development or updating of their Water Conservation Plan to comply with the 2007 Guidelines.
- ◆ Expenditures under the contract totaled \$ 330,954.24. Funding was provided in the amount of \$329,919.

High water loss targeted

The Kansas Water Plan funding provides targeted assistance to “Special focus” projects – those systems that are identified by the Kansas Water Office as having a 30 percent or greater unaccounted for water loss. What’s the process?

The Kansas Water Office assigned 97 systems for development or updating of their Water Conservation Plan to comply with the 2007 Guidelines.

Allen RWD 4	City of Cimarron	Harvey RWD 1	Montgomery RWD 10	Pottawatomie RWD 2
Allen RWD 13	Clay RWD 2	Hays Suburban Estates	Montgomery RWD 12	Russell RWD 2
City of Alma	City of Clyde	City of Herndon	Montgomery RWD 13	Saline RWD 4
Anderson RWD 1C	Coffey RWD 2	City of Jamestown	City of Morganville	Saline RWD 7
Atchison RWD 6	Countryside Estates MHC	Jefferson RWD 1	Morris RWD 1	Sedgwick RWD 1
City of Axtell	Cowley RWD 3	Jefferson RWD 2	City of Moscow	Smith RWD 1
City of Bennington	Crawford RWD 2	Jefferson RWD 13	City of Muscotah	City of St. George
City of Bentley	City of Cuba	City of Kiowa	City of Natoma	City of St. Paul
City of Buhler	City of Cunningham	Labette RWD 3	Nemaha RWD 3	City of Stafford
City of Buhler	City of Deerfield	Labette RWD 7	Neosho RWD 3	City of Stockton
City of Burlingame	Elk Co. RWD 1	Leavenworth RWD 8	City of Oketo	Sumner RWD 2
City of Burrton	City of Ellis	City of Leonardville	City of Osage City	City of Tescott
Butler RWD 1	City of Everest	Lyon RWD 4	Osage RWD 3	City of Viola
Butler RWD 3	Franklin RWD 3	Marion RWD 4	Osborne RWD 1A	Westmoreland
Butler RWD 6	Franklin RWD 5	Marshall RWD 3	Ottawa RWD 2	City of Winchester
Butler RWD 7	City of Garden Plain	City of McLouth	City of Ozawie	Woodson RWD 1
City of Carbondale	Geary RWD 4	City of Montezuma	City of Palco	City of Zenda
Cherokee RWD 2	City of Goessel	Montgomery RWD 2	City of Park	
Cherokee RWD 5	Green Acres MHP	Montgomery RWD 6	City of Perry	
Chicopee Rural Water District	City of Hanston	Montgomery RWD 7	City of Portis	

After notification of the candidate systems, KRWA contacts those systems to develop a plan of action. KRWA works with the individual cities and RWDs to develop a system profile and monthly reporting format. That report is to provide information that includes the amount of water purchased or produced, water sales and water that is provided without charge. A calculation is made each month as to the percentage of unaccounted for water loss. The results are summarized quarterly as work begins with the

system. Once a system maintains an unaccounted for loss of 20 percent or less for two consecutive quarters, the system is removed from the special focus listing.

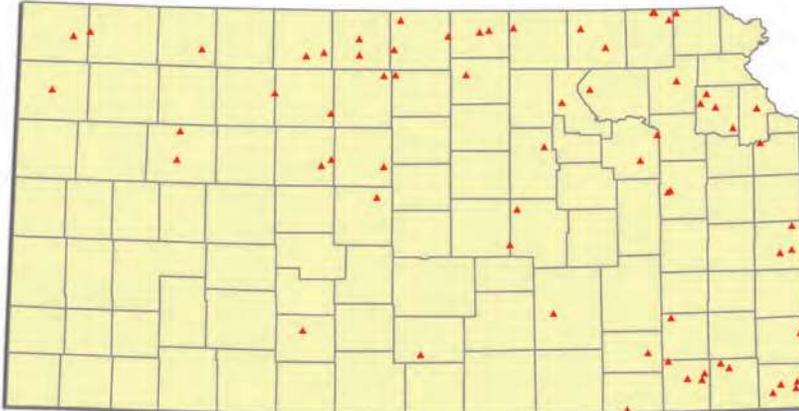
The leaks are not always in the pipes!

KRWA’s efforts on identifying and correcting high water loss begin with a review of the record keeping, metering and meter reading. Only after the accounting has been verified can it be determined if there may be actual leakage. Methods for detecting leaks in water distribution systems usually involve using sonic leak detection equipment. That equipment identifies the sound of water escaping from pipe.

KRWA’s equipment includes pinpoint listening devices that make contact with valves and hydrants, and correlator devices that can listen at two points simultaneously to pinpoint the exact location of a leak, assuming the size and type of pipe are known.

KRWA presently employs 3.5 staff members through the on-site assistance program funded through the Kansas Water Plan and Clean Drinking Water Fee. KRWA responds to a host of requests from cities and RWDs each week. While the focus of the contract is

▲ = locations of water loss surveys



From July 1, 2008 to June 30, 2009, KRWA conducted 87 water loss surveys, locating 530,856,000 gallons of loss on an annual basis. The cost of this production or purchase of water on an annual basis is \$1,497,121.

Special Focus Projects: Systems with >30% or more unaccounted for water loss

System	Percent Unaccounted for Water Loss		System	Percent Unaccounted for Water Loss	
	2007	2006		2007	2006
Butler RWD 2	46.6	11.6	City of Zenda	35.6	17.5
Cherokee RWD 1	37.4	32.2	Cowley RWD 7	46.4	33.2
Cherokee RWD 3	39.1	24.1	Crawford RWD 5	34.1	28.7
Chicopee RWD	35.2	17.7	Dickinson RWD 1	47.2	25.1
City of Barnes	33.6	23.3	Elk RWD 1	30.2	na
City of Baxter Springs	30.6	33.2	Greenwood RWD 1	31.2	35.8
City of Bird City	39.1	42	Harper RWD 5	30.2	18.6
City of Cawker City	33.4	28.6	Jefferson RWD 2	35.9	25.3
City of De Soto	53.6	47.1	Jefferson RWD 3	53.9	22.8
City of Gaylord	47.8	36.8	Leavenworth RWD 2	35.9	33.4
City of Geneseo	33.4	18.5	Montgomery RWD 8	44.4	na
City of Glade	50.4	29.3	Neosho RWD 3	35.6	-2.1
City of Gove	22.9	31.1	Neosho RWD 7	33	11.7
City of Kirwin	22	15.9	Osborne RWD 1A	49.7	49.8
City of Manter	27.7	48.5	Pottawatomie RWD 2	31.4	22.9
City of McDonald	50.1	42.1	Red Bud Lake Imp. Dist.	47.1	10.7
City of Muscotah	55.6	19.7	Republic RWD 1	33.9	26.2
City of Natoma	33.6	na	Republic RWD 2	27.1	9.9
City of Spivey	33.8	30.6	Wilson RWD 5	32.7	16.4

In FY 09, 38 cities and water districts with unaccounted for water loss greater than 30% were assigned to the KRWA. The emphasis that the State of Kansas places on helping systems reduce high unaccounted for water loss is unique.

The contract provides invaluable assistance to cities and RWDs and other systems statewide. The following are excerpts from letters of appreciation sent by systems.

It would have had a really bad day today if it had not been for Eric Davolt. One of the guys in the crew was off healing from hernia surgery and we were left with one man in the hole (me) and one on the machine. Eric has been working with me to try to resolve a problem with a customer who has a wood burning hot water heater / circulating floor heater and claims to have a water quality problem. Eric came by the construction site to check on us and firm up the time to go to the customer's home tomorrow, to take water samples. Just about the time he pulled up, things started to go really wrong.

I've been in the hole before and had a situation go from bad to worse in a microsecond. I've been in the hole and had "observers" just watch me as if they were waiting to see if I would drown, or be able to somehow pull it together all by myself. Figuring I was all by myself again, I climbed out of the hole and drove two miles to shut my high service pumps down to reduce line pressure and cut down water loss.

By the time I got back to the site, Eric had gone to our truck, pulled on some rubber boots, had a pump running and had jumped down in the hole to clear away the dirt from the line to uncover the leak. I pulled him out of the hole and jumped back in myself. Then Eric jumped in a truck with a valve wrench and started helping to slow down water flow so Brett and I could cut out the bad section of the line and affect a repair, while keeping positive pressure on the line.

Thanks for the technical help, advice and training, you make available to every water district in the state. I've come to expect good things from KRWA, but today was totally unexpected. Greatly appreciated, but unexpected. Thank you for having the foresight to hire Eric Davolt.

*JW Stephenson
Operator/Manager
Cherokee RWD 2*

Thank you to Doug Guenther for his prompt trip to Lenora, Kansas to test fire hydrants as a part of preparing for an ISO inspection. We sometimes feel as if we are in the "middle of nowhere" but never do we get that feeling from Kansas Rural Water.

Thanks again.

*Gayle James
City Clerk, City of Lenora*

I am writing on behalf of Montgomery County Rural Water District #2 to thank KRWA for your invaluable assistance in devising both our Emergency Contingency and Conservation Plans.

When confronted with the prospect of devising these plans we were somewhat overwhelmed to say the least. Upon our first endeavor, the Emergency Contingency Plan, the State Department (KDHE) advised us to call KRWA for help. Fortunately, we were directed to Greg Duryea for assistance.

Greg was both patient and knowledgeable. He walked us through the paperwork effortlessly. What originally seemed to us a monumental task was easily handled by phone and email. Greg is a great representative of KRWA. Needless to say, when told we also needed a Water Conservation Plan in order to qualify for the "mapping program grant", we again turned to KRWA and Greg, and once again, our "monumental task" was handled easily.

It gives us great sense of relief to know we have an organization like KRWA to depend upon for assistance and information. Whenever we have contacted KRWA for any reason, we have been assisted professionally, courteously and efficiently. We cannot thank KRWA and your staff enough for all your help.

*Dan Radcliff
Chairman, Montgomery RWD 2*

on reducing unaccounted for water loss, it is just as likely to find a KRWA staff member working to help repair a chlorinator, cleaning a filter or testing fire hydrants. The goal is to also train operators so that they are better prepared to deal with the daily operational issues. Council and board members and managers also receive 'on call' help with answers to questions from rates and financing to contract services and consolidation, as a couple examples. There certainly are no dull moments. KRWA appreciates the confidence that the Water Office has placed in the Association to help provide assistance to cities and RWDs across the state. Call KRWA at 785-336-3760 or email krwa@krwa.net if you have any water system issue.

Elmer Ronnebaum is KRWA General Manager; he has been employed by KRWA since 1983. He served seven years on the KRWA board of directors prior to that. Elmer also helped develop a large RWD and served for 14 years on a water district board of directors.

