

THREATS TO OUR WATER LOOMS

Lower Basin Transfers Most Ominous to Upper Basin Water

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I am often asked about the relative safety of our water rights in the Upper Arkansas Basin. Unfortunately the accurate response to this type of question deserves more time than the questioner has time to dedicate. Sensing this, I often provide a quick comment such as, “good so far, but we need to be vigilant”.

This type of interaction, I feel, leaves a lingering desire on the part of many folks for more information in as easily an understandable format as possible. Because of this, the Upper Arkansas Water Conservancy District held two day long seminars on water education in November and December. About 50 invited local government and water officials from the Upper Arkansas region attended. The response was overwhelming and the District plans to schedule more of these seminars each year.

The more pervasive issue that threatens water rights in the Upper Arkansas Basin is the past, present and future activities revolving around transfer of water from historic irrigation to municipal uses. Although, the Upper Arkansas Basin has experienced a few transfers, the effects from the Upper Basin transfers have been extremely minor when compared to the toll the farming communities in the Lower Arkansas Basin have experienced.

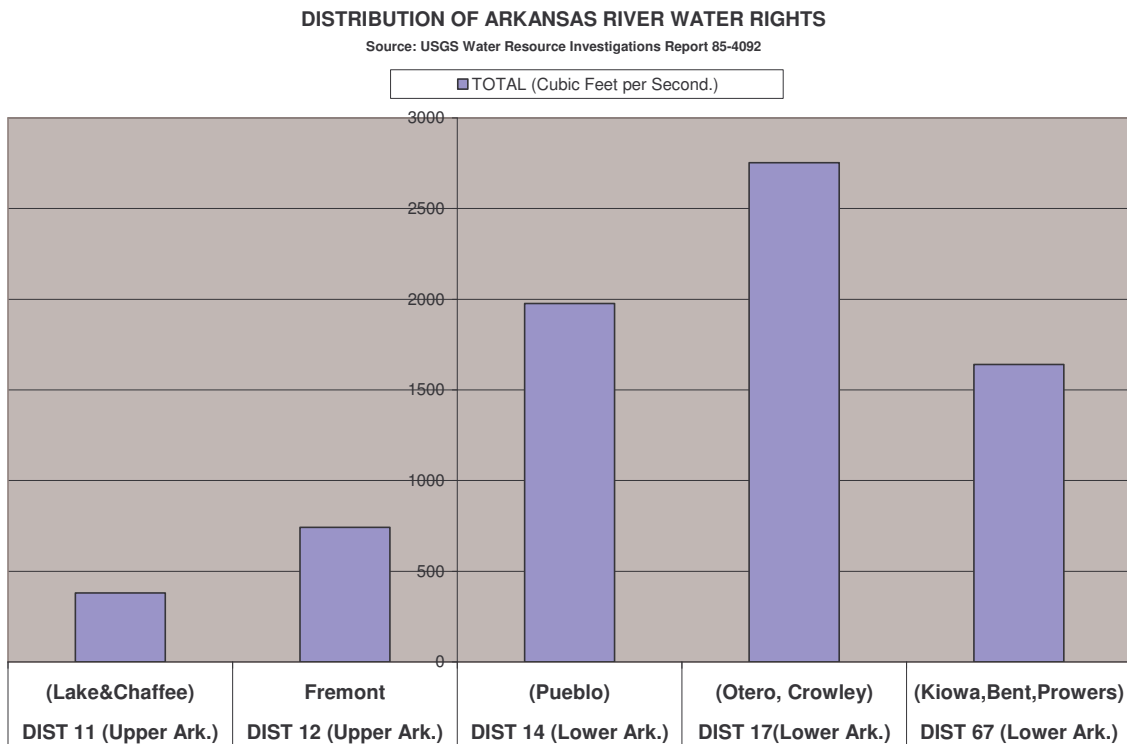
Although local transfers have not caused major negative impacts to the Upper Basin, ironically Lower Basin transfers have a greater potential to cause massive harm to the Upper Basin water rights. Much of the protection afforded the Upper Basin by the Upper Arkansas Water Conservancy District in past years has been from the results of its efforts in obtaining protective terms and conditions in Lower Basin transfer cases. Some of these cases involved transfers of Lower Basin water rights to Colorado Springs and Aurora.

The purpose of this article is to illustrate the connection between the Lower Basin water rights and the Upper Basin rights, and how the transfer of water from Lower Basin irrigation to Front Range municipalities impacts Upper Basin water rights. The Lower Basin is defined as the area down stream of Pueblo Reservoir. There is a distinct difference in water operations and rights between these two basins.

Historically, water was diverted and put to use earlier in the Lower Basin and in much larger quantities. Due to a longer growing season in the Lower Basin water is used nearly 365 days per year, whereas Upper Basin water is used about half as much. This translates in to less total water ownership in the Upper Basin as compared to the Lower even if the seniorities were comparable. One water right can yield thousands of acre feet of water (an acre foot equals approximately 325,000 gallons) in the Lower Basin but only a few hundred in the Upper Basin. Due to this stark contrast, municipalities in search of

water look to the Lower Basin to satisfy their needs. The cost per acre foot is greatly reduced in effecting the transfer and the larger quantities meet their demand.

Coupled with the economics of water transfers is the historic call regimen of the Arkansas Basin water rights. A “call” is placed by a water right owner when his water right is receiving less than his total allotment (appropriation). The effect is that all water rights junior to his right are curtailed from diverting until a sufficient amount of water is delivered to his head gate. The major “calling” water rights are located in the Lower Basin. In the Upper Basin, the small tributaries have a “local call” but these are relatively small volumes of water and have minor impact to the main stem river. Water rights and calls utilize a unit of measure called cubic feet per second of time or c.f.s. One cubic foot per second is 450 gallons a minute and in one day will deliver 2 acre feet of water or about 650,000 gallons. Below is a chart that illustrates the relative difference between water rights in the Upper Basin as opposed to the Lower Basin:



The two left side bars in the chart represent the water rights of the Upper Basin while the three bars on the right side represent the Lower Basin rights. Notice that the Lower Basin rights total more than 6,000 cubic feet per second. This potentially translates into 12,000 acre feet per day in diversions or more than 4 million acre feet per year. Meanwhile the Upper Basin has the potential of removing a little more than 1000 cubic feet per second. This translates into a 2000 acre feet per day in diversions or 360 thousand acre feet per year. The Upper Basin potential quantity pales in comparison to the Lower basin. The Lower Basin can potentially remove more than 90 percent of the total amount of water diverted in the Arkansas Basin.

It is clear; Front Range municipalities such as Colorado Springs will continue to seek water rights from the Lower Basin. When water is changed and transferred to new uses in a different location, i.e. by large Front Range municipalities, the potential for injury to our Upper Basin rights looms. During a transfer, the over estimation of historic use or not properly replacing return flows to their historic point of return can cause injury to Upper Basin water rights. The injury would be manifested in less water being available for Upper Basin uses.

Today, the Lower Basin is beginning to experiment with a new method for selling water to Colorado Springs and others; Water Leasing, and Rotational Crop Fallowing. Although this could hold promising results for farmers in the Lower Arkansas Valley, the injurious effects to the Upper Basin could be disastrous if not closely monitored. The Lower Arkansas Valley Water Conservancy District is spearheading this project and predicts that as much as 25,000 acre feet of water will be removed by these leases. This represents a dry-up of more than 10,000 acres of land. Rotational Crop Fallowing and Leasing is being promoted as an alternative to “permanent dry-up”. However, municipalities need guaranteed annual supplies of water. This means every year 25,000 acre feet of water will be transferred to a new location of use and a corresponding number of acres will be dried to satisfy the annual demands by Front Range cities. The reality is that this amount will be transferred permanently. The methods used to effect these transfers need to be scrutinized in order to avoid injury.

Another threat to our Upper Basin water is the acquisition of Lower Basin water rights by Pure Cycle Corporation of Thornton, Colorado. Its purchase of the Fort Lyon Canal water rights could eventually result in the transfer of as much as 60,000 acre feet of water from the Lower Basin to the Northern Front Range.

Considering that over 90 percent of the Arkansas River water is diverted and consumed in the Lower Basin, and that plans are already being developed for the annual transfer from the Lower Basin of over 85,000 acre feet of water, the magnitude of the potential impacts to the Upper Basin become real. This may just be the beginning.