Water and the law

A guide to what matters

By Bill Staudenmaier

We'll never know the worth of water till the well go dry.

— 18th century Scottish proverb

Water is the single most important substance on Earth. Humans cannot live more than a few days without it, and all living things must have some amount of water to survive. Water also is an essential commodity for many business applications. For example, enormous amounts of water are required to generate electricity. Approximately 48 percent of all water used in the United States in 2000, more than 195 billion gallons per day, was used to generate electricity. Agriculture is the second largest water user in the United States, consuming approximately 34 percent of all water used in 2000, followed by municipal and industrial uses, which totaled approximately 16 percent of water consumption.

Although water may sometimes be used for multiple applications (for example, first for hydroelectric power generation, followed by agricultural irrigation), the overall demand for water in many parts of the United States meets or exceeds long-term reliable supplies. Moreover, these traditional consumptive demands must also compete for limited water supplies with other uses such as habitat for endangered species, recreation, in-stream flows and Native Americans.

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While industrial operations, commercial enterprises and other businesses have widely varying water needs, all are dependent to one extent or another on reliable supplies of clean and affordable water. Consider, for instance, businesses as diverse as food and beverage producers, clothing manufacturers, and ski resorts. All require large quantities of water to operate, and all are subject to substantial business risks if water is in short supply.

In some cases these risks are direct, such as when insufficient snowfall shortens the season at a ski resort. In other cases, the effects are indirect. For example, a clothing manufacturer may use limited quantities of water in its operations, but a crucial element of its supply chain may be cotton, which requires vast quantities of water as it's growing.

For still other industries, the risks can be both direct and indirect. Breweries, for instance, require large amounts of water for brewing and bottling, and they also depend on crops of grain and hops that are themselves dependent on adequate water supplies during the growing season.

Even in urban centers, most industries and businesses depend on reliable supplies of water. Semiconductor manufacturers, for instance, need large quantities of very pure water to produce silicon wafers — by one estimate, as much as 3,000 gallons for every wafer produced. The water used in the manufacturing process, even when obtained from a municipal water system, also must be highly purified before use — generally by means of expensive, on-site treatment systems.

Other examples abound. Regardless of business sector, industrial and commercial operations are dependent on water — often in large quantities, and nearly always of good to very high quality. One would be hard pressed to identify even a single exception to this rule.

Given the importance of water to virtually all businesses, ensuring a stable water supply should be a prominent consideration in business planning. For many companies, however, the old Scottish proverb quoted above is as true today as it was in the 1700s. In fact, across the United States, plentiful supplies of good quality water are simply assumed to be available. Many people — from business owners to homeowners — think nothing more about water than their expectation that when a valve or faucet is opened, clean water will come out of the tap.

That is perhaps a reflection of the very successful development of municipal water supplies throughout the United States. Nearly everywhere, high quality water is readily available for domestic, commercial and industrial customers, on demand and at affordable prices.

While this is undeniably a good thing, and offers advantages to businesses in the United States that many foreign countries cannot provide, it also can lead to a false sense of security. Even in America, water is a precious and limited resource, and prudent businesses should carefully analyze the reliability and security of their water supplies for both current and future operations.

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Residents of the western United States have always had to be more cognizant of the scarcity, and correspondingly high value, of water. Generally speaking, the climate of the United States becomes increasing dry as one travels from east to west, beginning with a line of states running from the Dakotas in the north to Texas in the south. In the eastern parts of these states, rainfall is relatively abundant — to the west, it is not. With significant local variations, this remains true all the way to the West Coast.

In much of the vast area between, water has always been scarce. Nevertheless, the population of most western states has grown steadily for more than a century as limited water supplies have been harnessed and made available for agricultural, municipal and industrial uses.

Today, despite its wide open spaces, the West is the most urbanized region of the nation. Los Angeles, Phoenix, Denver and Las Vegas are several examples of the explosive growth that has transformed the region from an area dependent on agriculture and ranching to a vibrant, diversified economy.

That very growth, however, has contributed to the competition for water. Competition, in turn, makes an understanding of western water law a crucial element of business success in our region.

The legal mechanisms regulating water use in the West differ significantly from those in the eastern United States. In the East, the doctrine of riparian rights prevails. Under this doctrine, the right to use surface water is limited to landowners whose property borders a river, stream or lake (that is, riparian owners).

In contrast, throughout the West, the doctrine of riparian rights has little or no application. Some western states recognize limited riparian rights, mostly those that arose before the adoption of comprehensive state water codes, which often expressly rejected the doctrine. Many other western states rejected riparian rights from the outset — including several that did so in their state constitutions. Arizona's constitution, for example, provides that "the common law doctrine of riparian rights shall not obtain or be of any force or effect in the state." Ariz. Const. Art. 17, Sec. 1.

Today, across the West, the doctrine of riparian rights has either very limited or no effect on water rights. Instead, the prevailing legal regime for addressing water rights in the West is the doctrine of prior appropriation. This doctrine fundamentally differs from riparian rights because it is based on beneficial use of water rather than on ownership of land.

This difference makes sense in the arid West. If water rights were restricted solely to property adjacent to the few reliable rivers, development and use of water would be severely restricted. An early Colorado Territorial Supreme Court opinion expresses this point in colorful terms:

> In a dry and thirsty land it is necessary to divert the waters of streams from their natural channels, in order to obtain the fruits of the soil, and this necessity is so universal and imperious that it claims recognition of the law. . . . In other lands, where the rain falls on the just and the unjust, this necessity is unknown, and is not recognized by the law. But here the law has made provision for this necessity, by withholding from the landowner the absolute dominion of his estate, which would enable him to deny the right of others to enter on it for the purpose of obtaining needed supplies of water.

Yunker v. Nichols, 1 Colo. 551 (1872).

This quote illustrates a number of fundamental principles of the doctrine of prior appropriation. First, the doctrine allows — indeed it is founded on — diversion of water from natural channels for use at other locations. Second, a person who diverts water for use on a nonriparian parcel may move that water, by canal or ditch, across the property of others that lies between the stream and the place of use. In fact, many western states expressly provide a private right of condemnation for this purpose.

An even more fundamental attribute of the doctrine of prior appropriation is its focus on *when* a water right was first exercised. The doctrine is often described by use of the phrase "first in time, first in right" — meaning that the first party who diverts water from a stream and puts it to beneficial use gains a superior right to the water of that stream as against all subsequent diverters.

"First" users have a superior right to water.

A senior appropriator is entitled to use the full quantity of its water right before junior appropriators may take anything. The senior appropriator is not required to share any reduced amount of water available in a drought. As a result, in times of shortage, a senior water right can be particularly valuable.

Of equal importance to the doctrine of prior appropriation is the concept of "beneficial use." This phrase is used to define the quantity of a water right. Arizona, in language typical of the western states, provides that "beneficial use shall be the basis, measure and limit to the use of water." Ariz. Rev. Stat. § 45-141(A).

In practical terms, this means that the quantity of water an appropriator may use is determined, and limited, by the amount of water that historically has been "beneficially used." Western water codes further amplify this concept by specifically listing water uses that are considered beneficial. Arizona's statute again is typical. It provides that "'beneficial use' includes but is not limited to use for domestic, municipal, recreation, wildlife, including fish, agricultural, mining, stock watering and power purposes." Ariz.

Rev. Stat. § 45-181(1). This broad and open-ended list ensures that essentially any productive use of water will qualify as a beneficial use.

Another significant element of the doctrine of prior appropriation is the concept of "appurtenancy." This term means that, once established, a water right becomes tied — or "appurtenant" — to the location where the water is used. This concept historically has been applied most strongly to water appropriated for irrigation, where the right is specified as being appurtenant to particular parcels of agricultural land. Similarly, an appropriative water right usually is defined in terms of a specific use for which the water was originally appropriated — for example, irrigation, mining, domestic or municipal use.

Of course, the owner of a water right may want to change the place of use, the type of use, or both. To accommodate such transfers, most states have statutes that authorize the "severance and transfer" of appurtenant water rights from their original place of use to a new location, and authorize a change from one use to another. Generally, these statutes require that the transfer not impose any material adverse consequence on other water users.

Change of use and transfer statutes are particularly important for businesses considering new or expanded operations in the West. Often, the most senior water rights in a given area are appurtenant to parcels of agricultural land. If a business wants to secure such rights, it will, at a minimum, need state approval to change the use from agricultural to industrial. In addition, if the water will not be used on the appurtenant agricultural land, the acquiring business will need state approval to transfer the right to the new location.

The final element of the doctrine of prior appropriation is the rule that an appropriator does not own the water itself. Rather, an appropriator acquires only a right to use the water — a "usufructory" right. The water itself remains a public resource. This is usually confirmed either in a state's water code or its constitution. Colorado's constitution is typical, providing that "the water of every natural stream . . . in the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided." Colo. Const., Art. XVI, Sec. 5.

This does not mean that an appropriator has no legally protected right to water. To the contrary, courts have uniformly recognized that water rights are vested property rights entitled to protection against interference by other water users and against a governmental taking without just compensation.

Nevertheless, appropriative water rights have inherent limitations that distinguish them from the more complete bundle of rights typically associated with private property. Perhaps the best example of the limitations imposed on appropriative water rights is the fact that they are subject to forfeiture if they are not used on a regular basis. Typically, an appropriative right is forfeited if the water is not used for a period of five consecutive years without a valid excuse for nonuse. Forfeited water rights revert to the state and may be appropriated by subsequent water users.

While appropriative water rights are subject to limitations, they are also very valuable if properly perfected and maintained. In the arid West, securing a valid, senior water right can be a key element of a successful business plan.

For those unfamiliar with it, the seemingly arcane doctrine of prior appropriation may be tempting to ignore. A business with operations in the West, however, would do so at its peril. Even water supplies currently in use at existing facilities may be subject to interruption in times of shortage. The drought that has plagued much of the West for the past five to seven years has focused considerable attention on this reality.

Increasingly, businesses are evaluating their existing water supplies to determine whether they are sufficient in quantity, quality and seniority to meet current and future needs. The most sophisticated businesses conduct comprehensive water audits to determine their needs and supplies. Frequently, these audits evaluate both direct and indirect (that is, supply chain) water supply concerns.

Water audits combine legal analysis of water rights with technical analysis of water needs and availability. Often, they are performed by teams of water lawyers and technical consultants, such as hydrologists and engineers, working together in a manner similar to environmental audits of industrial operations.

Water audits are a relatively new business tool and have not yet become standard practice for many American businesses. Their benefits, however, should make them attractive to businesses with existing operations in areas where stability of water supplies is a concern. Audit reports can be used to develop plans for conserving water, increasing water use efficiency, or securing additional supplies.

Similarly, when a business considers locating or expanding in the West, water-supply analysis for future operations should be an integral part of the due diligence process. Often, adequate water supplies must be secured to obtain governmental approval to construct new facilities. Even when not required by governmental authorities, securing an adequate water supply generally is an essential element of facility and operational planning.

In both contexts — water audits for existing operations and securing adequate supplies for new operations — due diligence should follow a consistent path. The basic elements of that path include:

- Engaging knowledgeable water rights counsel and technical consultants. Lawyers who understand the statutory and regulatory processes for acquiring and transferring water rights are essential. Equally important are hydrologists and other consultants who evaluate the quantity of water available and the technical aspects of transferring a water right. The lawyers and consultants work as a team to

determine the validity, priority, quantity and transferability of the water right.

- Determining the amount of water required for the current or contemplated business operation. Often, this leads to questions that require detailed engineering analysis: How much water must be used? How pure must it be? Can it be treated on-site and reused? Can processes be designed to use water more efficiently?
- Determining how the water will be supplied. Will a municipal water utility or private water company deliver it? Will a private well be drilled, or an existing private well be acquired? Will an irrigation district deliver untreated water via canal?
- Will the water be surface water or groundwater? The doctrine of prior appropriation uniformly applies to surface water throughout the West. Groundwater, however, is subject to a variety of legal doctrines that vary significantly from state to state. When groundwater is the anticipated source of supply, engaging counsel with knowledge of the state's legal regime for groundwater is crucial.
- Is the right valid? This question will require analysis of the history of the right: Was it properly perfected? Has it been forfeited through nonuse? How much water has been beneficially used over time? These questions must be answered by reviewing historical documents — some of them a matter of public record, others likely in the possession of the current owner of the right.
- Can the water right be transferred to the location, and for the purpose, of intended use? Answering this question will require careful analysis of the state's "severance and transfer" and change-of-use statutes.
- Will there be any local opposition to using water for the intended purpose? Although not always the case, some new uses of water — particularly in locations where water supplies are already tight — can be the subject of intense public debate concerning the merits of the proposed use. Addressing such concerns may require the services of public relations and governmental affairs professionals. Preparing a clear statement of the local benefits to be derived from the project may do much to blunt or even eliminate local opposition.

This description of the due diligence process is necessarily general in nature. Careful planning and analysis should precede any significant new use of water in the western United States — preferably by a multi-disciplinary team of lawyers, hydrologists, engineers and other professionals. By investing in such efforts early in the planning process, the likelihood of success will be significantly improved, and a business can avoid learning the worth of water the hard way — by having "the well go dry."