



## Reviewing and Adjusting Water Rates – A Daunting Challenge for Most Water Systems

One of the greatest challenges for many local city councils and rural water district boards is to logically tackle the process of conducting a review of water rates. If anyone does an Internet search of "how to set water rates", there will be no shortage of ideas and promotions displayed. Some are online computer programs. There's only one problem with those and that is "garbage in, garbage out"! Example: if a purchase such as a new utility truck is incorrectly categorized, then the analysis will show a distorted report on what the rate should be.

First and foremost, the charges imposed by a water system need to be based on the funding requirements for that system. And the next question is if the funding requirements are all essential? Perhaps debt can be restructured? Perhaps there is waste in electrical use? Before increasing rates, the expenses should be understood and evaluated. And last, setting rates so that they are compatible with the neighboring systems may help some board or council members politically justify adjusting their rates but it is rare that two systems will have similar debt payments or other operational costs. That's not the way to go about setting rates.

### Types of rate structures

There are typically four different rate structures that are commonly used in Kansas and for that matter, across the country. A "Flat Rate" imposes a set charge and the rate is uniform regardless of how much water is used. A "Block Rate" imposes a set amount for the monthly minimum and a uniform charge per thousand gallons of water used. A "Declining Block Rate" imposes charges at rates that reduce as usage increases. By contrast, the "Increasing Block Rate" imposes higher charges as usage increases.

In Kansas in 2016, very few systems charge a flat rate. A flat rate does not encourage consumers to conserve water or to only use what is needed. In one case years ago, KRWA staff were asked to conduct a water loss survey in a far southwestern Kansas community. The first obvious issue identified was to shut off eight homeowners' yard hydrants that were flowing full stream.

Most medium-sized and small systems use the Block Rate charge. The advantages are that the customers are responsible for the water that is used.

Larger and more complex water systems are more apt to use either a Declining Rate or Increasing Rate for water usage. Maintaining or attracting business to an area would likely

suggest the water purchase be on a Declining Rate. Typically, many rural water districts were developed and initially operated with declining block rate structures. But here's the quandary. As the demands for increased capacity required additional investment, those declining block structures are tending to be replaced with a uniform charge per thousand used. Water systems that are dealing with water shortage or lacking in treatment or capacity to deliver water are likely to use an Increasing Rate to encourage conservation.

### The monthly minimum

The monthly minimum should also be carefully considered. Should all customers pay the same amount for a monthly minimum? Not necessarily, depending on the meter size or demand that the customer places on the system. Municipal systems will typically also impose a higher rate for customers living outside of city limits.

Most medium-sized and large water systems charge a higher monthly minimum for meters larger than the typical household meter. This is done even though they may not use any more water than a household of four people. Why? Here's an example. One customer has a two-inch meter to serve

the property. During most months that customer uses less than 5,000 gallons. Even though the usage is not very high, that customer is able to draw as much water as the two-inch meter will provide. The system is basically guaranteeing that the water will be available.

As meter sizes increase so should the monthly minimum charge. It is a matter of potential demand on the system. Extraordinary capacity costs money.

### Fixed and variable costs

When conducting a review, KRWA tries to determine whether the expenses are fixed or if the expenses are variable. Fixed costs are those such as debt service, administrative salaries,

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insurance, costs of an audit report, etc. Variable costs would include a portion of operation salaries, chemicals, utilities, etc.

Many expenses can have some portion considered as fixed and some as variable. The percentage of the expenses assigned to either fixed or variable can vary from 25 to 75 percent. While setting rates is not a science, the exercise of reviewing rates requires careful thought.

The single greatest error that can be made when reviewing rates is when a board or council ignores the obvious need to make adjustments. Doing nothing only compounds the problem and then will eventually require an even larger increase. It is not reasonable or responsible to hold rates below the cost to deliver the water when the system has revenues negative to expenses. That method of operation will work as long as there are cash

reserves to supplement the operations. Customers are much more receptive to incremental increases than to hit them with a 35 to 50 percent increase in one year.

Consideration should also be given to increasing rates to a level that allows the system to set money aside for improvements, emergency repairs and for potential future debt.

### "Kansas Rates Program"

The Kansas Rural Water Association (KRWA) provides a service of rate reviews at no cost to water systems. The program is known as the "Kansas Rates Program". Read more about it on the KRWA Web site at <http://krwa.net/TECHNICAL-ASSISTANCE/Rate-Reviews>.

KRWA's work typically focuses on reviews for those systems where the operations are fairly simple. More complex systems, and especially those that want to consider a mix of other utilities such as storm water charges are referred to Carl Brown Consulting.



Carl has completed extensive reviews for some of the largest cities in Kansas.

So what's needed for KRWA to conduct a water rate review for a typical small system? First, we need three years of financial information including revenue from metered sales and expenses that are categorized as reasonably as possible. Also, the amount of water produced or purchased, and the amount sold each year is necessary.

### What are other systems charging?

KRWA recently posted all water rates for all cities and RWDs in Kansas on its Web site. These rates can be found at [www.krwa.net](http://www.krwa.net) and then under



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These tables below are from www.krwa.net (online resources) – September 2016

### Western Kansas Cities

Search by System or County: Ness   Sort   Reverse

System Name	County	Monthly Minimum Gallons	Monthly Minimum Cost	5,000 Gallons	10,000 Gallons	15,000 Gallons	20,000 Gallons	30,000 Gallons
<b>AVERAGES:</b>			<b>\$16.80</b>	<b>\$31.83</b>	<b>\$52.44</b>	<b>\$73.22</b>	<b>\$93.69</b>	<b>\$135.31</b>
Arnold Waterworks Inc	Ness		\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00
Bazine	Ness		\$12.00	\$23.00	\$34.00	\$45.00	\$56.00	\$78.00
Brownell	Ness	5,000	\$7.50	\$7.50	\$12.50	\$12.50	\$22.50	\$37.50
Ness City	Ness	1,000	\$15.75	\$30.95	\$49.95	\$74.95	\$99.95	\$124.95
Ransom	Ness	2,000	\$24.00	\$47.00	\$76.00	\$105.00	\$134.00	\$192.00
Ulca	Ness	2,000	\$12.00	\$18.00	\$28.00	\$38.00	\$48.00	\$68.00

### Eastern Kansas Cities

Search by System or County: Miami   Sort   Reverse

System Name	County	Monthly Minimum Gallons	Monthly Minimum Cost	5,000 Gallons	10,000 Gallons	15,000 Gallons	20,000 Gallons	30,000 Gallons
<b>AVERAGES:</b>			<b>\$16.80</b>	<b>\$31.83</b>	<b>\$52.44</b>	<b>\$73.22</b>	<b>\$93.69</b>	<b>\$135.31</b>
Fontana	Miami		\$20.00	\$38.25	\$56.50	\$74.75	\$93.00	\$129.50
Louisburg	Miami		\$18.00	\$34.25	\$50.50	\$66.75	\$83.00	\$115.50
Osawatimie	Miami	1,500	\$12.08	\$25.30	\$41.78	\$57.78	\$73.78	\$105.78
Paola	Miami		\$25.00	\$55.75	\$86.50	\$117.25	\$148.00	\$209.50
Spring Hill	Miami	1,000	\$8.00	\$46.00	\$84.00	\$122.00	\$160.00	\$236.00

### Western Kansas RWDs

Search by System or County: Rooks   Sort   Reverse

System Name	County	Monthly Minimum Gallons	Monthly Minimum Cost	5,000 Gallons	10,000 Gallons	15,000 Gallons	20,000 Gallons	30,000 Gallons
<b>AVERAGES:</b>			<b>\$21.78</b>	<b>\$44.64</b>	<b>\$69.97</b>	<b>\$95.65</b>	<b>\$121.11</b>	<b>\$170.98</b>
Rooks Co RWD 1	Rooks		\$59.00	\$76.59	\$94.18	\$111.77	\$129.36	\$164.54
Rooks Co RWD 2	Rooks		\$20.00	\$32.66	\$65.32	\$97.98	\$130.64	\$195.96
Rooks Co RWD 3	Rooks		\$33.00	\$50.50	\$68.00	\$85.50	\$103.00	\$138.00

### Eastern Kansas RWDs

Search by System or County: Shawnee   Sort   Reverse

System Name	County	Monthly Minimum Gallons	Monthly Minimum Cost	5,000 Gallons	10,000 Gallons	15,000 Gallons	20,000 Gallons	30,000 Gallons
<b>AVERAGES:</b>			<b>\$21.78</b>	<b>\$44.64</b>	<b>\$69.97</b>	<b>\$95.65</b>	<b>\$121.11</b>	<b>\$170.98</b>
Shawnee Co RWD 1C	Shawnee		\$23.00	\$57.50	\$92.00	\$128.50	\$161.00	\$230.00
Shawnee Co RWD 2C	Shawnee		\$18.00	\$43.00	\$68.00	\$93.00	\$118.00	\$168.00
Shawnee Co RWD 3C	Shawnee		\$30.00	\$63.25	\$96.50	\$129.75	\$163.00	\$229.50
Shawnee Co RWD 4C	Shawnee	1,000	\$20.50	\$36.50	\$56.50	\$76.50	\$96.50	\$136.50
Shawnee Co RWD 8	Shawnee		\$8.00	\$25.50	\$43.00	\$60.50	\$78.00	\$113.00

the "ONLINE RESOURCES" tab. The rates are listed under CITY RATES or RWD RATES. The rates are searchable by system or county and can be sorted in a variety of manners based on usage with the pull-down tabs at the top of the page.

KRWA encourages water system representatives to check the rates that are posted. There is an update submittal form for ease in providing updated information to KRWA. Hundreds of cities and RWDs have already provided updates. The top line of the tables shows the averages by category. It is interesting to see the variance in charges, especially from eastern Kansas to western Kansas. Screenshots of the tables are shown to the left.

If a system sets rates based on the state average or what their neighboring system is doing, then revenues may be grossly inadequate to cover expenses. The challenge for water systems is to provide affordable drinking water while generating enough revenue from rates to remain solvent over time. KRWA is available to assist water systems in determining if the water rates are adequate. Give KRWA a call at 785.336.3760 or email me at greg@krwa.net.

*Greg Duryea has worked for KRWA since 1993 as Technical Assistant. He holds a Class I water certification and is the certified operator for Sycamore Springs Resort in Brown County.*



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