by Elmer Ronnebaum

Impact of compliance costs set at $61 million for Kansas systems

Recently, while in Washington with Dennis Schwartz attending the National Rural Water Rally and calling on Senators Roberts and Brownback and Representatives Moran, Moore, Ryun and Tiahrt, we also were asked by National Rural Water Policy Analyst Mike Keegan to meet with several representatives of the General Accounting Office (GAO). They were interested in costs that public water systems have in complying with drinking regulations. Representatives of the New Mexico and South Dakota Rural Water Associations also took part in the discussion.

We often complain about costs for various compliance issues. Complaining doesn't change anything, much less put the costs into perspective. Our discussions were aided immensely in that the Kansas Department of Health and Environment had already conducted a study of these costs when proposing to amend the state's regulations last year. KRWA appreciates the response by David Waldo, Chief of Technical Section at the Bureau of Water, for being able to provide the information via e-mail on the spur of the moment. Two tables by KDHE are printed on the following pages.

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KRWA's comments

While meeting with the representatives of the GAO, Dennis and I expressed both agreement and concern. We explained that their review of compliance costs was on target if coupled with a program to relieve PWSs of some of these costs, but there are many compliance costs involved with rules that have little or no benefit to consumer safety. Here are points that we made – and all of which were equally supported by others in the meeting. KRWA consultant Pat McCool collaborated with me on these points; some I actually do understand; others concerning surface water treatment are complex.

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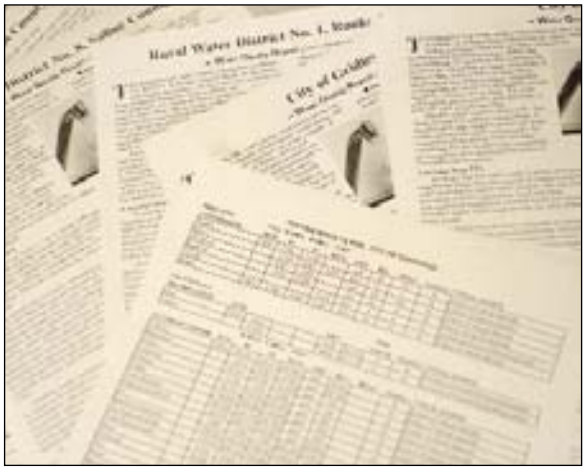

KRWA provides assistance to public water systems to prepare their CCRs. In conjunction with KDHE's providing of data, KRWA has nearly 250 CCRs to prepare before July 1.

Consumer Confidence Reports

While KRWA continues to support using the Consumer Confidence Report as an information piece, it's our opinion that there should be no requirement to mail it to each customer annually. Back during the development of the regulations, KRWA was a member of the advisory workgroup. KRWA, and others, recommended that that KDHE not waive the requirement for systems to mail out the CCRs. Given five years of experience now, and the awareness that many systems are only mailing these reports because they have to and further, that customers are generally not paying much attention to those mailings, it's appropriate to rethink this position and to ask for a reconsideration of the mailing requirement. Still, the water quality information should be available and should be given/sent to customers upon request. We know many friends, relatives and others who do not read those reports, much less understand all the information in them. The question is how many times has something worthwhile resulted only because these reports were sent? The public expects the government (state and federal), the water

supplies, KRWA and other technical assistance providers to look after the water quality.

Public notification

The requirements for public notice for a monitoring failure or test that does not meet standards should be reviewed and, possibly, reduced. The public notices are expensive in direct costs and staff time. The notices are often sent many weeks after the incident and most citizens question the worth of such notice when it is given many weeks after the "contamination." If the situation is important for public health, then a "boil water", "bottle water", or other advisory should be given immediately. The costs to public water systems for public notification do not bring any direct, immediate benefit. The lab does not quantify the amount of coliform bacteria so there is no way of knowing what is or was an appropriate response.

Less monitoring

The whole situation of monitoring for each regulated and each unregulated "contaminant" in the drinking water should be reviewed. There are many "contaminants" which are costly in both direct costs and indirect costs to sample, mail, analyze, understand, and report. The monitoring of some of these parameters could be eliminated, and some could be reduced in frequency. Also, the requirements of the location of the sampling could be improved. For example, many years ago, Kansas required the inorganic sampling of wells. Now EPA intercedes and the sampling is taken from within the distribution system. The sampling of wells is better and more useful. Another example would be the sampling for TTHM. If a water system carries a combined chlorine residual, four required samples from the distribution system on one day in a three month period are not as good as, for example, one plant tap sample taken every three weeks. This is due to EPA's "point of use" theory of being more relevant for water consumers vs. what's in the source water.

Changes in reporting

The unnecessary time, costs, and frustration on both ends of the public water systems reporting to regulatory agencies should be reviewed. In many situations, if reporting requirements were changed, the present situations in many instances could be eliminated. For example, many times the information being reported is already available to the state agency because the water quality data was analyzed by the state's lab. All the data is on the state's lab computer system. Also, the forms and reporting format are not easily understood by the public water systems. Costs, time, frustrations, and public misunderstandings result. As another example, the total trihalomethanes (TTHM), haloacetic acids (HAA_5), and total organic carbon (TOC) data are analyzed by the state's lab, but the public water systems incur costs, staff time, and some level of frustration in completing complicated forms to be sent to the state when the state already has the data and could have its computer summarize and complete the forms. It is our understanding that KDHE is already reviewing and making beneficial changes in the matter of TTHM and HAA_5 reporting.

Disinfection Byproduct Rule

The present Disinfection Byproduct Rule requires the following or less for surface water treatment systems and GWUDI (ground water under the direct influence) systems: 80 ug/l TTHM, 60 ug/l HAA_5, and certain TOC removal. If the requirements for TTHM and HAA_5 were change to 100 ug/l and 80 ug/l, respectively, then much, costly

TABLE ONE: SUMMARY OF ESTIMATED COSTS FOR WATER SYSTEMS TO COMPLY WITH NPDWR

Rule	Monitoring and Reporting Costs*				Capital Costs*	
	# of Systems	1st Year	2nd Year	3rd Year	# of Systems	Total Costs
Consumer Confidence Report[1]	913	$324,115	$324,115	$324,115	-	$0
Lead & Copper[2]	1068	$0	$0	$0	-	$0
Disinfectants/Disinfection ByProducts, Stage 1	659	$235,134	$185,744	$185,744	56	$42,400,000
Interim Enhanced Surface Water Treatment (>10,000 pop.)	18	$102,870	$0	$0	18	$1,100,000
Long Term 1 Enhanced Surface Water Treatment Rule (>10,000 pop.)	81	$82,620	$0	$0	81	$1,300,000
Filbert Backwash Recycling Rule	104	$12,000	$0	$0	14	$8,000
Arsenic Rule	659	$8,376	$4,239	$4,239	17	$9,300,000
Radionuclide Rule	604	$195,570	$70,760	$38,970	19	$5,300,000
Other Regs Adopted for Clarify	1068	$0	$0	$0	-	$0
Bacteriological Monitoring	829	$110,760	$110,760	$110,760	-	$0
COST TOTALS**		**$1,071,445**	**$695,618**	**$663,828**		**$59,408,000**

* *Cost estimates are summarized for all systems affected, and not per water system.*

** *The present value of total cost estimates for all monitoring, reporting, and capital costs associated with these rules (as identified in the above table) is $61,838,891.*

1 *The costs for distributing the annual CCR vary upon size of population served. The costs may range from $10 to over $10,000. The average cost for all water systems was estimated at $355 based on costs associated with developing and mailing 500 reports.*

2 *The minor revisions to the Lead and Copper Rule do not require additional monitoring or capital improvements, but rather simply streamline requirements to promote consistent national implementation.*

construction would not be required. The public health benefit difference after such change should be evaluated. The public health benefit difference of such a change should be reviewed and is, probably, quite small. The standards are set from tests on mice at high dosages and the results are extrapolated to low-level human exposure of seventy years. Seat belts on drivers and helmets on motorcycle operators have much more benefit to the public.

TOC requirement

The TOC (Total Organic Carbon) reduction requirement should be eliminated. The TOC reduction requirement has no known public health benefit. The "reasoning" for this requirement is something like "… more TOC removed results in less TTHM and HAA_5 produced." However, in Kansas surface water treatment plants or GWUDI plants, the major factors affecting the level of TTHM and HAA_5 levels in the drinking water are the temperature and the water resident time.

There are plants that meet the TTHM and HAA_5 requirements but do not meet the TOC reduction requirement. In contrast, there are plants that meet the TOC requirement but do not meet the TTHM and HAA_5 requirement. Also, there are plants that produce water that has TOC levels higher and TTHM and HAA_5 levels lower than other plants. The TOC

reduction requirement doesn't make sense and should be eliminated

TOC in the drinking water does not have a direct, public health benefit. The aforementioned situations do not seem logical concerning the TOC requirement. They are a result of 1) the three, overall, controlling factors in the TTHM and HAA_5 levels in Kansas public water systems (PWS's) treating surface water or GWUDI are type of disinfection (free chlorine), free chlorine contact time and water temperature, and 2) the TOC requirement is based on a percentage removal due to raw water alkalinity and is not an absolute value / MCL. Even after good, (excellent) treatment of Kansas surface water / GWUDI, there are plenty of organic precursors and TOC in the water to produce high TTHM / HAA_5 levels in the drinking water. Disinfection Byproducts (DBP), that is TTHM and HAA_5, should be the issue and not the % of TOC removal.

Very little sampling of Kansas surface waters for Cryptosporidium and E. Coli has been conducted. Thus, it is difficult to determine the consequences and costs of the rule should it become law.

Draft: Disinfection Byproducts: Stage 2

In 2001 EPA released a draft version of a proposed rule called Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Among other requirements, this rule requires those systems having surface water treatment plants or GWUDI plants to monitor source waters for Cryptosporidium and E. Coli bacteria. Based on levels of these contaminants found in the source water, additional treatment may be required. The additional treatment may include ozone addition, membrane filtration and other expensive processes. Very little sampling of Kansas surface waters for Cryptosporidium and E. Coli has been conducted. Thus, it is difficult to determine the consequences and costs of the rule should it become law. One of the major "driving forces" for this rule was the Cryptosporidium contamination in March/April 1993 of the Milwaukee drinking water. The Milwaukee contamination was due to poor filter operation (rapid sand filter media in poor condition, prior poor coagulation/flocculation, operator error and lack of education).

Cryptosporidium has not been shown to be a problem in Kansas ***in the drinking water*** from Kansas plants. Really, what

TABLE TWO: SUMMARY OF PUBLIC NOTIFICATION RULE COSTS

Anticipated Costs for Public Notice to be Distributed for Public Water Supply Systems Serving 1,000 Service Connections

Violation Tier	Public Notice Requirements	Approved Methods of Notice	Cost per Method of notice	Estimated Total Cost
Tier 1	Immediate, Within 24 hours	TV	$1,000[1]	$160 - $3,360[7]
		Radio	$200[2]	
		Direct Delivery	$160[3]	
Tier 2	As soon as Possible Within 30 Days	Mail (copies & postage)	$530[4]	$160 - $720[8]
		Newspaper	$190[5]	
		Direct Delivery	$160[3]	
Tier 3	Annual Notice	Mail (copies & postage)	$530[4]	$0 - $530
		Posting in Public Venues	$10	
		Consumer Confidence Report (CCR)	No Additional Cost[6]	

1 *Cost based on providing notice during one prime time newscast according to: KSNT Channel 27*

2 *Cost based on one 60 second notice given on radio according to: Kansas Radio Information Network*

3 *Cost based on $ 0.16 per copy at Kinkos*

4 *Cost based on $ 0.16 per copy at Kinkos plus $ 0.37 postage per public notice*

5 *Cost based on publishing an article in the newspaper according to: Topeka Capital Journal*

6 *The Consumer Confidence Report (CCR) Rule requires community public water supply systems to distribute an annual water quality report to their customers. The Public Notification Rule allows systems to use the CCR for a Tier 3 annual notice. Because the CCR is already required by regulation, the notice may be provided to customers at no additional cost.*

7 *Cost calculated by adding two TV newscasts, five radio broadcasts, and direct delivery of public notice.*

8 *Cost calculated by adding mail and newspaper to distribute notice.*

Source: Supplemental Regulatory Impact Statement, Prepared for Joint Committee on Kansas Administrative Rules and Regulations by the Kansas Department of Health and Environment, Division of Environment, August 2004

difference does it make what the Cryptosporidium and E. Coli levels in the source water are if the drinking water does not have such contamination? Isn't that why treatment plants are built? Maybe the required sampling should be of the drinking water and not the source water. The Milwaukee rapid sand filtration plant without ozone addition operated many years prior to 1993 without Cryptosporidium getting into the drinking water.

When EPA officially proposes this rule, water suppliers and their organizations should seriously consider the necessity of such a law and its costs-to-benefits ratio. Does the incremental reduction in risk justify the expensive capital costs for additional plant process and the ongoing costs of operation and monitoring?

Lead and copper testing

The sampling costs, monitoring costs, reporting costs, analytical cost, bureaucracy costs, staff time for lead and copper compliance are unnecessary and do not continue to offer significant public health benefits. EPA should give the States much more flexibility in the frequency and number of samples required."

Cryptosporidium has not been shown to be a problem in Kansas in the drinking water from Kansas plants.

Arsenic

The arsenic MCL and its associated compliance costs and public health benefit should be re-evaluated. The lawsuit that some water suppliers have against the EPA is supported by scientific facts and questions the stated public health benefits of the present MCL.

Where to now?

So, how to change any of the above? Support organizations that have the expertise to address the issues and in a unified way. Certainly KRWA does not have all the answers but your Association works in conjunction with others at the state and federal level to help systems produce quality water. KRWA works also to help reduce compliance costs. Obviously there's more to do. You can be assured KRWA will continue to work on these issues.