

THE URBAN-RURAL WATER DIVIDE: WATER IN THE AMERICAN WEST

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ABSTRACT

The concept of an “urban-rural divide” is a sociological theory that distinguishes the cultural and social perspectives between urban and rural sectors. This division underlies the conflicts over water resources in the western United States. Often, the disparate perceptions between these groups result in clashes over goals and priorities of water resources.

Western states have embedded the urban-rural “divide” into water codes and related land-use policies. Western water laws in most western states shield municipalities from forfeiture laws that support urban agricultural practices and provide urban water users more flexibility than their rural counterparts. This flexibility provides a level of water security for urban residences that incentivizes suburban and urban growth and development. As a consequence, the increased density and demand for resources creates an additional burden on accessible water and a more contested dispute over allocation of who gets the water especially as between the urban-rural water users.

INTRODUCTION

Water scarcity has wreaked havoc on the development of the western United States since early settlements in the 1800s. The increase in population density has served to exacerbate the scarcity issue, but the ultimate concern is the division in ideologies between urban and rural populations of how to utilize what water is available.

The clear separation of urban and rural lifestyles and socioeconomics continues to feed opposing viewpoints regarding water management. As the concentration of money flow increasingly migrates to urban developments, likewise do water management practices that favor urban-friendly uses. As populations become ever-more urbanized, the pressure to prioritize urban uses over rural uses will only grow.

To show the differences between urban and rural water uses, a basic understanding of water rights provides a common foundation to contrast the growing divide. Both urban and rural water use in the western United States require a water right. This paper focuses mainly on the prior appropriation water management system used in the American West.

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Basic Elements of a Water Right

As part of an introduction to water law and regulation, it is beneficial to identify the basic elements of a water right. These elements are necessary for both urban and rural water users, and serve to outline the boundaries for water laws in the western United States.

Point of Diversion. The first element of a water right narrows in on the precise location at which the water is diverted, withdrawn, or appropriated from its source, known as the “point of diversion.” For example, a concrete dam intercepts water at the river and diverts it from its natural course to a non-natural channel.

Water diversions can generate from either surface or groundwater. Surface water sources encompass visible bodies of water such as lakes or rivers. Groundwater tends to trace its source to underground aquifers, usually accessed through a well or natural spring.

Place of Use. The location at which the water is used for a specific purpose is known as the “place of use.” These locations are often identified through a legal description of the property where the water is used, or the “appurtenant” lands.

Urban users, such as municipalities, are loosely regulated by a large area described as the place of use. Under an urban water right of use, a city’s limits may stand as the confines for where the water must be used. However, rural water rights are more explicit and defined. A rural place of use must specifically define a location with physical boundaries on a map, and any deviation from those boundaries exposes the water right to penalties, such as a loss of portions or all of the water right of use by cancellation through forfeiture or other means.

Quantity (Flow and Volume). “Flow” is the maximum rate at which water can be diverted under a water right, generally measured in cubic feet per second (“cfs”). A five-foot-wide and one-foot-deep irrigation ditch, flowing at one-foot-per-second, has a flow rate of five “cfs.” Similarly, “volume” is the maximum rate diverted annually, and is measured in acre-feet per year. One acre-foot is about a football field covered one foot deep in water.³ Municipal rights of use very often are limited only by rate, not total volume, a limit that applies to rural rights of use.

Season of Use. Specific types of water rights are only permitted to divert water during set times of the year, designated as the “season of use.” An example of a water right with a specific season of use is an irrigation right. Under an irrigation water right, the user can only divert water during the irrigation season that is either defined by an adjudicating court considering climate, soil types, usual crop patterns, or by a state’s water code or rules.

Municipal water rights are generally not subject to season of use restrictions, since the amount of water needed throughout the year is continuous and not confined to a specific

³ Sigler, Adam & Bauer, Brad (2017), *Water Rights in Montana: An Overview*, Montana State University. Page 2.

season or time. Year round seasons of use for municipals are granted for the same rate throughout the year. Even though urban/municipal users use water for irrigation of lawns, parks, and other similar “seasonal” uses, a municipal right of use is not split between a restricted use seasonally as is the rural irrigator.

Priority. The “priority date” is the time at which the water right was first created and used. Priority dates serve to settle disputes among competing water users during scarcity; whoever has the oldest “senior” right has priority during times of scarcity, and whoever is the newest, or “junior” user, is only allowed to divert water once all the other, more senior users have diverted their allocated water portion.

Beneficial Use (Purpose). The purpose for obtaining a water right is commonly known as the “beneficial use.” Beneficial uses tend to be strictly enforced, and nonconformity with the officially designated use can result in loss of the water right.

Urban beneficial users, such as municipalities, are allowed to use water for a variety of purposes under the municipal “umbrella” description such as domestic, industrial, commercial, public supply, and irrigation for lawns and trees. In contrast, rural water rights are stricter, with specific single beneficial uses designated like irrigation of fields. A rural user is regulated even when changing from irrigation of fields to irrigation inside a greenhouse, considered a “nursery” beneficial use.

THE URBAN RURAL WATER DIVIDE: URBANISM VS. RURALISM

The distinction between urban and rural water uses traces its history to long before the thirteen original colonies had taken root, where the groundwork for modern water law in the United States was conceived under England’s common law. The history of water use in the western United States chronicles a past wrought with fights over water, from international disputes over fishing to neighbors vying for access to a river for their cattle to drink. As water management regulations took shape, so too did underlying contentions over water use. An analysis of core water rights issues is essential to understanding the division between urban and rural water users.

Consumption Levels with Transfers

The term “consumptive use” refers to the amount of water that a user diverts under a water right. Water that is not consumed reenters the water source and is designated as “return flow.” Since return flows are not consumed, or “depleted,” they are often reallocated to a different water user, generally downstream.

Transfers of a water right’s use, either to change an element of the right itself or to transfer use to a different user, have led to a meticulous framework under the prior appropriation doctrine common throughout the western United States. In some states, the standard for evaluating a transfer is known as the “no injury rule.” This rule requires the reviewing authority to determine if the proposed transfer would “injure” other existing water rights. Jurisdictions vary on precise interpretations, but the baseline rule requires a

finding of “no injury” to both senior and junior priority users of return flow for approval of the transfer.

Many western states require a public review for proposed water transfers to assess the projected impacts on local communities. Often, urban users are very protective of their municipal supply while protesting transfers of agricultural water rights of use as a way to obtain a negotiating position that may require the agricultural user to “mitigate,” or give up, to the municipal use either directly or indirectly by assuring return flow volumes to the downstream municipal to approve the agricultural transfer.

The concept of water transfer is based upon the idea that reallocation of water from one location or use to a better-suited designation is an appropriate way to abrogate water scarcity. Although this rationale is sound in theory, reality indicates that the end result is often more water for “higher value uses,” such as domestic and municipal, and less water for “lower value uses,” like irrigation. The reality supports an often repeated statement in the West that “water flows to money.”

While irrigation is a predominate water use given the volumes necessary to grow fruits and vegetables as well as fodder for livestock, the framework for regulation of water rights has come to partially favor urban users. The infrastructure in place sets stringent permitting requirements and approval processes for rural water users, like irrigators, while at the same time allowing urban water users, such as municipalities, to self-regulate most aspects of their water rights. Urban users, like cities, are allowed far greater discretion to transfer water from one location to another within the city’s boundaries, or for a different purpose than originally designated. For example, cities may transfer commercial and industrial uses to domestic uses without any oversight or formal transfer process. In contrast, transfers between two types of rural uses typically require an administrative process and a showing of “no injury” or “enlargement” in the use of the water.

Rural water uses, such as irrigation, are required to stay within strictly defined locations and uses, impeding needed flexibility in irrigation of fields and crop-rotation. Transfer of irrigation rights to other types of uses may require an analysis of the consumptive amount used historically.

Case Study: Transfer of Oregon Irrigation Rights. Oregon water law addresses the issue of “enlargement” in irrigation water transfers. Under Oregon Administrative Rule 690-380-0100, an enlargement occurs when the transfer would expand the rate or duty of the diversion or increase the number of irrigated acres.⁴ This diminishes the value of irrigation water rights relative to other uses, since transfers require the applicant to ensure that the proposed use would not impact the flow regime in such a way that other water rights would be injured. This places a heavy burden on irrigators who wish to transfer irrigation water rights of use.

⁴ Or. Admin. R. 690-380-0100(2).

Abandonment and Forfeiture

Typically, failure to use a water right for its beneficial use or to secure a change of use before making a different type of use opens the door to cancellation of the water right of use. This framework spans many of the western United States, with the rationale that a water right of use may be reallocated for a better use if it is no longer required for the use permitted.

A common exception to the cancellation framework is municipal water rights of use. A city's water right of use is permitted to ebb and flow with urban development and growth. For example, a row of city lots can lie vacant without water use, and the city can later reallocate the water to more promising neighborhoods without having to first seek the approval of state water authorities.

In contrast to urban water rights, rural users must either develop all their acreage and water use within specific time frames or lose the right of use. Certainly, they cannot change the use to a different location or place of use without state water authority approval. The idea that water, if not applied to the beneficial use for which it was appropriated, is subject to cancellation and reallocation is sound in theory and flawed in practice, because water use is dynamic in nature and is reliant on infinite variables.

As a rural water user, it is challenging to rehabilitate a water right of use that has been left unused for more than five years, often meaning a permanent loss of the associated right of use. The loss of the water right of use is a loss to the entire agricultural community because once lost, obtaining a junior priority right of use, if possible at all, will be junior to all then existing uses.

“Spreading” of water conserved from one location to be used on an additional area amounts to an admission of “waste” of the resource and is disallowed in some states on policy grounds. In Oregon, it constitutes an illegal use unless the agricultural water user has engaged in a very specific conserved water program wherein a water user can expand the place of use but must in this process sacrifice a portion of the conserved water to instream uses, with a priority only one minute later than the water right from which it was conserved.⁵

The “use it or lose it” principle, although designed to encourage productive use and prevent water hoarding, creates a cycle wherein the water right holder must exclusively use in order to escape cancellation.

Case Study: Forfeiture Exemptions in the Western States. In Washington, the water code includes nine water uses exempt from forfeiture. The majority of the exemptions listed under the code target urban uses, such as municipal water supply.⁶ Although one of the exemptions is for “agricultural industrial processes,” this broad category refers to industrial water uses for processing agricultural products rather than supporting rural

⁵ Or. Rev. Stat. 537.455 to 537.500.

⁶ Wash. Rev. Code 90.14.140(2).

uses. Additionally, Washington's "trust water rights program" is designed to act as an alternative to the state's forfeiture laws for excess water.⁷ However, the exception only applies if the excess or "waste" water is managed through the state-run program.

Under Utah law, the forfeiture exemption is specifically designed to encourage urban expansion. Public suppliers are exempt from forfeiture so as to provide for future urban development.⁸ The code's definition of "public water supplier" includes irrigation districts, but private rural water users are prohibited under the exemption as it explicitly targets "public" water suppliers.

Under the Nevada Revised Statute 533.060(3), abandonment does not apply to water rights of use on agricultural land if two conditions are met: first, that the land is converted to urban use; and second, that a water purveyor, public utility, or public body acquired the water for municipal use.⁹ The underlying result is twofold: urban users are incentivized to acquire rural water rights, and rural users are left with an increasingly limited water supply.

Place of Use Limitations

Place of use, as defined in the above section on water elements, places a requirement on where the water is applied. Although the guidelines and flexibility for place of use vary from jurisdiction to jurisdiction, the most striking distinction is the disparity between urban and rural place of use limitations. Under a municipal water right, a city's place of use limitations are only defined by the city limits or even the urban growth boundary both of which can change over time. On the opposite end of the spectrum, a rural water use, such as irrigation, is required to remain within a strict designated location, and deviation of that location requires an extensive and lengthy place of use transfer application.

The framework for urban water users is based on practicality. It is impractical to expect a city to request prior approval for every modification in a water use. Instead, municipalities are allowed leeway to assess where to best utilize their allocated water. Instead of restricting municipal water rights to a designated lot, they can move the use like pawns on a chess board. This makes sense because to require approval from a state water authority for every alteration would require an unmanageable measure of state oversight and would place the decision-making in the hands of individuals incapable of understanding issues at the local level. Therefore, municipal flexibility to adjust their own water rights makes sense.

The regulations set in place for rural water uses are starkly different from those in urban areas. The requirements for maintaining a rural water right involve strict adherence to the state-approved place of use. Any deviance from that location must follow approval of an

⁷ Bell, Craig & Taylor, Jeff (2008), *Water Laws and Policies for a Sustainable Future: A Western States' Perspective*, Western States Water Council. Page 110.

⁸ Utah Code Ann. 73-1-4.

⁹ Nev. Rev. Stat. 533.060(3).

application to transfer the place of use. If the place of use changes without proper authorization, the water right of use is potentially subject to cancellation.

Self-supplied domestic uses, such as indoor water use for a farmhouse, are likewise subject to strict regulations in some states. While some states have carved out an exemption for domestic single-household wells, the water must only supply that household and its needs, such as a small number of livestock watering. If down the road the landowner decides to parcel-off the property for multiple households, each household may be required to obtain its own exemption or must secure water rights of use, possibly either through a state-approved agreement with neighbors or through an entirely new water source, such as a new well. The domestic “exception” to the requirement for a water right is not protected because it is not an approved water right of use via permit issuance, and could be decreased or eliminated by the legislature’s statutory changes. It is rare that rural domestic water users hold a water right, which is a protected property interest that would survive any statutory changes to the domestic exceptions.

Increasingly, already scarce water resources are being allocated in rural areas to protect instream flows. The broad category of “instream uses” runs the gamut from fish and wildlife protection to water quality to sufficient water flow to float a recreational raft or fishing boat. The benefits of safeguarding instream flows are indeed extensive, but the recent focus on permanently allocating water rights of use to maintain streams and rivers persistently encroaches on water available to future agricultural growth. Essentially, this form of “beneficial use” is a water right for the non-use of the water left instream, with the impact primarily borne by rural residents. As generational farmers and ranchers retire, and their water rights of use fall abandoned to the wayside as younger generations leave agriculture, water is increasingly transferred to urban or instream uses rather than maintained for their historic beneficial purposes. Over time, this reduces rural communities’ total access to water indefinitely.

Case Study: Places of Use in Montana. Water laws in Montana recognize places of use comparable to other western states. Municipalities are allowed flexibility in the places of use, and rural water rights must receive prior approval before deviation from the designated place of use. However, unlike most western states that prohibit “spreading” of excess water to additional land, Montana allows water users through an application process to apply the conserved or “salvaged” water to neighboring land. This allows rural water users to expand irrigated acreage. Unfortunately, the lengthy application process acts as a deterrent.

Extended Development Timelines

Once a new water right application has passed the approval stage, a development timeline is set for the user to “develop” the water right under specific guidelines. These development deadlines often fall short of the time needed to “develop” the water for its designated beneficial use. The water authority may grant an extension to allow further time as needed. The standard for extension determinations vary from state to state. However, as a general rule, an extension of time for development of the water use is

based on the state water authority's analysis of "due diligence" during the initial period of development including physical developments such as construction of a well and how much further work is needed to fully put the water to beneficial use.

The norm for approval of a city's request for extension of time is loosely based on what work has been done to reach the water's beneficial use. With capital and resources from local businesses pushing projects forward, the probability of an extension from the state water authority favors urban growth. Likewise, commercial and industrial projects are similarly situated. With the financial security to back up physical development of a water permit, extended development timelines are assured.

Unfortunately for rural water users, much of the manpower to develop a water right comes from spare time on the weekends and what little cash flow survives day-to-day living expenses. Without the corporate-level capital to pay for the physical labor and necessary supplies, a rural water right of use may take longer to develop. Once the quickly approaching deadline looms ahead, the work done to develop the beneficial use may not pass the state water authority's inspection. Consequently, the built-in incentives to allow time extensions results in more leeway for those individuals with more financing, and the small farmers struggling to obtain water for their fields end up with the short end of the straw.

Case Study: Time for Municipal Development in Oregon. The statutory scheme under the Oregon water code favors municipal water development projects. The Oregon Revised Statute ("ORS") 537.230 provides for the initial development period as follows:

(2) *Except for a holder of a permit for municipal use*, the holder of a water right permit shall prosecute the construction of any proposed irrigation or other work with reasonable diligence and complete construction within a reasonable time, as fixed in the permit by the Water Resources Department, *not to exceed five years* from the date of approval.

(3) The *holder of a permit for municipal use* shall commence and complete construction of any proposed works within 20 years from the date on which a permit for municipal use is issued under ORS 537.211. The construction must proceed with reasonable diligence and be completed within the time specified in the permit, *not to exceed 20 years*. However, department may order and allow an extension of time to complete construction or to perfect a water right beyond the time specified in the permit ORS 537.230 (Internal emphasis added).

This excerpt from the Oregon Revised Statute is one of many examples that demonstrates the division between urban and rural water use regulations, instilled within the state's water code.

As to municipal extensions if needed beyond the 20 year period for the initial development, Oregon requires quite an onerous municipal extension process for those municipals appropriating from a surface source or a hydrologically connected well

source. However, the municipal who successfully navigates the Oregon procedure may obtain a 30-50 year extension to fully develop the water use only limited by a regulatory priority attached to the water approved for development so that fish flows must be satisfied before the development water can be appropriated by the municipality. These lengthy time periods are not available to rural users, most limited to extensions of one to five years.

Types of Use Available

Universally necessary for virtually every aspect of life, water often requires management frameworks to carve out specific categories for water use. Some of the most common uses in modern times are designated as agricultural, domestic, municipal, industrial, and environmental. Additionally, legislators and courts have chosen to exclude some types of uses. Prohibited uses include intentional flooding to preserve soil moisture or to exterminate rodents, water as a means of transporting sand and gravel for mining, and testing wells with temporary pumps.¹⁰

Urban water uses strive to accommodate the rapidly changing and dynamic nature of urban and suburban expansion. Examples of urban water uses include housing developments, new schools and hospitals, processing plants, and commercial developments like hotels and other businesses. Every example of urban growth share a common prerequisite: access to water. As a result, regulations of urban water uses are flexible and place a majority of the decision-making in the hands of those benefitting from the water: the municipalities. Municipal water rights include all forms of uses, such as industrial, commercial, irrigation of lawns and trees, public supply, and domestic.

The scope narrows for rural residents, as rural water rights tend to be restricted to a single use. One major discrepancy is the flexibility of permitted uses. For example, urban water rights are designed to accommodate growth, but go for a Sunday drive into the heart of rural America, and the laws of water change drastically. Rural water rights are strictly held to defined uses, and any deviation from that permitted use requires an application and approval process through the state water authority. For example, a typical rural water right may only provide for irrigation of a field on a specific tax lot.

Case Study: Types of Uses in Idaho. As a western state with a thriving agricultural industry, Idaho maintains some of the region's most rural-friendly water laws. In addition to recognition of both diversion and instream flow water rights, the state has also carved out a category for "instream livestock," wherein a water right holder can water livestock directly from a stream.¹¹ Other beneficial uses in Idaho are more restrictive for a rural user, such as irrigation, stock-water, and fish and wildlife designations. These latter categories are specific to certain types of uses, and allow little room for change without prior approval from the state water authorities.

¹⁰ *Danielson v. Milne*, 765 P.2d 572 (Colo. 1988).

¹¹ Idaho Stat. 42-113.

Categories of beneficial use for urbanites are broader in Idaho including domestic, municipal, manufacturing, recreation, and hydropower. These uses are generalized and allow for discretion on the part of the water right holder to determine what might be included in the actual use.

CONCLUSION

The very nature of water as a necessary component of society places users at odds with each other. The water rights scheme in the western United States has attempted to address the inherent issues of water use. Unfortunately, when a perceived issue was identified, rather than rely on the courts to resolve matters under the prior appropriation doctrine that was the foundation law of appropriation in the West and developing common law on that doctrine as Colorado has done, legislatures in all the other western states have passed successive laws and adopted regulations that may have solved the issue of the “year,” but created more conflicts necessitating more legislative action or state agency rule-making the following year. Decades of legislative and agency activism have compounded and complicated the laws of water use in the West. Unfortunately, it is unlikely that we can turn back the clock.

Ultimately, water has always and will continue to give rise to disputes across urban and rural boundaries. Technological fixes may mitigate the impact, but are more akin to superficial answers to bigger questions. While urban developments are sprouting up across the western United States, rural farmland is being abandoned for lack of resources. Failure to cultivate rural lifestyles does more than open up water for reallocation – it leaves grocery stores barren, dinner tables sparse, and a dying legacy gasping for water. The division between urban and rural water uses begs the question: how far can society go before realizing the importance of maintaining rural water availability? Perhaps Benjamin Franklin correctly foresaw the conflict over water, when he said: “when the well is dry, we know the worth of water.”

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