

Water Law and Allocation in the SW

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Background on Water Laws and Allocation

The eastern United States has a water law allocation system based on the riparian doctrine. This riparian doctrine was developed under a concept of reasonable use where the right to use water from a stream or lake belongs to adjacent landowners (riparians) along the river bank or shoreline. Every riparian owner is entitled to use a reasonable amount of water from the stream as it flows through the landowner's property. This method of allocating water supply works relatively well where water is abundant and there is sufficient supply to provide adequate and equitable use of water for all riparian owners.

The system of water law and the allocation of water supply in much of the western U.S. differ significantly from the riparian system of the eastern U.S. Water law in the Colorado River basin states and in the southwest U.S. was developed in response to the unique climatic and geographic conditions in these areas. With the exception of high mountain elevations, the Southwest has a semi-arid to arid climate with average annual precipitation ranging from 20 inches to less than 10 inches in many areas. The limited rainfall results in the inability to reliably grow crops without supplemental irrigation. In response to the scarcity of precipitation, a different means to allocate water supply was needed to provide for development of the southwest. (See Figure 1.)

Doctrine of Prior Appropriation

The doctrine of prior appropriation developed in the Southwest as a means to allocate a scarce water supply and to allow use of the water on lands not adjacent to streams. This doctrine is



Figure 1. Furrow irrigation typical of southwestern U.S.

commonly described as “first in time, first in right.” Under this doctrine, the rights to use water are granted upon the appropriation of a certain quantity of water for a beneficial use. It is the date of the appropriation that determines the priority of the water right, with the earliest appropriation establishing the most senior, or superior, right. In many southwestern states the right to use water is based on a prior appropriation, rather than by a grant from the state.

Under the doctrine of prior appropriation, if water is insufficient to meet the needs of all water users, those with senior rights can require full or partial curtailment of diversions by junior water users. Therefore, users with later priorities receive less than their allotted amount of water or none at all. This doctrine is designed to protect

those who first begin using the water from any shortage created as a result of water use by those whose use began later in time. Typically, the more senior the water right, the more valuable it is, particularly in times of drought. This method of allocating water is illustrated in the following example for a stream where 5 cfs of water rights exist. When there is 5 cfs of streamflow, there is sufficient water to meet the needs of all water rights holders. However, if there is less than 5 cfs available, water is not shared among the users, but instead allocated strictly based on the priority of the water rights. As a result, a junior appropriator may be completely prevented from diverting any water while the senior appropriators are completely satisfied. (See Figure 2.)

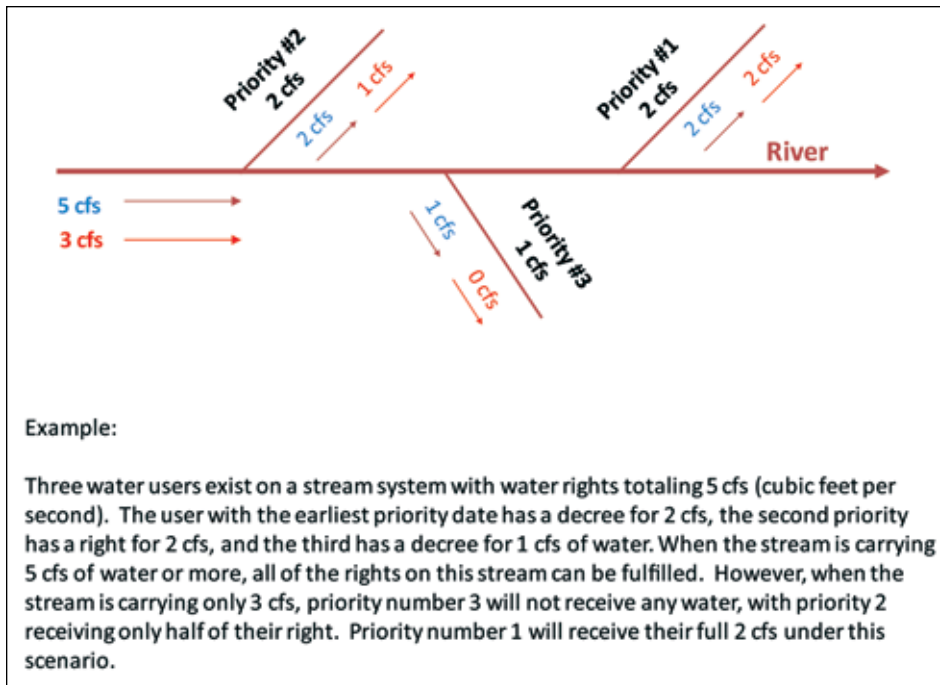


Figure 2. Example of administration of water rights in a stream under the prior appropriation doctrine.

Types of Water Rights

Surface water rights are generally classified as “direct flow” or “storage.” Direct flow rights are diverted from a stream for immediate use and measured in cubic feet per second. Water diverted for direct flow purposes is not to be stored with the intent that the next priority water user gets to divert the water, if the senior water user cannot immediately put the water to beneficial use. Storage rights are measured in acre-feet, a measure of volume. Storage rights were developed in the Southwest later than direct flow rights. Much of the hydrology of the Southwest is based on snowmelt runoff with more than 75 percent of the annual flow occurring in less than three months. In many basins in the southwest, water needed to raise crops that had growing seasons lasting five to seven months was quickly claimed by senior appropriators. Later, water users with junior priorities needed to construct reservoirs to divert and store excess flows during peak runoff or during the non-irrigation season when senior direct flow rights did not have a use for the water in streams. Storage rights allow a water user to divert water and store it to make a beneficial use at a later time. Like other water rights, storage rights are assigned a priority. Storage

rights are an important mechanism for ensuring that water supplies will be adequate in times of drought. Reservoirs provide year-round water when stream levels drop following the snow melt each year. (See Figure 3.)

A direct flow or storage right may be either absolute or conditional.

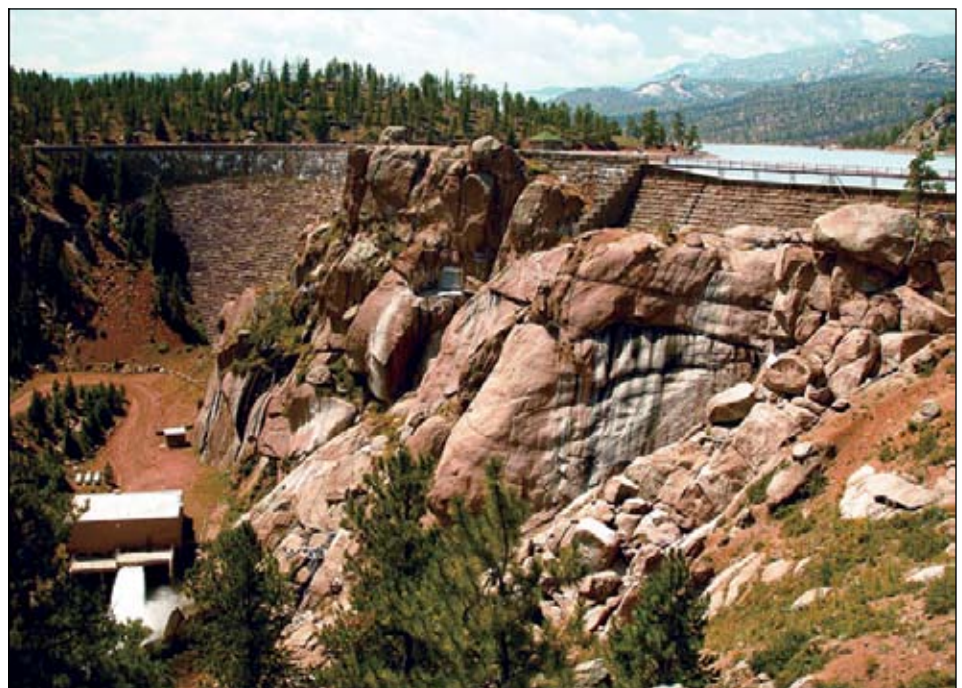


Figure 3. Cheesman Reservoir, constructed in late 1800s to supply water to the City of Denver.

This terminology will differ in the southwestern states. In Colorado, an absolute water right has already been diverted and placed to beneficial use. A conditional water right allows an appropriator to secure a place in the priority line before any water is actually applied to beneficial use. In order to obtain a conditional water right, an applicant must show that the “first step” toward the appropriation has been taken. These first steps include the intent to appropriate, plus a demonstration of that intent through “physical acts sufficient to constitute notice to third parties.” Other southwestern states have similar provisions for holding a place in line for a water right before the water is actually diverted or stored. These conditional rights are needed to encourage development of water resources by allowing the applicant to complete financing, engineering, and construction with the certainty that if its development plan succeeds, it will be able to obtain an absolute water right. This is crucial to large-scale development projects, including most transmountain diversions and storage projects.

Water Rights, Beneficial Uses, and Administration

A general requirement for a water right is that it must be placed to

beneficial use. Beneficial uses historically meant water diverted from streams for agricultural, mining, domestic, municipal, or industrial uses. A water right does not include the right to waste. The purpose is to prevent waste, hoarding, and speculation by appropriators, and to encourage the quick and efficient use of the resource. In addition, water users are generally to use efficient means of diversion and the water use must be limited to the amount needed for the actual use. In Colorado, efficient use of water has been interpreted to include historical means of diversions and irrigation, including unlined earthen ditches and flood irrigation.

These methods of diversion, conveyance, and irrigation resulted in significant return flows of the amount of water diverted from the stream, sometimes averaging greater than 70 percent of the amount diverted. The Colorado system is based on the fact that other water users relied on the historical pattern of diversions and return flows. These requirements ensure that the amount of water used under a water right over time remains limited to the amount historically consumed and conserves water for other uses and users. Beneficial uses in Colorado are recognized without regard to the economic value which will be produced from the use of the water, while many other southwestern states weigh the relative merit of the beneficial uses when granting a water right.

Every western and southwestern state has specific laws and requirements regarding the allocation of water and method for granting and administering water rights. Water rights in most of these southwestern states are property rights and, similar to other property rights, may be conveyed separate from the land. For example, this right is protected under Colorado state law, which establishes that public uses of water are subject to the right to appropriate a water right for private use.

A water right can also be diverted from a stream for a use in another basin, including across major basin boundaries such as the continental divide. The ability to divert water out of streams and to other basins was essential to the development of the west. As an example, the Colorado Constitution includes a provision that the

right to divert water shall never be denied. New Mexico's water law is derived from the mixture of Spanish and Mexican law with the West's traditional rule of first in time, first in right. While New Mexico is clearly a prior appropriation state, New Mexico's water law also accommodates historic pueblo rights and reserved Indian rights. (See Figure 4.)

The following general descriptions for the seven Colorado River basin states apply to the allocation of surface water. Each state has more complicated rules regarding the use of groundwater and significant conflicts are developing over the allocation and interaction of groundwater with surface water supplies.

Arizona is a prior appropriation state with an application to the Arizona Division of Water Resources required for a new water right. In general, a permit is granted if the application does not conflict with vested rights, is not a threat to public safety, and is not contrary to the interests and welfare of the public. The issuance of a permit allows the permittee five years to complete the necessary construction and to put the water to beneficial use. Upon putting the water to beneficial use, the water right is perfected and the permittee is granted a Certificate of Water Right.

California's system of water rights is referred to as a "dual system," in which

both the riparian doctrine and the prior appropriation doctrine apply to water rights. Water rights in California are use rights. All waters are the property of the state. A water right in California is a property right allowing the use of water, but it does not involve ownership of the water. Riparian rights result from the ownership of land bordering a surface water source (a stream, lake, or pond). As a class, these rights are senior to most appropriative rights, and riparian landowners may use natural flows directly for beneficial purposes on riparian lands without applying for a permit. The acquisition of appropriative rights requires an application through the State Water Board.

Colorado is a prior appropriation state for surface water. Unlike the other southwestern states, in Colorado water rights are granted through a water court procedure where the applicant must show that there is water available for appropriation and that the water can and will be applied to beneficial use and that senior water rights will not be injured. The State Engineer is responsible for the administration, but not granting or permitting of surface water rights.

Nevada is a prior appropriation state. Water rights are granted through a permit system with the State Engineer. Once



Figure 4. Major diversion on the Colorado River for the irrigation of orchards and vineyards.

granted, water rights in Nevada have the standing of both real and personal property.

New Mexico is a prior appropriation state and uses a permit system to regulate new appropriations of water. For surface water, the New Mexico State Engineer should grant a permit if the State Engineer finds that: (1) there is unappropriated water available for beneficial use; (2) the proposed appropriation is not contrary to water conservation; and (3) the proposed appropriation is not contrary to the public welfare.

Utah is also a prior appropriation state with the State Engineer having the authority to grant permits for water rights. The Utah State Engineer may only withhold approval of an application if he has reason to believe that the appropriation will interfere with more beneficial uses of water (irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing) or will unreasonably affect public recreation or the environment. The Utah Supreme Court has determined that this provision gives the State Engineer the discretion to deny an application in favor of a potential future use of the water that would be “more beneficial.”

Wyoming water law is founded on the doctrine of prior appropriation. The Wyoming constitution states that all natural waters within the boundaries of the state are property of the State. The only way to obtain a surface or a ground water right is by filing an application with the State Engineer. The State Engineer is charged with the regulation and administration of the state’s water resources.

Law of the River

The Colorado River is managed and operated under numerous compacts, federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the “Law of the River.” This collection of documents apportions the water and regulates the use and management of the Colorado River among the seven basin states and Mexico. There are several other laws, contracts

and document that are part of the “Law of the River” in addition to these provisions. The federal Endangered Species Act and various Native American water claim settlements both affect the extent to which water developments and diversions can be utilized in the Colorado River Basin. The Law of the River has significant impacts on the operations of Colorado River basin reservoirs such as Flaming Gorge, Blue Mesa, Navajo, Powell, and Mead.

Water Rights for Instream Flows and Recreational Uses

In most of the southwestern states, instream flows rights were not originally recognized as beneficial uses of water. A combination of case law and statutes has resulted in recognition of instream flow uses in most of these states, with specific limitations or procedures for each state. In Colorado, until the 1970s, beneficial use required that water had to be diverted out of a stream in order to be awarded a priority date. There was not a mechanism to award a water right or otherwise provide for protection of instream flows, unless a federal permit was required and minimum flows required as a condition of issuance of the permit. In 1973, Senate Bill 97 was passed. It stated: “Further recognizing the need to correlate the activities of mankind with some reasonable preservation of the natural environment, the Colorado Water Conservation Board is hereby vested with the authority, on behalf of the people of the state of Colorado, to appropriate . . . such waters of natural streams and lakes as may be required to preserve the natural

environment to a reasonable degree.” A Colorado Supreme Court decision was required before it was confirmed that the Colorado Water Conservation could hold a water right for instream flow purposes without a diversion out of the stream. There has also been controversy over the definition of the amount of water required “to preserve the natural environment to a reasonable degree.” A summary of state instream flow laws can be found at <http://www.blm.gov/nstc/WaterLaws/stateflowsummary.html>.

In most cases, under the prior appropriation system, instream flow rights have a relative junior priority since there were decades of water supply diversions and development before the legal recognition of the beneficial use of water for instream flow purposes. An option for providing for more reliable instream flow is to acquire an existing water right and change the use to instream flow purposes. Individual states handle this differently and it remains a controversial proposition in the West, where providing water for instream flow purposes may limit future water uses or require the reallocation of supplies from existing agricultural, municipal or industrial users.

A new phenomenon in the West is consideration of water rights for recreation, such as rafting and kayaking. (See Figure 5.) These uses typically desire high flows and where these rights are granted they may command much, if not all, of the remaining undeveloped water in a stream. A result, sometimes not unintended, is a limitation on further water diversions or development upstream



Figure 5. Kayak Course on Clear Creek, Golden Colorado. Example of recreational in channel diversion in Colorado.

of the recreational water right. Recent legislation in Colorado allowing the appropriation of water for recreational in channel diversions has resulted in significant controversy and conflict between consumptive water uses such as agriculture, municipal and industrial and nonconsumptive water uses such as environmental and recreational.

Western Water Law and the Challenge for Lake Managers

There are few natural lakes in the Southwest outside of the higher elevations of the mountains. Manmade reservoirs ranging in size from a few acre-feet to more than 20 million acre-feet in storage were developed in the Southwest to help meet water needs. The water laws of each state and the characteristics of water diversions, storage, and withdrawal result in unique operations for individual reservoirs. Water is often imported from multiple sources and water rights requirements often result in inflow and release patterns that differ significantly from year to year. Seasonal nitrogen limitation in many reservoirs is not uncommon and typical chlorophyll-phosphorus relationships and lake models often do a poor job of capturing the unique limnology and operations of western lakes. A lake (better termed reservoir) manager in the southwest must understand these operational constraints in order to understand the limitations and implications of management decisions on water quality. (See Figure 6.)

Note

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References

- Bureau of Land Management Western Water Law Fact Sheets: <http://www.blm.gov/nstc/WaterLaws/>.
- Citizens Guide to Colorado Water Law, (Revised ed. 2004) Justice Gregory Hobbs Jr.
- Colorado Statewide Water Supply Initiative, CDM, 2004. Prepared for the Colorado Water Conservation Board Holland and Hart LLP: <http://www.westernwaterlaw.com/>.



Figure 6. Grand Lake, Colorado adjacent to Rocky Mountain National Park. One of the few reservoirs in Colorado that was originally a natural lake and connected to a tunnel diverting flows under the continental divide.

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