

# Charges for water continue to increase

The cost of providing water has been increasing for many years. But in 2008, the rate of increase might be quite significant depending on a water supplier's circumstances.

I would like to discuss the causes of the price increases, the circumstances that particularly can increase costs greatly, and two Kansas examples showing how the cost of water to the customers is rising.

## The causes

The increase in the cost of water can be attributed to either operational costs or capital expenditures. Generally, operational costs increase some each year. Capital expenditures occur when new infrastructure is constructed or improvements are made to existing infrastructure. The increase in the

cost of water due to capital expenditures is usually significantly larger when compared to many years of operational cost increases.

Operational costs include chemicals, electricity, replacement equipment, parts, transportation costs

including fuel, repairs, laboratory costs/fees, salaries, benefits and contractual labor. The operational costs increase somewhat with general inflation with fuel costs being a notable, recent exception – and unexpected repairs being a “wild card” but hopefully not recurring often. The global economy has caused much of the increase in costs for materials and fuel in recent years.

Capital expenditures for upgrading deteriorating infrastructure, for increasing water supply capacity, and for meeting federal laws can significantly increase the cost of water. The

capital expenditures have had a significant effect on the increased cost of water for many years. The true cost has been somewhat hidden/mitigated by the use of grants. Grants reduce capital

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factors that affect the amount of increase are construction/equipment costs, loan amounts and terms, grant amounts if any, and the purchase of water from another system. The purchase of water from another system can be placed under capital expenditures if infrastructure is needed and under operational costs for the price of water.

expenditures to the supplier and make the price of water more affordable.

Also, the terms of many loans are for 40 years. These long-term loans reduce the monthly/yearly costs but require the payments for decades. This is a way of transferring some of the costs to the succeeding generation.



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Consultant

Existing Rates				Proposed Rate / Change		
Gallons Used	Water Charge	Total	Rate Steps	Proposed Rate	Proposed Increase	Proposed vs. Old
Minimum	18.00	18.00	18.00	18.00	0.00	0.00
1000	18.00	18.00	0.00	22.00	4.00	4.00
2000	22.00	22.00	4.00	26.00	4.00	4.00
3000	26.00	26.00	4.00	30.00	4.00	4.00
4000	30.00	30.00	4.00	34.00	4.00	4.00
5000	34.00	34.00	4.00	38.00	4.00	4.00
6000	38.00	38.00	4.00	42.00	4.00	4.00
7000	42.00	42.00	4.00	46.00	4.00	4.00
8000	46.00	46.00	4.00	50.00	4.00	4.00
9000	50.00	50.00	4.00	54.00	4.00	4.00
10000	54.00	54.00	4.00	58.00	4.00	4.00

KRWA conducts many water rate reviews for water systems. While not as comprehensive as some, rate reviews should be easy to understand. One of the first recommendations that KRWA suggests is to eliminate the 'allowance' of free water with the payment of the monthly minimum. The minimum rate in the above example is \$18. The rate for 1,000 gallons \$18. Water use in excess of 1,000 gallons is \$4 per thousand. Eliminating the 1,000 gallons with the monthly minimum adds \$4 per month to every customer bill. With 600 customers, this one simple change turns into an annual guaranteed \$28,800 of additional revenue for this system.

### Circumstances for significant increase

If a water supplier needs to construct a water supply lake, then the cost of water will increase markedly unless there are significant grant funds to offset the costs. Thus, there have been few if any lakes being constructed in the last 10 to 15 years for water supply purposes.

Although there are exceptions, a water supplier having a small surface water treatment plant that has to be upgraded to meet federal drinking water regulations can encounter a significant increase in the cost of water. This has occurred when plants had to be brought into compliance with the disinfection byproducts rule (DBPs).

Now the new surface water treatment rule (SWTR) may require upgrading a surface water treatment plant because of cryptosporidium exceeding federal limits in the raw surface water. It is worth noting that this is the first requirement of significance that is based on the untreated, raw surface water and not

based on the treated, drinking water. Now that is a big change in reasoning or lack of it.

When discussing cost increases, the best measure is the cost per 1,000 gallons at the customer

approximately 350 persons, has a surface water treatment plant on a small lake, and does not presently meet the requirements for DBPs. The sampling for E.coli for meeting the new SWTR is presently ongoing.

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service connection. The cost increase due to capital expenditures to meet federal laws is much less to the customer/service connection of a large water supplier than for a small water supplier. That is because of the "economy of scale". In other words, the more water treated, the less the cost per unit.

### A tale of two systems in Kansas

Fairbanks RWD (fictitious name but actual facts) serves

Fairbanks RWD had a recent opportunity to purchase water from a nearby water supplier for \$7.50 / 1,000 gallons. The stated construction cost for the connection was \$800,000. It was later estimated that the costs could possibly be reduced to \$400,000.

The Fairbanks RWD present base charge per connection is \$12 per month; the charge for water purchased by customers is \$5.75 / 1,000 gallons. If the



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## Charges for water . . .

connection were made to the nearby water supplier, it was estimated that the base charge and water price to the customer would increase to approximately \$40 per month and \$10 / 1,000 gallons, respectively.

Now either the base charge or the water price could be reduced if the other were increased. In any event the elected officials chose not to connect because they decided that the cost was too high for the customers.

The above cost estimates were made without grant monies included. Fairbanks is still pursuing other water suppliers for "economical" water for its customers.

The second water supplier is San Diego (fictitious name but actual facts). The system serves approximately 250 persons, has a surface water treatment plant on a small lake, and is presently sampling for E.coli to meet the new SWTR. It appears that San Diego will not meet the E.coli

criteria and will have to go to the expensive sampling/analyses for cryptosporidium.

San Diego has an opportunity to purchase water from another water supplier. If and when this connection is made, San Diego will have to pay for bulk water at a price much greater than the present cost of water produced at its treatment plant. Also, if the connection is made, San Diego will lose significant water sales to other water suppliers.

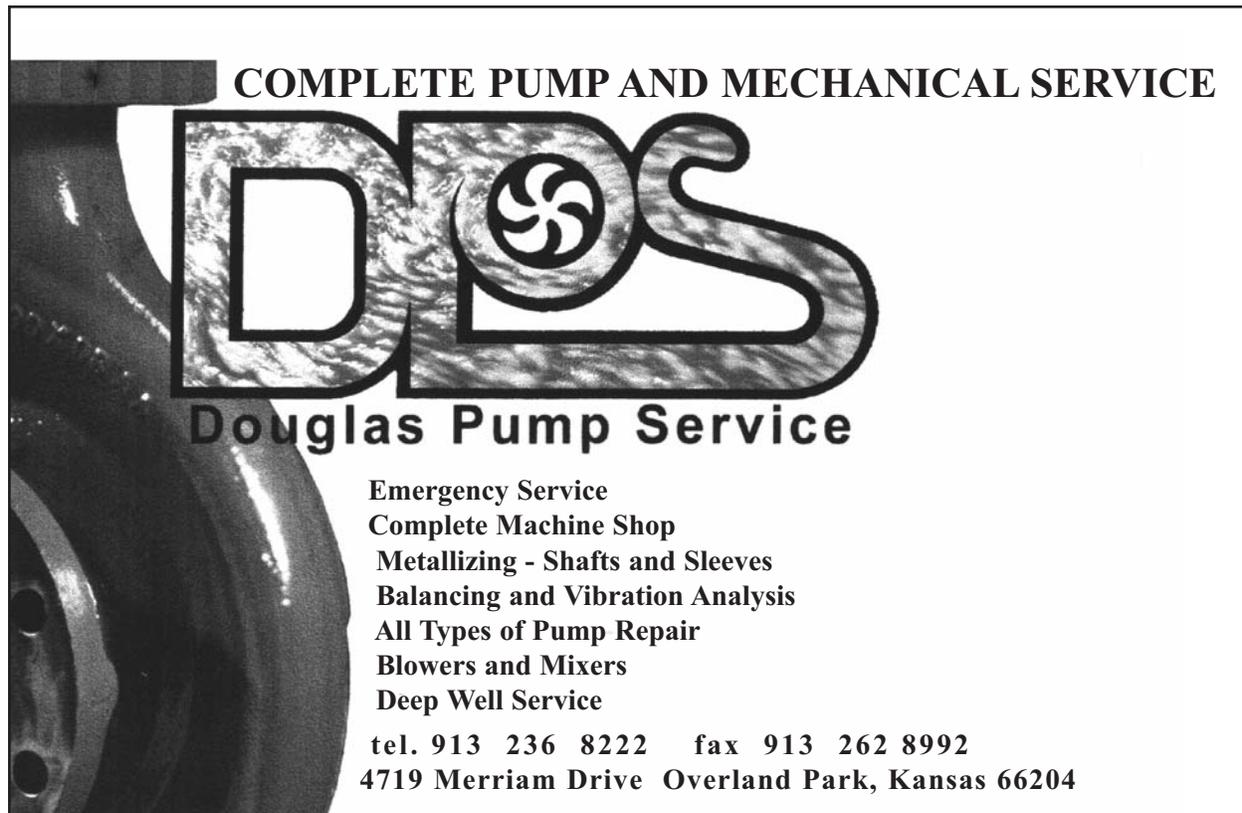
The present water price for San Diego customers is \$ 5.40 / 1,000 gallons presently. If the connection is made to the other water supplier, the water price will increase to an estimated additional \$5.50 / 1,000 gallons to make up for the increase in bulk water price and the lost sales. This is a very significant increase to the San Diego customers.

Many water supply projects have goals on bulk water price such as \$3.50 or \$4.00 for 1,000 gallons. This is only a part of the

cost of the water to the end user. All costs must be evaluated in order to determine the cost to the customer. Elected officials must keep a watchful eye on both operational costs and, especially, capital expenditures in order to keep water costs for their customers within reason.

### Need help?

I would like to remind everyone that KRWA staff are available to attend city council or RWD board meetings to have discussions about rates, improvement projects, financing or other operational issues. KRWA's job is not to design the project; KRWA's challenge is to help local systems consider all their options, whether it's financial or water supply. Give us a call; KRWA is helping today for a better tomorrow.



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