

THE CASE FOR DITCH-WIDE WATER RIGHTS ANALYSIS IN COLORADO

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ABSTRACT

In Colorado, the pressures on the historic native water rights are tremendous. Senior water rights that have been in place since the 1800's are now frequently changed to accommodate transfers to municipal and industrial use or an environmental use. Senior water rights are also frequently changed as well augmentation is added as a water use. In order to begin a change case in Colorado Water Court, the historic consumptive use (CU) of the water right must be established through an engineering study. Various historic use records, assumptions, period of record, and other elements of the engineering study come under intense scrutiny by objectors in the case and by the Court.

Most commonly, ditch companies actually hold the decreed water right and each shareholder in the ditch system owns a proportional amount of that right based on their share holdings. For example, one share out of one hundred shares issued represents one percent ownership of the company and one percent of that water right. In the past, change cases have been initiated, and a new change decree fully adjudicated, in consideration of only a portion of the outstanding shares under the ditch system using what is known as a parcel specific analysis. Issues arise with this in that the amount of shares owned and used to irrigate a certain amount of irrigated ground can vary from one farming operation to another. The pros and cons associated with doing a full ditch-wide analysis of the water right are discussed.

INTRODUCTION

The South Platte Basin has become a focus and “poster child” of many of the interrelated problems associated with population growth and the municipal hunt for growth-driven water. Cities and towns along the Front Range have varying water portfolio amounts in what is commonly referred to as “safe yield” water to serve their growing populations out to a prescribed date. There is often a desperation mentality in play that forces municipal water managers to grasp at all alternatives – water conservation programs, new storage, leak detection, fines for water waste, public information programs, and aggressive water acquisition. As can be imagined, no community wants to be chronically short of water and no administrator wants to be responsible for not securing a suitable amount of water for the future.

Specific to the South Platte Basin, and as noted in Colorado Water Conservation Board's 2004 Statewide Water Supply Initiative report:

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“Nearly two-thirds of the increase in the state gross demand by 2030, approximately 409,700 AF, will be in the South Platte Basin. Of the 409,700 AF of increased water demands in the South Platte Basin, the majority of the demand is proposed to be met through existing supplies and water rights and through the implementation of identified projects and processes. However, there are still some anticipated shortfalls expected in certain portions of the basin. The identified shortfalls will be the focus for supply alternatives developed for the basin.” (Colorado Water Conservation Board. *et al.* 2004)

Todd Doherty, program manager with the Colorado Water Conservation Board noted in a recent Colorado Water issue that “most of the demand (water for population growth) will be met through three main water supply strategies: conservation, agricultural transfers, and new water supply development.” He goes on to say “if these new water supply projects are not built, future water demands will have to be met mostly through a combination of agricultural transfers and conservation” (Doherty 2010).

In recent U.S. congressional hearing, Jennifer Gimbel, Director, Colorado Water Conservation Board, offered the following expert testimony:

“The projected growth in the South Platte River basin will create water supply challenges for the agricultural community. The basin currently irrigates approximately 830,000 acres. Since 2001, the basin has seen a decline of approximately 100,000 irrigated acres due to well curtailment, urbanization and urban transfers. The basin will likely lose 40,000 to 50,000 acres as a result of urbanization. An additional 160,000 to 280,000 acres is expected to be lost due to agricultural to municipal transfers--combined this could equate to a 25% to 40% reduction in its irrigated acreage in the basin by the year 2050. There are several projects working through the federal permitting process that could assist in helping to minimize the loss of irrigated agriculture. Those projects include Halligan-Seaman Project, Moffat Collection System Project, Windy Gap Firing Project, Northern Integrated Supply Project (NISP) and Chatfield Enlargement Project. However, comments from the Environmental Protection Agency suggest that agriculture dry-up is the least environmentally damaging alternative to most of the proposed projects. This conclusion ignores the environmental benefits of the irrigated acreage itself, as well as the return flows, riparian environment and wetlands that are created”(Gimbel 2010).

Clearly water to serve the anticipated population growth, and the well augmentation needs anticipated in the South Platte and other areas of Colorado, is going to be a significant issue over the next few decades and water right change cases are likely to abound.

WATER RIGHTS IN COLORADO

Colorado was the first state to develop a system of water rights and laws based on the prior appropriation system. The underpinning of the system is “first in time, first in right.” So, if you were the first to divert the water from a stream, then you are the first priority on the river, and so forth. Calls on the river are satisfied according to the priority or priorities enjoyed by the water right holder. This approach, started in the mid-1800s, has worked quite well for Colorado and other western states that operate under the prior appropriation system (Schempp 2009).

In the late 1960’s, a State of Colorado statute legally recognized that tributary ground water is hydrologically connected to surface water³. Consequently, both ground water and surface water are administered under Colorado’s prior appropriation system. Colorado’s water supply can come from either surface or tributary ground water sources, both of which are governed in the same way.

When water rights are changed, the CU must be established through an engineering analysis and subsequent report that accompanies the change case and the ultimate change decree (Jones and Cech 2009).

HISTORIC CONSUMPTIVE USE ANALYSIS

The amount of the CU per share really establishes the water right in Colorado whether that CU has been quantified and decree or not. The historic diversions at the river headgate are a vital part of the historic record but the understanding of the historic CU is indicative of the value of the water right. The diverting of water at the river headgate has not only established the priority and gross volume of the diversion water right, but arguably and more importantly, the beneficial use of the water has established the volume of the water consumed under that water right.

As an overly simplified example, consider two 500-acre farms with different water rights. One farm has been historically irrigated with 3,000 acre feet of water diverted from the river, while the other farm has been irrigated with 2,000 acre feet of water diverted from the river. Both farms have historically grown corn and let us assume the CU for corn is 2 acre feet per acre or 1,000 acre feet for either of the 500-acre farms. So, the CU for each farm is identical. The farm that diverted 3,000 acre feet returns more water to the river than the other farm as either surface return flows or a subsurface return flows. The consumptively used water is the same in either case considering the area is 500 acres and the crop is corn. Hence, the water right is the same for both farms.

(Pease 2010) notes these overview requirements about water rights transfers:

³ When this paper refers to ground water, reference is made to tributary ground water that is hydrologically connected to surface water in streams and rivers. This should not be confused with deep, closed basin ground water, which is not regulated by the prior appropriation system in Colorado.

Often a transfer of water has unknown impacts on downstream users, or at least an impact that is difficult to quantify. A water right should contain the following information:

- a diversionary amount
- a consumptive amount
- the point of diversion
- the purpose of use
- place of use
- the priority date of the right.

Also important, but often omitted from water rights are, the time of year during which water can be diverted from a water course, and the size and location where return flows reenter the system. A change in any of these attributes can negatively impact downstream users.

The need and justification for establishing the CU of a water right must first exist. If farmers have beneficially used a water right decreed for irrigation for a long period, then they can continue to use the water right in that way indefinitely with no need to define or quantify CU. An evaluation of CU is generally driven by a change in the type of use, place of diversion, or the quantity of water diverted. Because the engineering to establish historic consumptive use is time consuming and therefore costly, it is unlikely that anyone would take on the effort without justification.

DITCH-WIDE VERSUS SMALL PARCEL (SHARE BLOCK) ANALYSIS

A historic consumptive use analysis can be accomplished for a single parcel (shareholder) or a subset of the full shareholder group in a parcel specific analysis, or it can be done for the full service area of the Company, which is referred to as a ditch wide analysis.

In a case commonly known as the “Jones Ditch Case” (See *In Re Water Rights of Central Colorado Water Conservancy District*, 147 P.3d9 (Colo. 2006), the Supreme Court stated that a ditch wide analysis is preferred. Unfortunately, the court did not elaborate as to why a ditch wide analysis is preferred. Even though the decision leaves considerable room for speculation and future litigation might bring clarification, to date, both approaches for calculating CU are legally valid.

The issues are exemplified by the histogram depicted in Figure 1. At some time in the distant past, with many ditch companies, there might have been rather narrow distribution of shares for a given acreage of land. Over time, especially over a 100-year plus timeframe, some farmers may have sold shares and others may have bought shares within the company and under the confines of the service area of the ditch. This is normal and represents a perfectly legal and acceptable means of selling and buying shares within an

irrigation mutual company – willing seller and willing buyer. The reasons for the movement of shares within the company is not material but the exchanges were likely driven by one shareholder’s need to sell an asset to raise cash and another shareholder’s desire to increase their water holdings. The primary point here is that some farms, through this process of buying and selling, can become water short and others water long.

Figure 1 shows an example of the disparity that result. The average consumptive use for this example is 28 acre feet per share if a ditch-wide analysis were conducted. By contrast if a group of water short shareholders initiated a change case, then their quantified CU per share would be higher, and if a group of water long shareholders initiated a change case, then the CU per share would be less than the average.

Refer to Table 1 for a summary of reasons, from the shareholder perspective, as to why a parcel analysis or a ditch wide analysis is preferred. A summarizing question for consideration is this: the stockholder owns a pro rata interest in the water right. The stockholder pays a pro rata portion of the operating expenses through assessments. So, why would the stockholder have anything other than a pro rata interest in the CU given that CU is the true measure of the water right?

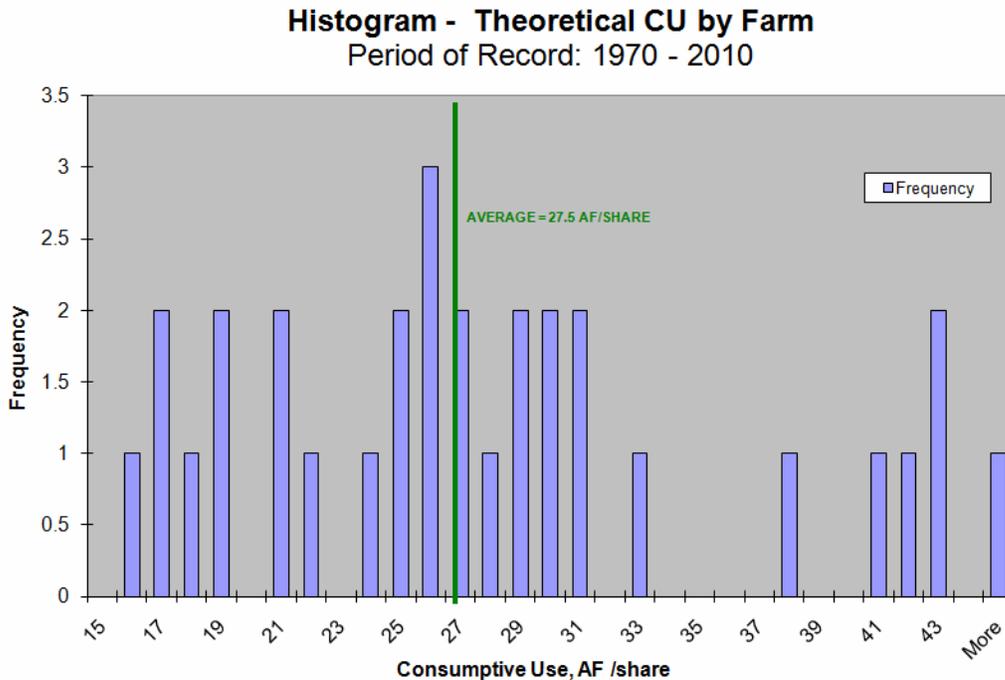


Figure 1. A histogram depicting the variability that can result due to willing seller and willing buyer exchanges of company stock over time. In this example, the average CU per share is 28 AF/share but outliers show the variance that is possible.

Table 1. The primary pros and cons of a ditch-wide versus a parcel specific (share block) analysis of CU.

PARCEL SPECIFIC ANALYSIS	DITCH WIDE ANALYSIS
CU varies from parcel to parcel (share to share)	CU equal for every share
Dry up acres vary for every parcel or share (but limited to parcel involved)	Dry up acres equal for every share
Cheaper analysis short term	Market develops for surplus dry up acres
Exposes stockholders to multiple inaccuracies from different sources in differing analyses	More expensive analysis short term
Often done using river diversion record and not headgate deliveries	Opens system to easier changes in the future
Favors those with fewer shares per acre	Favors those with fewer acres per share
Favors those who improved irrigation facilities (if they increased the acres irrigated)	Favors those who paid the expenses historically
Favors those who sold off water	
Shareholders may not be aware that a parcel level change may affect their CU per share	All shareholders are informed and participants in the change case
Requires the company to be involved in multiple analyses with multiple engineers and attorneys.	More indicative of the intent and spirit of a mutual ditch company

SUMMARY

In consideration of a parcel specific analysis of CU versus a ditch wide analysis of CU, the summary points are these:

- 1) A change of shares by any stockholder has the potential to adversely impact another or all stockholders if not properly accomplished.
- 2) There are pitfalls with either approach if you view the question from strictly the point of view of the water long versus the water short shareholder.
- 3) A more magnanimous approach in asking “what’s best for the irrigation mutual company as a whole?” is probably preferred.

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