

Municipal and RWD Water Use Reduction: Unnecessary and Costly

In the last year State agencies have released two draft documents, have formed regional planning committees, and have selected members for those committees. As a result, there have been suggestions for reductions in municipal and RWD water usage. Many of these ideas or suggestions for public water systems concerning reducing municipal and RWD water use and water sales were comments by people attending the area planning meetings. This entire process is a result of the Governor issuing in October 2013 “a call to action to his Administration to develop a 50-year *Vision for the Future of Water*”.

When discussing public water system water reduction it is not clear at this time if the discussion is in reference to the water diverted/pumped from surface water and groundwater, or to all water metered and unmetered to customers, or to only the water sold to citizens through residential meters. Whichever, each has a different financial and numerical effect on Kansas citizens.

Mandating broad public water system water reduction would have unintended consequences on Kansas citizens; it is unnecessary in many situations, and is a top-down, “broad brush” approach that frankly, just does not make sense. This article will address three situations where possible, future mandated water reduction would be unreasonable. Many water systems in Kansas are similar to one or more of these three situations.

Kansans are already addressing water conservation

Many water systems in Kansas have water conservation plans that can be used when water supply is limited and water use reduction is needed. Many water systems have implemented water conservation measures when needed. These decisions are local as they should be.

Where the supply of water is limited or critical, the State now has the authority to restrict water rights and has done such. In additional situations that need reduction of use by water systems, leaders at the State level already have the ability and facts to address the matter with local officials.

Where water usage reduction is needed or in situations where water supply is adversely affected, state agencies and local water systems discuss and plan for such. For example, the Kansas Water Office already does such with many local

water systems in its implementation of the Water Assurance District program with regard to water systems receiving water directly downstream from federal reservoirs.

Where mandates and requirements are not needed

The following three situations are where top-down mandates are not needed. There are also many other water system situations that are in the same category as these situations. Every local water system situation with respect to water supply is unique but each may also have characteristics of one or more of the following three situations.

Many water systems in Kansas have water conservation plans that can be used when water supply is limited and water use reduction is needed. Many public water systems have implemented water conservation measures when needed.

Five Largest Water Suppliers On Missouri and Kansas Rivers	Water Diverted MGY
WaterOne - Johnson County	22,666
Kansas City Board of Public Utilities	11,920
Topeka	7,232
Olathe	4,928
Lawrence	1,812
Total MGY diverted	48,558
Total MGD diverted	133
Total AFY diverted	149,000
MGY = million gallons per year	
MGD = million gallons per day	
AFY = acre-feet per year	

Table 1

Situation 1: Water supply unaffected by water use reductions

The large water systems along the Missouri River and Kansas River include Atchison, Leavenworth, Kansas City, WaterOne serving Johnson County, Olathe, Lawrence, and Topeka. These systems serve a large portion of the State’s population and use a significant amount of water (See Table 1).

At these systems, reduction in water usage will result in a reduction in water sales and the reduction in sales will reduce the revenue. The reduction in sales will in turn be cause for an increase in the water rates at some point to make up for the revenue loss from the reduction in use/sales.

Any State, “broad brush” mandate or requirement for reduction in water use will thus result in less water revenue, increased water rates, and will have no significant effect on the amount of river water flowing past these public water systems to the Gulf of Mexico. Also, most of the water provided by these water systems is routed back to the rivers through sewage collection systems and treatment plants.

There is no significant loss of water or increase in the river water supply in these rivers from water use by these systems and there will be no significant increase of water in the rivers because of a reduction of water use. All the water will still flow to the Gulf and will be recycled to the hydrological cycle by evaporation.

Again, the water supply in these rivers is unaffected significantly by the reduction in water usage; but the water rates citizens pay will increase due to reduction in water sales.

Situation 2: “Saving” the groundwater in western Kansas

There has been substantial discussion whether additional restrictions are needed on groundwater pumping, and what the water supply and financial consequences of such restrictions would be. State government and groundwater management districts have been monitoring the situation for decades; water rights and pumping are restricted in many areas to varying degree.

However, this situation is about whether the reduction in public water system usage in western Kansas is needed and whether it will result in significant groundwater “savings”. Please refer to Table 2; it shows that the estimated amount of water use by residents at their homes is quite small when compared to



Selected 2012 Water Use Data For 39 Western Kansas Counties			
	AFY	MGY	MGD
Total Kansas Irrigation	4,007,680	1,305,810	3,578
Total Irrigation in 39 Counties	3,293,060	1,072,968	2,904
Finney County Only	339,419	110,592	303
All 136 PWS Residential Use	43,202	14,076	39
4 Largest Cities' Residential Use	15,511	5,054	14
* Irrigation use based on MGY divided by 365			
AFY = acre-feet per year			
MGY = million gallons per year			
MGD = million gallons per day			

Table 2

irrigation. For instance, in western Kansas a 10 percent reduction in citizen, residential water usage is equal to a 0.13 percent reduction in irrigation. Stated otherwise, a one percent reduction in irrigation usage is 7.4 times greater than a 10 percent reduction in water system residential use.

If the goal/mandate/requirement is to “save” the groundwater, not much can be accomplished in the reduction of use by water systems; any significant gain can only be achieved elsewhere.

Situation 3: “Been there; Done that”– and can’t afford more

The city of Buffalo, located in southeastern Kansas, had a surface water treatment plant and small lake as a water supply source for many years. The city’s plant did not meet federal and

City of Buffalo Present Monthly Utility Rates

Gallons	Water	Sewer	Total
1,000	\$49.75	\$18.11	\$67.86
2,000	\$61.75	\$19.22	\$80.97
3,000	\$73.75	\$20.33	\$94.08
4,000	\$86.75	\$21.44	\$108.19
5,000	\$97.75	\$22.55	\$120.30
6,000	\$109.75	\$23.66	\$133.41
8,000	\$133.75	\$25.88	\$159.63
10,000	\$157.75	\$28.10	\$185.85

Table 3

City of Buffalo City Water Sales in Gallons

Year	Water Sales
2006	10,363,000
2007	6,310,000
2008	5,666,000
2009	4,995,000
2010	5,188,610
2011	4,953,830
2012	4,831,900
2013	4,598,390
2014	4,130,050

Table 4

City of Buffalo Number of monthly meter readings by usage category

Year	10,000 gallons and more	8,000 gallons to 10,000 gallons	6,000 gallons to 8,000 gallons	4,000 gallons to 6,000 gallons	2,000 gallons to 4,000 gallons	Less than 2,000 gallons
2007	79	72	139	313	491	115
2008	65	53	105	343	501	145
2009	61	55	144	345	456	130
2010	49	44	85	277	481	243
2011	49	33	77	272	522	213
2012	42	36	75	245	518	263
2013	20	18	83	272	532	281
2014	20	15	58	215	528	358

Note: City of Buffalo began purchasing water from Public Wholesale Water Supply District No. 23 in January 2010

Table 5

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State requirements. The city participated in a regional water supply and began purchasing water from Public Wholesale Water Supply District 23 (PWWS D 23) in 2010.

The city has approximately 100 active water meters. Because of the increase in water costs due to purchasing PWWS D 23 water, the city has had two rate increases in recent years (see Table 3). These rate increases have resulted in a substantial decrease in water sales (see Table 4). Since January 2010 the water use / sales have decreased by approximately 20 percent. This has resulted in the loss of the city operator position. This city presently only has a part-time city clerk.

The citizens have reduced their water use (see Table 5 for monthly use by category). Note the substantial decrease in categories of greater than 4,000 gallons purchased per month, and the substantial increase in the categories of less than 4,000 gallons especially the lowest category of less than 2,000 gallons.

In some matters there is an “elephant in the room that is being ignored”. In the State’s Vision program for municipal water use reduction is there a “buffalo in the room that is being ignored”?

PWWSO 23 is now considering the construction of a new, replacement water treatment plant. That plant will increase the cost of water to the citizens of Buffalo an estimated additional \$2 per 1,000 gallons. Also, any further reduction in water sales will further increase the rates. The question becomes how much more can city citizens afford?

In some matters there is an “elephant in the room that is being ignored”. In the State’s Vision program for municipal water use reduction is there a “buffalo in the room that is being ignored”? The city of Buffalo may be an extreme example to make a point, but there are many citizens elsewhere who have already reduced water use and do not want additional rate increases.

State records indicate a substantial reduction in water use by many water systems since 2000. For many water systems on the issue of water use reduction, they have “been there, done that”. Yet it appears that some people are now wanting more (reduction).

The big question: Who decides?

The three situations discussed are where water use reduction does not affect the water resource, where residential water use does not substantially affect the western Kansas groundwater use when compared to other uses, and where substantial water use has already occurred caused by high prices. Many water systems in Kansas fall into one or more of these situations.

When discussing water use reduction by water systems, several questions arise. Unfortunately, these questions are sometimes not specifically asked and answered.

- How much water should a citizen reduce his/her residential water use?
- How much water should a citizen use?

The State has issued two drafts concerning water use in Kansas. The first draft was released on July 1, 2014; it was entitled *Vision for the Future of Water in Kansas*. The second was in November 2014 and was entitled *A Long-Term Vision for the Future of Water Supply in Kansas*.

In those draft documents the following were proposed for discussion. The proposals and similar goals would have significant effects on increasing water rates and on Kansas citizens’ water use. Here are some of the comments:

1. 20 percent per capita reduction in water consumption
2. Reduce statewide water consumption by 20 percent
3. 20 percent reduction per capita in municipal water demand
4. Kansans will use 10 percent less water per person
5. Importance of...water conservation practices
6. Development of locally driven conservation and management plans
7. Develop a ...conservation guide for communities
8. Goals of reinforcing the value of water and reducing water consumption
9. More efficient water use
10. Ensure water conservation is properly evaluated as an alternative for water supply when providing financial assistance
11. Effectiveness for rate structures and conservation

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The following data is from the USGS report that can be found at <http://pubs.usgs.gov/circ/1405/>.

The table shows the United States, Kansas, nearby states, the lowest state and highest state data. As can be seen in the USGS table, Kansans use less water from public water systems in many other states. Only ten states have a per capita use from public water systems less than Kansas.

Per Capita Water Use	
Gallons Per Person Per Day	
USA	89
Kansas	72
Nebraska	88
Oklahoma	85
Missouri	91
Colorado	110
Maine	51
Utah	167

- How much should a citizen pay for residential water?
- How much should water rates be increased?
- But the big question is, Who decides?

The political aspect

Elected city officials and RWD board members have been addressing these questions for many decades. The answers are based on their water supply situations and financial considerations.

Now it appears that the Governor, selected committee members and State employees want to answer these questions to implement actions to address these questions with the use of “education” or recommendations, guidelines, mandates, requirements, regulation or other State

The reduction of water use by public water systems will increase the cost of water and will occur in situations where the reduction is not needed or wanted.

government actions. Is any of that really needed?

The amount of water use and rate charges should be addressed on the local citizen level and by the local water system. A higher, State authority and influence should only occur if the legislature passes laws concerning such. The reduction of water use by public water systems will increase the cost of water and will occur in situations where the reduction is not needed or wanted.

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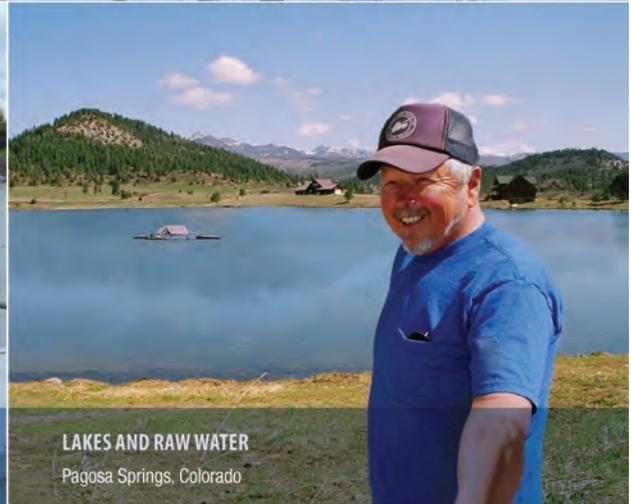
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