# Climate & Water Law

#### **CLIMATE CHANGE & WATER LAW**

HOW WILL WATER LAW RESPOND TO CLIMATE CHANGE IN THE INTERMOUNTAIN WEST?

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# Water Law Adaptation

**Prior** 

Appropriation

Riparian Law

#### Introduction

Climate change continues to have detrimental effects on the environment, especially water resources. The Intermountain West faces record-breaking droughts and increased water scarcity. Water law in the Intermountain West was not developed to confront the unstable environment that climate change creates. This article addresses the ways in which western water law in the Intermountain West may inevitably adapt to climate change.

#### Development of Western Water Law and the Law of Prior Appropriation

The legal doctrine governing water law varies in the United States of America, depending broadly on whether a state is located to the east or to the west of the 100th meridian (Craig, 2020 at 3-4, see References). The western United States, inclusive of the Intermountain West, is predominantly governed by the law of prior appropriation, whereas the Eastern states are generally governed by the riparian doctrine. *Id.* at 3. Under the riparian doctrine, water rights are allocated between real property owners adjacent to a body of water and water is allocated under the theory of reasonable use wherein each riparian water user has an equal right to make a reasonable use of the water source, subject to the equal right of the other riparian water users' reasonable use of the same source. *U.S. v. Willow River Power Co.*, 324 U.S. 499, 505 (1945). In other words, "[r]iparian law gives equal and correlative rights to those owning land along the stream, while the law of appropriation recognizes that the person who has found available water and put it to beneficial uses has a right to continue his use." (Trelease at 24). Although the eastern riparian system of water law also faces challenges with climate change, such as flooding, this article addresses only the challenges to western water law, and specifically how the prior appropriation systems adapt to climate change impacts.

Mining Customs

The prior appropriation doctrine that dominates western water law was developed during the 19th Century California Gold Rush to meet the intensive water needs of mining operations. (Wilkinson, 1985 at 317). The riparian water system of the eastern United States was unfit for mining operations because miners used excessive water to flush out gold and silver deposits, which ran afoul of the riparian doctrine's recognition that water users collectively shared a water source, and "a landowner could not substantially diminish the flow of a river because of the duty to respect possible future water development." *Id.* at 318. In the West, water was scarce, and miners viewed water as a means to further their business endeavors, not as a valuable resource in need of future preservation. *Id.* at 319. Thus, "[m]ining...could not proceed unless water could be assured in sufficient and certain quantities." *Id.* at 19. So, miners created their own customs, and a priority system for water use emerged in the West. *Id.* at 19. Under this priority system for water use, the first miner to claim an area for mining became the first water user of that area and had "an absolute right of priority." *Id.* at 19. In 1885, the mining priority system was affirmed by the Supreme Court of California in *Irwin v. Phillips* and the law of prior appropriation became the core of western water law. *Id.* at 319.

**Priority System** 

The law of prior appropriation transitioned from mining uses to agricultural uses as ranchers and farmers migrated towards the West and treated water as a means to further their own agricultural operations. *Id.* at 320. Congress wanted to "reclaim the west," and passed the Reclamation Act of 1902, which sought to support settlement in the West through encouraging settlers to become irrigation farmers. *Id.* at 320. Today, senior appropriative rights still remain largely in the hands of agricultural and ranching owners, while junior users tend to be cities and individuals. Craig, 2020 at 5. However, many scholars believe that western water law is undertaking its next transition to meet public needs and address water scarcity. (*See generally*, Wilkinson).

Transition to Agriculture

#### Overview of the Law of Prior Appropriation

**Full Allotment** 

Prior appropriation follows the rule of "first in time, first in right." Under the law of prior appropriations, water users do not share water. Wilkinson at 319. The first person to use water from a water source has senior priority and is guaranteed their full allotment of water. *Id.* In other words, the first person to "divert water from a particular source and use it for a beneficial use (mining, farming, cattle, domestic use, and so forth) acquires a right to that quantity of water superior to anyone who later withdraws water from the same source — i.e., the senior water right." Craig, 2020 at 4. If water is scarce, senior users are

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Over-Appropriation

Untouchable Rights

Climate Change Impacts

**Harsh Reality** 

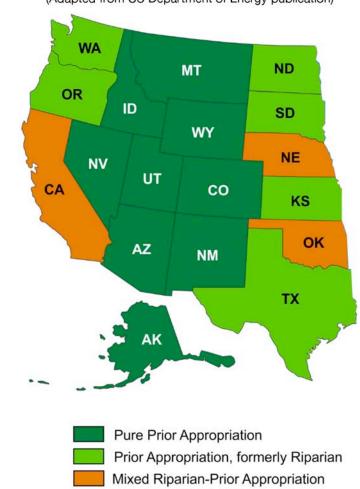
allocated their full supply, while "junior users are cut off according to their order of priority." Wilkinson at 319. The law of prior appropriation does not consider the preservation of water — "[a] stream or lake can be drained low or dried up entirely, as has occurred with hundreds of western rivers and streams, even the lower Colorado." *Id.* at 319–320. The priority system does not incentivize leaving water in the stream and most surface water in the intermountain West is now "fully or over-appropriated." *Id.* at 5. In many parts of the Intermountain West, there is a belief that water rights under the law of appropriation "are considered untouchable, and any effort to curtail them spawns numerous lawsuits." (Sommer). However, the uphill climb to adjust the law of prior appropriation is inevitable as the survival of our society rests upon our adaptation to climate change.

#### **Effects of Climate Change on Water**

Western water systems were created with the assumption that the climate and water resources would remain constant. *Id.* However, climate change has obliterated the idea that water is a static resource as record-breaking droughts and extreme weather patterns dominate news cycles. (Craig, 2020 at 5). Water resources in the western US have especially suffered from the impacts of climate change. (Sommer, 2021). Lake Mead is the lowest it's been since the 1930s. Hotter climates create parched soils, leaving less water runoff for rivers and streams because the soils are absorbing more water to reach normal moisture levels. Higher temperatures increase the evaporation of rain and snow, making it "less likely for a raindrop or snowflake to reach a reservoir." *Id.* Further, mountain snowpacks are melting earlier and producing less water, which increases evaporation because soils heat up faster without the reflective surface of snowpacks. *Id.* The unpredictability of climate change creates a harsh reality that "the people who manage the West's complex water systems...can no longer rely on the past to predict the future." *Id.* Dams and reservoirs are no longer enough to maintain communities during a drought. (Craig, 2020). Accordingly, western water law will need to adapt to the harmful effects of climate change on water. *Id.* 

# Western States' Water Governance Policies

(Adapted from US Department of Energy publication)



# Main Issues with Water Law and Climate Change in the Intermountain West

Climate change raises complications for the law of prior appropriation, which as noted above, was established in the 19th Century by California miners for an environment that was perceived to have constant and predictable water resources. With climate change, access to constant and predictable water resources is no longer the case across most of the Intermountain West. Although the West has historically experienced drought, "the new, drier normal of climate change is making drought both a more regular and a worse reality for prior appropriation states." (Craig, 2018 at 84). One issue with the law of prior appropriation is that during a drought "the junior users — the users who acquired their water rights later in time — must entirely cease to use water before senior users have to curtail their water use at all." Id. So, junior users, who tend to be cities and individuals, suffer most significantly in a drought because they are left with no or little water after agricultural users (senior users) take their full allotment. (Craig, 2020 at 5).

With the strict adherence to priority built into the legal framework, prior appropriation law is not flexible enough to adapt to our changing environment. *Id.* To address the realities of climate change, the law "needs flexibility to deal with these changing hydrological realities." (Craig, 2018 at 85). For example, rather than following the priority system, state water agencies need the flexibility to reallocate water priorities in times of drought and water shortages to ensure that modern demands and public needs are met. *Id.* However, the law of appropriation "is tied up in private and governmental property and contractual rights," making necessary reallocation of water "economically expensive and legally and politically challenging." *Id.* 

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Anti-Speculation

"Reasonable Projected"

Unpredictable Availability

**Adaptation Need** 

Water Banks (Voluntary)

Sellers' Incentives

**Market Forces** 

Involuntary
Allocation
&
Public Necessity
Doctrine

The law of prior appropriation also remains an obstacle for cities to effectively plan for severe droughts. *Id.* at 86. The prior appropriation's anti-speculation doctrine imposes a maximum on how much appropriators —including cities — can claim in preparation for droughts and water shortages. *Id.* The law of prior appropriation only allows cities to claim future water rights "to the extent of their reasonably projected future needs." *Id.* However, with climate change, the intensity and unpredictability of droughts in the West can almost never be "reasonably projected." *Id.* Thus, an unexpected drought "could legitimately catch even the most diligently prepared city off guard." *Id.* For example, the record-breaking drought that California experienced in 2012-2016 was so severe and historically unprecedented that no amount of planning could have realistically prepared for it. *Id.* The priority system needs more flexibility for water allocation so cities can claim additional future water rights than what is "reasonably projected" in preparation for droughts. Climate change has altered the projections. *Id.* 

As discussed above, the law of prior appropriation developed on the idea that water is constant and stationary. (Craig, 2020 at 5). By contrast, climate change has created a new normal of fluctuating and unpredictable water availability. *Id.* There is no clear answer for how water law will change. However, "[t]ransformational legal change is inevitable, either because society will choose a sustainable path, or because the present legal institutions will collapse from economic and social disintegration following ecological chaos." (Wood, 2009 at 88). Thus, as water practitioners continue to face climate-related challenges in each project they undertake, these practitioners must begin to integrate potential responses to climate change's impact on water resources and water law itself. To aid the water practitioner in crafting a response to these climate challenges, the following are brief summaries of some of the proposals scholars have made for how water law will respond to climate change.

### Proposals For How Water Law Will Adapt to Climate Change

#### **Drought Planning**

It seems beyond dispute that western water law will need to adapt to the increasing severity of droughts as temperatures rise. One proposal for drought planning is to create a voluntary program of water banks to re-allocate water, a system that California and Texas already have in place. (Craig, 2018 at 88). Water banks are "state-operated mechanisms that allow water rights holders to voluntarily transfer water rights, temporarily or permanently, to other uses." *Id.* The California Department of Water Resources (CDWR) implemented water banks to adapt to the reoccurring and intense droughts in the 1990s. Id. The CDWR created buy and sell agreements for water. Id. The incentive for buyers and sellers to use the drought water bank was to "take advantage of economies of scale and avoid the high transaction costs and third-party effects of individually negotiated transactions." Id. The 1991-1993 California Drought Water Bank proved to be a success and California was able to provide more than one million acre-feet of water through its water bank. Id. However, California created another drought water bank in 2009, which failed because the CDWR was not able to economically incentivize appropriators to relinquish their water rights. *Id.* at 90. The CDWR's water bank depended on voluntarily sellers, but water appropriators were not willing to sell to the state because the state was only paying \$275 per acre-foot of water, whereas profits from rice were the highest they had been in 30 years due to a drought in Australia. Id. Naturally, water appropriators would rather use their full water rights to grow rice, and make more money, than sell their water to the state. Id. Thus, although drought water banks are a potential solution for water law to adapt to climate change, California's 2009 Drought Water Bank "illustrates one of the potential weaknesses of voluntary programs to reallocate water during western droughts — market forces that tempt senior water rights holders away from drought mitigation and into business as usual. Few governments can afford to compete with a world rice shortage that drives food prices to high levels." Id.

Another proposal for drought planning is to implement an involuntary program of water allocation through the Doctrine of Public Necessity. *Id.* at 92. The Public Necessity Doctrine derives from common law and is "inherent in all private property rights." *Id.* at 93. This doctrine "recognizes that in times of true emergency, private rights yield to public needs, with no need for the acting government to pay." *Id.* In other words, during times of emergency, the government may reallocate property rights *without* compensation. However, for the government to utilize this doctrine, a "public emergency or necessity" must exist, and the destruction of private property must be "reasonably necessary." *Id.* at 94. The first hurdle in the context of drought planning is, therefore, the existence of political will to declare climate change a public emergency. For example, the California Second District Court of Appeals recently rejected City of San Luis Obispo's use of the Public Necessity Doctrine when the city instituted emergency groundwater pumping during a drought. *Id.* at 98. The court reasoned that the city did not meet the emergency requirement because the

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"Emergency"
Definition

"Best Efforts"

**Limited Right** 

"Beneficial Uses"

Nonconsumptive Uses

> Waste Prohibition

Institutional Shortfall

Waste Adaptations city had known for years that it needed to conserve water but chose to implement "damaging groundwater pumping" instead. *Id.* The court held that "[this] choice of action over the years does not constitute an emergency." *Id.* This case illustrates that "[c]ities and counties must actively engage in water supply planning — including drought planning — and impose water conservation measures before the public necessity defense becomes available during drought." *Id.* The Public Necessity Doctrine is not a litigation tool for cities that did not engage in drought planning or water conservation. *Id.* at 99. Rather, the Public Necessity Doctrine is for municipalities that used their best efforts to plan and conserve water. *Id.* Of course, until addressing climate change and its impacts on water resources becomes widely accepted as an emergent effort, what constitutes "best efforts" to plan and conserve water will always be subject to interpretation and, therefore, litigation.

#### "Beneficial Use" and Stricter Enforcement of the Rule Against Waste

As stated earlier, water law in western states are predominately governed by the law of prior appropriation. The first person to divert water has a superior right to continue using that same amount of water. However, that superior right is not unlimited. The appropriator's water right is limited by the concepts of beneficial use. (Koehl at 1142). Beneficial use refers to the purpose or type of use of water. Each state defines "beneficial" in different ways, either by constitution or statute. (Toll at 602). Prior to the 1970s, beneficial purposes were "limited to consumptive uses, such as mining, agricultural, industrial, municipal, domestic, stock-raising, and hydropower." (Koehl at 1142). However, the environmental movement of the 1960s led both state and federal legislatures to enact environmental and natural resource laws throughout the 1970s and 1980s. (Craig, 2010 at 81). Since then, courts and legislatures began to "redefine [] beneficial use to include nonconsumptive uses, or instream uses, such as recreational and environmental preservation." (Koehl at 1142). Further, "case law and precedent supports the changing nature of the beneficial use element of prior appropriation." (Hall at 31). Oregon has taken the lead in redefining "beneficial" to include "nonconsumptive uses, or instream uses, such as recreational and environmental preservation." (Koehl at 1142). In Oregon, beneficial use is defined by the amount of water diverted, the amount of water used, and the amount of water needed. Id. at 1155. The lowest amount of all of these factors is what is considered to be beneficial. Id. The Oregon Supreme Court has stated that water rights extend "only to what is needed for the use for which water has been appropriated." Id.

A corollary to beneficial use is the rule against waste. Many western states adopted "beneficial use, without waste [as the] basis, measure, and limit of water right." (Toll at 602). These states "directly prohibit waste of water, and permits generally have authority to deny a proposal of water use on that basis alone." (Wood, 2014 at 176). However, in practice, western states have roundly ignored the law against waste and have not enforced it. (Russell). Often, this is because "waste" has not been clearly defined by western states, and the politics surrounding and influencing water laws. *Id.* The politics of environmental law cause state water agencies to "lack political support for enforcing against waste." *Id.* at 157. Law professor and scholar, Mary Christina Wood, described the political reality of environmental law in her book, *Nature's Trust: Environmental Law for a New Ecological Age*, as the following:

As we have seen, environmental law is not what it appears. Agencies at the local, state, and federal levels have turned the statutes into a broad scale permitting system that allows colossal damage. Politicized agencies repeatedly serve industrial and development interest at the expense of the public. Time and time again, science provides an impenetrable coverup for decisions that sabotage statutory purposes. Despite its original goals, environmental law now institutionalizes a marriage of power and wealth behind the veil of bureaucratic formality.

(Wood, 2014 at 103).

As climate change progresses, however, the rule against waste must adapt to changing circumstances. *Id.* at 170. The law against waste has adapted before to "countenance the clearing of timber to make land fit for civilization." *Id.* at 171. As water availability decreases, "the doctrine again must transform in response to extreme natural scarcity." *Id.* The concept of adapting a rule against waste has been confirmed by courts. One court stated that the rule against waste will require "reasonable modifications as may be demanded by the growth of civilization and varying conditions." *Id.* The Idaho Supreme Court stated that beneficial use "might so change that [previously acceptable uses] would be an unjustifiable use of water needed for other purposes." (Hall at 31). California courts have already started the process by guiding "the state's water use by stressing reasonable and beneficial purposes," and establishing that "there is no vested property right to waste water unreasonably." *Id.* at 28. Moreover, "California's courts also recognize that the State may validly limit the property interest of a water right to reasonable use, going so far as allowing the full deprivation of water rights." *Id.* 

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**Use Regulation** 

Forfeiture Due to Waste

**Prioritizing Uses** 

Public Welfare & Survival

Public Trust Duty

**Evolving Doctrine** 

Mono Lake Case

Advanced technology that increases the efficiency of water uses has "led to changing perceptions as to what constitutes acceptable water use." (Hedden-Nicely at 156). Accordingly, "a practice that was reasonable at one point could be considered wasteful now, obligating the user to update his irrigation practices or risk forfeiture of the water that is not being reasonably used." *Id.* In response to pressures of climate change, tighter regulations on, and enforcement of, the laws against waste allow state agencies to more closely monitor historically unregulated water uses and, for example, determine that agricultural and industrial water uses, may no longer be treated as "de facto beneficial." (Hall at 31).

For example, newer technology deems the practice of flood irrigation wasteful and unreasonable as drip irrigation becomes more common. (Hedden-Nicely at 156). States may allow state engineers and agencies to "consider future water needs before deeming a use beneficial and entitled to a water right." (Hall at 31). Similarly, state courts may deem "proposed and current water usages wasteful, just as the courts recognized that once non-beneficial uses could become beneficial." *Id.* Water appropriators' rights may be forfeited if their water use is deemed to be no longer beneficial. *Id.* at 31-32.

Another possibility is that States may begin to contemplate prioritizing types of water users and enact statutes that rank crops based on wastefulness, and provide "deference to more water efficient crops, and designating other crops as wasteful." *Id.* at 31. For example, "corn in western Kansas may be unreasonable in a drought, while wheat production may be beneficial." *Id.* In California, "some crop productions may never again be considered beneficial as the effects of climate change worsen" — such as almonds and alfalfa crops — which take up ten to fifteen percent of California's water usage. *Id.* at 31, 26. Although there are multiple ways in which the law of waste and beneficial sue may adapt to climate change, these proposals illustrate possibilities as to how state statutes and courts may necessarily change as the pressures of climate change continue to increase water scarcity across the intermountain west.

#### **Public Trust Doctrine**

As water scarcity becomes the status quo instead of the exception, States may increasingly use the Public Trust Doctrine beyond its traditional role as a way to protect the public's right to water resources. The Public Trust Doctrine, derived from common law, provides that "some natural resources remain so vital to public welfare and human survival that they should not fall exclusively to private property ownership and control," but instead should continue to belong to the public. (Wood, 2014 at 14). It is a legal principle that ensures the government's duty to protect resources, such as waters, wildlife, or land, for the public's use. *Id.* Prior appropriation states have incorporated the public trust doctrine through the state's constitution or state statutes. The US Supreme Court first established the Public Trust Doctrine in *Illinois Central Railroad Co. v. Illinois*, 146 U.S. 387 (1892) by declaring the government's trust duty to preserve waters for the use of the public. In that case, the Supreme Court (Court) held that "the shoreline of Lake Michigan was held in public trust by the State of Michigan and could not be transferred to a private railroad corporation." (Wood, 2014 at 15). The Court ruled that "the attorney general could take back the land on behalf of the people." *Id.* at 21. Subsequently, the Court established "an apparent federal law basis for many later state pronouncements of their own public trust doctrines." (Craig, 2010 at 62). In addition, the Court provided that "private title must comply with the public trust duty...." (Wood, 2014 at 32).

The role of the Public Trust Doctrine is evolving as natural resources become scarce. Courts are already recognizing the Public Trust Doctrine as an adaptation to climate change. The California Supreme Court stated that, "[t]he objective of the public trust has evolved in tandem with the changing public perception of the values and uses of waterways." (Craig, 2010 at 73). In addition, Texas courts have noted that, "the State, as trustee, is entitled to regulate those waters and submerged lands to protect its citizens' health and safety and to conserve natural resources." *Id.* Since the Supreme Court's decision in 1892, western states have shaped and added to the role of Public Trust Doctrine by using "a variety of legal techniques to protect and expand public rights in the waters of each state." *Id.* at 71. Some states have "redefin[ed] navigable waters...; expand[ed] the list of protected public uses beyond navigation, fishing, and commerce; and extend[ed] public rights and public trust principles to all state waters, regardless of who owns the beds and banks." *Id.* More recently, states such as Hawaii, Oregon, and California, have "extended the concept of a public trust in waters to environmental protection." *Id.* 

For example, in *National Audubon Society v. Superior Court of Alpine County* (also known as the *Mono Lake* Case), the California Supreme Court stated that, "[t]he human and environmental uses of Mono Lake — uses protected by the public trust doctrine — deserve to be taken into account. Such uses should not be destroyed because the state mistakenly thought itself powerless to protect them." *Nat'l Audubon Soc'y v. Superior Ct.*, 33 Cal. 3d 419, 452, 658 P.2d 709, 732 (1983). The *Mono Lake* decision "squarely defined water as a public trust asset." (Wood, 2014 at 324). Subsequently, the public trust doctrine was

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Groundwater & Public Trust

Water Right Revocation

"Minimalist" View (Private v. Public)

Commodity v. Sacred Life Force

Cultural Views v. Hydraulic Society

State Water Rules

Antiquated Law Adaptation modified to "protect navigable waters from harm caused by diversion of non-navigable tributaries." (Craig, 2010 at 86). In addition, the Public Trust Doctrine altered the prior appropriation system — "when the public trust doctrine clashes with the rule of priority, the rule of priority must yield." *Id.* at 85-86.

Hawaii has also utilized the Public Trust Doctrine to "place a public trust status on groundwater, recognizing the integral connectivity of the hydrological cycle." (Wood, 2014 at 324). Hawaii courts "subordinated private water rights to the public interest" due to water scarcity. (Craig, 2010 at 72). In applying the public trust doctrine, the Oregon courts have noted that "lands underlying navigable waters have been recognized as unique and limited resources and have been accorded special protection to insure their preservation for public water-related uses such as navigation, fishery and recreation." *Id.* at 74. These decisions emphasize that courts have the power, through the Public Trust Doctrine, to not only reject current privatization of water resources, but also to revoke private water rights previously in place where "such privatization impairs necessary public access and use." (Wood, 2014 at 325).

Unlike the states just discussed, some states in the Intermountain West such as Idaho, Montana, Colorado, and Arizona, "have largely adhered to this 'minimalist' public trust doctrine." (Craig, 2010 at 71). The Colorado Supreme Court does not "allow public rights in non-navigable rivers based on state ownership of the water itself, concluding that the Colorado Constitution does not preserve public recreation rights in such waters." *Id.* at 76. Instead, "[w]ithout permission, the public cannot use such waters for recreation." *Id.* Montana statutes make it clear that appropriated water rights trump any other public interest in the waters, including environmental protections and public use rights. *Id.* at 78. Nevertheless, scholars continue to assert the need for expanded public trust doctrines. *Id.* at 81. Scholars contend that the public trust doctrine should expand to adapt to resource scarcity and the harmful effects of climate change. *Id.* at 82. Western states that have not yet expanded their Public Trust Doctrine are "more cautiously using public trust principles to expand the legally cognizable public values in the environment." *Id.* at 83. However, the impacts of climate change may incline more western states to expand their Public Trust Doctrine to address water scarcity.

### Incorporating Cultural Views of Water into the Anglo-American West's Laws of Prior Appropriation

In contrast to western water law — which commoditizes water sources and prioritizes excessive, consumptive water use — many cultures, such as Muslim, Chinese, Buddhist, and American Indian cultures believe that water is sacred and a life-source to be valued and honored rather than a resources to be consumed. (Bryan at 140). While it is impossible to capture the complexities and nuances of tribal views on the sacredness of water, for many American Indian tribes, water is viewed "as sacred in a variety of ways, including through ceremonial uses, beliefs in water as a spirit, and in creation stories and other significant cultural narratives." *Id.* at 145. Accordingly, in some tribes unwritten tribal law "requires their caretaking of the ecosystem, including the waters that are tied to their salmon, berries, and roots" because water resources are central to the culture of the tribes and have been such "since time immemorial." *Id.* at 145.

These cultural views of water are more adaptive to climate change than the law of prior appropriation, which views water as an "extractive and beneficial resource to help communities and economies thrive." *Id.* at 150. The Anglo-American West does not view water as a scarce resource that must be protected, rather, the predominant view of the Anglo-American West is of a modern *hydraulic* society that excessively manipulates and extracts water for economic purposes. *Id.* at 150. However, this Anglo-American view of water is not in compliance with the effects of climate change, as droughts become more severe, and water becomes more and more scarce. Non-Anglo cultural views of water as sacred and central to humans' existence, are more fit to adapt to climate change. For the Anglo-American West to adapt to climate change, water law must "embrace both realities — the utilitarian and the sacred. In doing so, our laws will push us to innovate, collaborate, and better protect the multiple values we place on water today. In particular, we should focus on those controlling state rules that run most counter to sacred water: beneficial use, diversion, seniority, abandonment for non-use, and an economically driven 'public interest' requirement." *Id.* at 151.

#### Conclusion

While there is no clear answer as to how water law will respond to climate change, it is clear that water law will change. The law of appropriation, when strictly followed, is antiquated and unfit to address the harmful impacts of climate change on water because of its stringent rules on water rights that are premised on the idea that water is simply a resource to be manipulated for economic gain rather than a living, sacred part of our ecosystem. The climate is changing, and water resources are becoming scarcer; the old

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Change Needed

approach to allocating water uses in Intermountain states will need to adjust state water law to be more flexible and adaptable to climate change impacts. Whether Intermountain states will utilize water banks, the public necessity doctrine, the beneficial use principle, the law of waste, the Public Trust Doctrine, or some other tactic is unknown. The only definite answer is that Intermountain states' water law will necessarily change in response to climate change or in response to the social and political pressures that climate change will impose on governing bodies to adequately address water scarcity.

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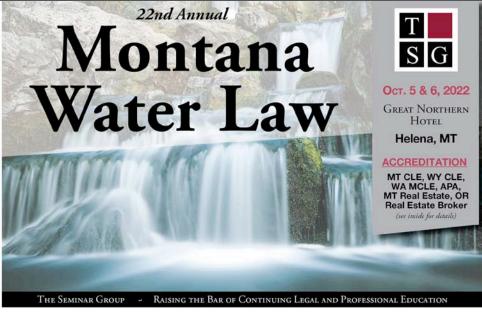
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