By Pat McCool, Consultant, KRWA

Who Will Determine What's "Affordable" Water?

Kansas cities and rural water districts are incurring more costs to supply water to their customers. The governing bodies address these issues at their regularly scheduled meetings and in their annual budgeting process. The review of operating costs, amount of water sales, and customer water rates is an ongoing responsibility and concern.

For many Kansas water suppliers, the costs of complying with additional federal regulations have significantly increased or will significantly increase the customers' water bills. A major cause is that the costs of constructing a water treatment plant have increased significantly in the last two decades. The construction costs and resulting debt payments are many times the most significant reason for large increases in the customers' water rates.

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These large increases are especially true for small systems and Kansas has many small systems. The increases in water rates for the smaller systems' customers are much more than for larger systems as there are fewer customers to cover the increasing costs. Stated another way, larger systems have the better, "economy of scale".

Some examples of these small systems are those that have had to abandon a surface water treatment plant and purchase water from another system to meet disinfection byproducts requirements. Already the construction costs and resulting debt for a small city or RWD to construct a surface water treatment plant is way too expensive. Also, there are small systems that have had to provide treatment plants for groundwater that is high in nitrates, or arsenic, or radium or uranium.

In the 1996 amendments of the Safe Drinking Water Act (SWDA), Congress recognized the issue of regulations resulting in high customer water rates for small systems. Congress gave the states authority to grant variances to small systems. Please see the sidebar that explains the 2006 summary/introduction in the Federal Register requesting comments on the issues of affordability and required variance technologies.

Since 2006 EPA and interested "stakeholders" including the National Rural Water Association, have been meeting to discuss the matter of "affordability". Progress has been slow and so last December Congress directed EPA to submit a report in 180 days on alternative "affordability" criteria in general. Specifically, the report was to focus on the effects costs for small systems costs to comply with the arsenic rule which has its own "affordability" issues. This report is to include "alternative compliance methods". That directive was given by congress; see the excerpt from House Report 112-15 on the next page.

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OW–2005–0005; FRL–8035–7]

Small Drinking Water Systems Variances – Revision of Existing National-Level Affordability Methodology and Methodology To Identify Variance Technologies That Are Protective of Public Health

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The 1996 amendments of the Safe Drinking Water Act (SDWA) provide States the authority to grant variances to small public water systems that cannot afford to comply with a primary drinking water standard. These variances allow a system to install and maintain technology that can remove a contaminant to the maximum extent that is affordable and protective of public health in lieu of technology that can achieve compliance with the regulation. One of the conditions for States to grant variances on a case-by-case basis is that the EPA must have found for systems of a similar size and with similar source water that there are no affordable technologies available that achieve compliance with the standard, but that there are affordable variance technologies that are protective of public health.

The EPA currently determines if there are affordable compliance technologies available to small systems by comparing (for a representative system) the current household cost of water plus the estimated additional cost to comply with a new rule to an affordability ''threshold'' of 2.5 percent of the median household income (MHI). Today's Federal Register notice requests comment on revisions to this existing national-level affordability methodology for small drinking water systems and an approach for determining if an affordable variance technology is protective of public health. The Agency is committed to working with State and local officials and stakeholders to update and improve affordability analyses under the Safe Drinking Water Act.

DATES: Comments must be received on or before May 1, 2006.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OW–2005–0005, by one of the following methods:

http://www.regulations.gov. Follow the on-line instructions for submitting comments.

From House Report 112-15 – Department of the Interior, Environment, and Related Agencies Appropriation Bill, 2012

Environmental Programs and Management

Arsenic Reporting.--Legitimate concerns have been raised relating to the challenges that many small and rural communities, particularly in the West, have in meeting national compliance standards set by the EPA for arsenic in drinking water. In 2001, the Agency adopted a new standard for arsenic in drinking water at 10 parts per billion (ppb), replacing the older standard of 50 parts per billion, in order to protect consumers served by public water systems from the effects of long-term exposure to this odorless and tasteless naturally occurring element. In many instances, small communities with arsenic levels only marginally higher than the national standard lack the population or tax base to build or operate a water treatment plant or the ability to take other corrective measures. The Committee believes that current options established by the Agency to assist communities in complying with the standard are not working. EPA and State regulatory agencies must do a better job to empower smaller communities to ensure their water is safe without requiring communities to consider unaffordable utility rate increases. The Committee therefore directs the Agency to do the following not later than 180 days after the date of enactment of this Act: (1) promptly submit to Congress an overdue report--requested in the Fiscal Year 2005 Omnibus Appropriations Act (P.L. 108-447)--on the extent to which communities are being affected by the arsenic rule, and proposing compliance alternatives and making recommendations to minimize costs; (2) convene a working group composed of representatives from States, small publicly owned water systems, and treatment manufacturers, which shall submit to the Committee a report on barriers to the use of point-of-use and point-of-entry treatment units, package plants (including water bottled by the public water system), and modular units; and (3) in consultation with the working group, submit to the Committee a report on alternative affordability criteria that give extra weight to small, rural, and lower income communities.

Past documents on the "affordability" issue discuss many possible scenarios and some of the resultant, possible implications. The very recent draft copy of the comments of the participants preparing the report to Congress raise as many more questions than it provides answers.

There seem to be two major questions among the many aspects of the issue of "affordability". First, is EPA going to promulgate regulations that allow, in the end, variances to MCLs in the drinking water due to "affordability" issues? If so, then there will be financial relief for many systems facing high water rates – but their customers will be drinking water that is "inferior" as many would suggest. On the other hand, what really is the increase in risk, for example, in drinking water with arsenic levels of 11 ppb as opposed to 9 ppb when the MCL is 10 ppb? Unfortunately, EPA is not known to make a regulation less restrictive even though there may be good reason to do such.

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The other question/issue is how does EPA define/determine "affordability"? In the past the EPA has used the standard which is explained in the second paragraph of the sidebar on the 2006 summary. That is, a customer's present annual cost of water and additional, annual cost to comply with a new rule are added together and compared to a threshold of 2.5 percent of the annual median household income (MHI). EPA has developed data in the past of MHI for different size systems nationally.

EPA is presently considering using the threshold of 0.25 percent, 0.50 percent and 0.75 percent instead of 2.5 percent. There is also the issue of complying with one EPA regulation and then some years later having to construct additional improvements to meet other, maybe newly promulgated, regulations. The question then again will be does the certain percent of MHI apply again; that is, is it cumulative or does it apply to each regulation?

These thresholds may appear to be quite high to many Kansas elected officials and their rate-paying customers. So the struggle with decisions that might result with high monthly water bills will continue. If variances are possible, then considerations "outside the box" will be more seriously considered.

The use of bottled water is an option that could be approved but will have many in the water supply industry and the state regulatory agency possibly opposed to it. Many people in Kansas already drink bottled for varying reasons and they do so on a daily basis. The average water used for drinking and cooking purposes is probably around one-half gallon per day per person. It might make "affordability" sense to treat and supply that one-half gallon in a bottle rather than to build a treatment plant to treat the 150 to 200 gallons used by a person per day for all purposes.

Also, treatment devices at each residence at the point-of-use or point-of-entry might be more seriously considered. Such devices have certain advantages such as lower initial cost. But they also have certain drawbacks such as installation and ongoing maintenance. Several cities in Kansas have chosen to use point-of-use devices in order to save considerable costs that would be incurred with the construction of a water treatment plant.

The overdue report should be submitted to Congress in June or later in summer. The report hopefully give more and better choices to cities and RWDs presently considering treatment plants for meeting federal regulation. KRWA will be reviewing the report and will provide information on how it affects or might affect public water systems in Kansas.

Pat McCool has worked as a consultant to KRWA since January 2004. He previously worked for KDHE for 30 years. Pat has a bachelor degree in Chemical Engineering and a masters degree in Environmental Engineering from the University of Kansas.