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Water Rights, Water Quality & Water Solutions in the West

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BENEFICIAL USE IN TIMES OF SHORTAGE

RESPECTING HISTORIC WATER RIGHTS WHILE ENCOURAGING EFFICIENT USE AND CONSERVATION

by Steven E. Clyde, Clyde, Snow & Sessions (Salt Lake City, UT)

Introduction

The Prior Appropriation Doctrine for water was adopted throughout the American West as a means of addressing the West's physical realities. The West's arable lands were rarely located adjacent to streams, most of which were in deep canyons. To make the land productive, water had to be diverted from the streams and carried considerable distances in ditches and canals to reach arable lands. The construction of diversion and conveyance facilities was an arduous undertaking, one generally accomplished by hand-work and primitive scrappers pulled by teams of horses or mules. The work rarely could be accomplished in a single irrigation season. The doctrine of priority protected the appropriator's investment and provided assurance that his water claim would be preserved while he completed his diversion works, cleared land, and put the water to beneficial use.

This doctrine served the West well during the 19th Century. It facilitated settlement and economic expansion. However, the security afforded by priority also excluded access to water by others in times of shortage, regardless of how inefficient or wasteful the senior (first in time) water right holder was in his water use. This is the harsh reality of the doctrine's "first in time, first in right" tenet. To blunt that harshness, junior (later in time) appropriators began constructing storage facilities that would capture high spring flows that were in excess of anyone's beneficial needs at the time. The availability of storage assured the "juniors" they would have some water late in the season, even after their direct flow rights in the stream had been curtailed in deference to senior rights.

Conservation was rarely discussed, and never in terms of leaving water undiverted in the stream. The storage of high flows for later use was the conservation of old. Today, conservation is taking on other meanings. Because of the influence of other stakeholders, the term now includes notions such as: instream flows; recycling or reuse of water; and other non-economic uses that have been determined by society to be beneficial. Because the senior water user is protected by his priority and by the non-impairment doctrine, senior appropriators have had little incentive to conserve water. Those who enjoy priority protection have seen little reason to change the law to their possible detriment.

When viewed along with the second major tenet of the Prior Appropriation Doctrine — i.e., that "beneficial use is the measure and limit of the water right" — and the doctrine's penalty of forfeiture for non-use, it is not too hard to understand why the doctrine is not conducive to conservation and why change and adaptation has come so slowly. Historically, during shortages priority has prevailed.

Most of the water in the West was allocated in the late 19th Century and early 20th Century. The primary uses were for agriculture, livestock, mining, and domestic purposes. Municipal and industrial use emerged later in the 20th Century as the West began its unrelenting march towards urbanization. This early allocation of most of the available water and vesting of property rights (water rights) left many stakeholders out of the water allocation process. These stakeholders are now seeking a seat at the table — adding new pressures on this scarce resource.

Beneficial Use

New Stakeholders

New Concerns

Doctrine Flexibility

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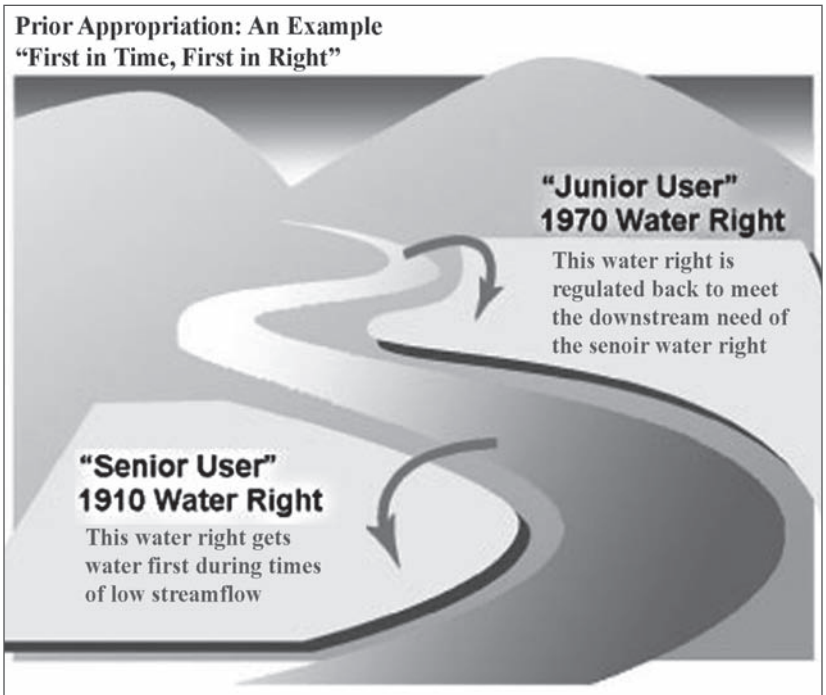
However, as a common law doctrine, the Prior Appropriation Doctrine is inherently flexible. The doctrine has evolved over time in response to changing societal values, but those changes occur very slowly. The water itself remains the property of the State, and the State holds title for the benefit of all of its citizens. Appropriated rights are thus clearly limited by the public interest, and this reality creates avenues for change to occur. Unfortunately, there is significant institutional resistance to change.

This article will discuss the institutional framework of the Prior Appropriation Doctrine and some of the changes that have occurred in response to changing social values and changing notions of priority and reallocation of this scarce and very public resource.

Exclusionary Nature of the Doctrine

The Prior Appropriation Doctrine (Doctrine) is exclusionary in nature. It favors those who were here first. It rewards and protects economic development, diversions, and depletions and ignores large elements of society who were silent in the past but are becoming much more vocal in demanding a seat at the water policy and allocation table. Many of these new stakeholders are from areas of water origin where water has been purchased and stripped from the land for use in distant communities. They are recreationists who enjoy floating and fishing on a live and active stream. They are Indian tribes who have waited far too long for their opportunity to have water developed for their benefit. They include new immigrants to the West, who bring with them a different mind-set honed in other locales where the population is less dependent upon the diversion and consumptive use of water for their very survival. These people have a strong sense of the inherent value of simply leaving water running in the stream rather than diverting every available drop of water. But their notion of value and of use are contrary to the basic tenets of the Doctrine, which: makes beneficial use the measure and limit of the water right; has validated *only* those rights that diverted water from the stream for application in some economic producing endeavor; and subjected water rights to forfeiture for non-use. Clyde, *Marketplace Reallocation in the Colorado River Basin: Better Utilization of the West's Scarce Water Resources*, 28 J. Land, Resources & Envtl. Law, P. 49, (2008).

Some argue the Doctrine is not the best way to have allocated water in the West — noted expert Charles Wilkinson called the Doctrine "…possibly the stupidest body of law we've ever created." *See* The Fourth West, 2009 Wallace Stegner Lecture, University of Utah Press, p. 5 (2009). It must nevertheless survive, however, because there really is no better option for water allocation in the West. Water management based on "Riparian Rights" simply does not fit the landscape. Additionally, too many property interests have vested in appropriated rights and economies built in reliance on the security of priority to simply walk away from the Doctrine. The Doctrine is in need of reform, but part of its beauty lies in its inherent flexibility. This is what has distinguished the Doctrine from riparian rights. As noted by Professor Dan Tarlock in *The Future of Prior Appropriation in the West*, 41 Nat. Resources J. 769, (2001), "The distinguishing feature of prior appropriation is its continual evolution in response to a changing West. Because prior appropriation is grounded in both abstract principles of justice and hard experience, it has constantly had to adapt to changed conditions."



An example of Prior Approriation at work
Prior approriation ensures that the first user to obtain water rights has first access to water in times of shortage. If a "downstream" landowner has the earlier priority date (they initiated their right in 1910) the "upstream" landowner may have to let the water pass unused to meet the needs of the senoir, downstream water right holder.

Adapted from Oregon Department of Water Resources website, updated April 2010

Beneficial Use

Basic Tenents

Property Right

Instream Rights

Formation of the Prior Appropriation Doctrine

The Doctrine originated from custom and usage in the early mining camps and irrigated farms of the West, fostered by a federal policy of "benign neglect" that allowed the States to control the allocation of water. *See* Clyde, *Adapting to the Change Demand for Water Use Through the Continued Refinement of the Prior Appropriation Doctrine: An Alternative Approach to Wholesale Reallocation*, 29 Natural Resources Journal, p.435, (1998). The Doctrine's basic tenet — first in time is first in right — rewarded those who were simply first, with little regard to the efficiency or economy of their use, or whether more beneficial uses of water were being precluded (R. Dewsnup & D. Jensen, *A Summary-Digest of State Water Laws*, 475, 719 (1973)). Beneficial use became the measure and the limit of the water right (Utah Code Ann. §73-1-3 (1980)). To be beneficial, the use must promote economic activities, and generally there must be actual diversion and consumption of water. *Bountiful City v. De Luca*, 77 Utah 107, 292 P. 194 (1930); *Sowards v. Meagher*, 37 Utah 212, 108 P. 1112 (1910). *See* generally Trelease, *The Concept of Reasonable Beneficial Use in the Law of Surface Streams*, 12 Wyo. L.J. 1 (1957).

Once perfected, the water right becomes a vested, perpetual property interest subject only to prior rights and the possible assertion of dominant federal interest. The water right is entitled to full legal protection including due process. *See*, e.g., *Hunter v. United States*, 388 F.2d 148, 153 (9th Cir. 1967); *Hughes v. Lincoln Land Co*., 27 F.Supp. 972 (D.C. Wyo. 1939); *Town of Sterling v. Pawnee Ditch Ext. Co.*, 42 Colo. 421, 94 P. 339 (1908). The protection of prior rights has been given express judicial sanction as a matter of "natural justice." *Atchison v. Peterson*, 87 U.S. (20 Wall.) 507, 512 (1874).

The policy of most western states has been to maximize economic development and use of its water resources (R. Dewsnup & D. Jensen, *supra* note 1 at 475, 719). The federal government promoted western migration and acquiesced in the appropriation of its water under state law. While this policy served the West well in the past, this 19th Century body of law is struggling to address the problems of the 21st Century.

The Doctrine and those who benefit from its strict application are entrenched and resist reform. However, the Doctrine does not need to be an obstacle to change. It is inherently flexible and that flexibility will enable society to adapt it to meet today's changing economic, social, and environmental concerns. One recent example of that flexibility is the validation of non-diversionary, instream water rights. Instream flow rights were essentially unheard of in the West 20 years ago. The only limited exceptions were for livestock watering directly from a stream and the floating of logs to market. *Adams v. Portage Irrigation, Reservoir & Power Co*., 95 Utah 1 72 P.2d 648 (1937). But *see Vaughn v. Kolb*, 130 Or. 506, 280 P. 518 (1929); *Robinson v. Schoenfelt*, 62 Utah 233, 218 P. 1041 (1923). Today, most western states have given instream rights judicial or legislative sanction. *Ritter v. Standal*, 98 Idaho 446, 566 P.2d 769

PRIOR APPROPRIATION v. RIPARIAN WATER RIGHTS

PRIOR APPROPRIATION DOCTRINE

Water laws developed in the arid Western States — where water supplies are limited and often inadequate — are known as the Prior Appropriation Doctrine. This doctrine is essentially a rule of capture, and awards a water right to a person actually using the water.

This doctrine has two fundamental principles:

- First in time of use is first in right (i.e., the earliest appropriator on a stream has the first right to use the water)
- Application of the water to a beneficial use is the basis and measure of the right

Priority

Priority determines the order of rank of the rights to use water in a prior appropriation system. Under the Prior Appropriation Doctrine, priority is the concept that the person first using water for a beneficial purpose has a right superior to those commencing their use later. The priority date of a Federal reserved water right is the date the land is withdrawn from the public domain. Priority is important when the quantity of available water is insufficient to meet the needs of all those having rights to use water from a common source. Under the prior appropriation system, shortages are not shared.

Preferred Uses

Some western States statutes contain priority or preference categories of water use, under which higher priority uses (such as domestic) have first right to water in times of shortage, regardless of priority date. There may also be constraints against changes or transfers involving these priority uses.

Perfected Right

This term indicates that all required steps to secure a State appropriative water right have been completed with due diligence. At that time a Water License or Certificate is usually issued. This document is prima facie evidence of a water right and is considered real property.

Abandonment & Forfeiture

Under the Prior Appropriation Doctrine, a State water resource agency may find that a water right has been abandoned or forfeited. Abandonment requires an intent to give up the water right permanently. Forfeiture results from failure to use water in the manner described in State statutes.

RIPARIAN DOCTRINE

This doctrine is in effect in most eastern States, some midwestern and southern States, and the State of California (which also uses the appropriation doctrine). In almost all jurisdictions, the doctrine has been modified to fit local conditions. It applies to all bodies of water including streams, lakes, ponds, and marshes, and grants to all riparian owners the right to make reasonable use of the water so long as the water use does not interfere with the reasonable use of water by other riparian users. Disputes over what constitutes reasonable use are generally resolved by the courts.

Fundamental principles of this doctrine are:

- ownership of land along a body of water (riparian ownership) is essential to the existence of a right to that water
- each riparian owner has an equal right to make use of the water in its natural state (no storage), no matter when use of the water was initiated; thus, shortages are shared.

Adapted from US Fish & Wildlife website: www.fws.gov/mountain-prairie/wtr/water_rights_def.htm

Beneficial Use

(1977); *Southern Idaho Fish & Game Ass'n v. Picabo Livestock, Inc*., 96 Idaho 360, 528 P.2d 1295 (1974); *State Dep't of Parks v. Idaho Dep't of Water Admin.*, 96 Idaho 440, 530 P.2d 924 (1974); Colo. Rev. Stat. §37-92-102(3) (1986); Colo. Rev. Stat. §37-92-1409(2)(f)(1986); Idaho Code §42-1409(2)(f) (1986); Utah Code Ann. §73-3-7 (Supp. 1988); Wyo. Stat. §§41-3-1001 to 41-3-1014 (Supp. 1986). Further changes will occur as a natural consequence of the shift in societal values and economic forces in the West; but because this is a common law doctrine and societal values take time to coalesce, if left to change on its own change will occur very slowly.

Economic Forces

Shifting economic forces in the West will drive reform more quickly than any other influence. Agriculture, mining, livestock grazing, and the other extractive industries are losing ground to urbanization, and an economy dependent upon recreation and the service industries that cater to it. This shift in economic focus will force the reallocation of water away from agricultural (in Utah for example approximately 80% of the water rights are used for agriculture) to accommodate this increased municipal and industrial growth. *Utah's Water Resources: Planning for the Future, Utah Division of Water Resources*, p. 35 (2001); available at: www.water.utah.gov/.

Municipal Pressures

Additional pressure from growth will undoubtedly hit Utah's limited water supply. The population of Utah in 2002 was over 2.2 million. By 2020 the population is expected to grow to 3.2 million people, and by 2050 it is expected to double to over 5 million people — all of whom will need water to drink, food to eat, housing, and an economy to meet their needs. *Id*. at 17. This surge in population growth will create additional demand for conversion of agricultural rights to support municipal growth.

Land Use Conflicts

Unfortunately, growth and development is occurring in the West as we if had an endless supply of water. Without tying growth to water availability, land use decisions are being made in a vacuum. Consequently, we risk growing beyond the ability of our available water supply to sustain that growth. *See* generally Steven E. Clyde, *Municipal Water Supplies, The Impending Conflict Between Beneficial Use, Statutory Forfeiture and Providing Public Water Supply Agencies Time to Plan for the Reasonable Future Needs of the Public They Serve*, American Bar Association 26th Annual Water Law Conference, San Diego, CA February 21-22, 2008.

Another water supply pressure point is the growing sense of inequity in water allocation decisions of the past and a belief that some of them need to be revisited. Federal environmental laws such as the Endangered Species Act and the Clean Water Act are forcing some reallocations and modified operations to further underlying national policies at the expense of water development.

Public Trust Doctrine

Reform is nevertheless possible via the Western states themselves. If they resist reformation of the Doctrine, however, they risk water reallocation through the expansion of Public Trust priciples or grafting of attributes of riparianism onto Doctrine. The court in *National Audubon Soc'y v. Superior Court*, 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346, cert. denied, 464 U.S. 977 (1983) held that perfected water rights may be reconsidered where their exercise threatens certain public values in water resources. *See* also *United States v. State Water Resources Control Bd*., 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986); *Kootenai Envtl. Alliance, Inc. v. Panhandle Yacht Club, Inc.*, 105 Idaho 622, 671 P.2d 1085 (1983); *Galt v. State*, 44 Mont. 103, 731 P.2d 912 (1987); *Montana Coalition for Stream Access, Inc. v. Hildreth*, 211 Mont. 29, 684 P.2d 1088 (1984); *Montana Coalition for Stream Access, Inc. v. Curran*, 210 Mont. 38, 682 P.2d 163 (1984). The tools for reform already exist in the Doctrine itself and in the statutory authority given State regulators, but State Engineers will need some courage, and both legislative and judicial support, to push beyond the traditional application of the rules. *Supra*, Clyde, S. E. note 1, p. 62.

Courage to Reform

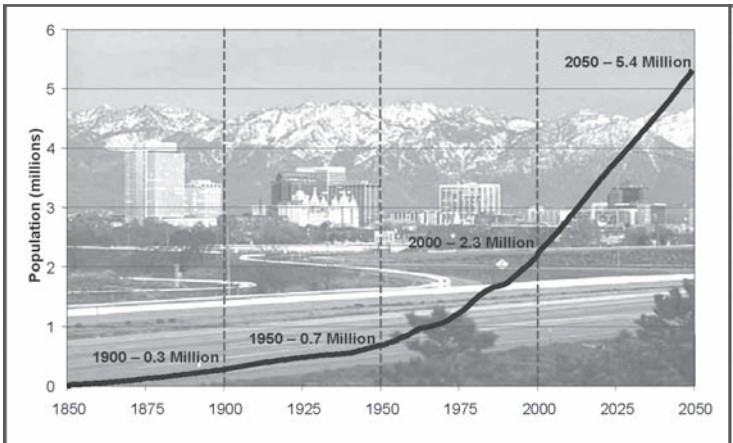


Figure 1, Utah Population Trend and Projection

Source: Utah Governor's Office of Planning and Budget, 2005

Rankings determined by percentage change in population based on 1990 and 2000 Census figures for states in the U.S.

The Nation's Five Fastest Growing States and Growth Rate Rankings of Other Western States

Source: Census 2000

Beneficial Use

Preference Evolution

Human Survival

Prorated Sharing

Domestic & Agriculture Preference

2009 Repeal

Condemnation

Utah's Domestic Use Preference

Another example of how time and events can induce change in the Doctrine is in the area of domestic preference — that allows domestic use by an individual to trump all other uses in times of shortage regardless of priority. Domestic preference has slowly evolved in the West to embrace municipal use rather than just domestic use on isolated farms. The Utah experience provides a prime example of this change.

Utah's domestic preference dates back to the State's adoption of the Doctrine. As the territorial government began to codify the Doctrine, it included a domestic preference as part of its body of statutes. Domestic preference first appeared in Utah statutes in 1880.

An 1880 statute (L. 1880, Ch.20 §14) provided:

> …but those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for irrigating lands shall have preference over those using the same for any other purpose, except domestic purposes. Provided, such preference shall not be exercised to the injury of any vested right, without just compensation for such injury.

The statute section recognized the common law "elemental right" to use water for human survival, both for drinking water and to protect the ability to grow food for human consumption. These uses were preferred over all others. This made sense in historical context, as many people lived on individual farmsteads, and often obtained their drinking water from the ditch they irrigated from and from which their livestock also drank. Protecting the ability and right of humans to use water for their basic survival to the exclusion of some other diversionary right was in the public interest. However, the territorial legislature recognized that the assertion of this preference could cause harm and therefore required compensation if injury occurred.

Utah adopted its permit system to administer appropriations and water rights in 1903, and the domestic preference was retained in the 1903 water code. The legislature, however, dropped the requirement of compensation but added a requirement derived from Riparian Rights water management — i.e., proportionate distribution of the available supply during low flow conditions (thereby ignoring priorities). This prorated sharing had a two-tiered approach. Domestic use came first, and agricultural use came second. All other rights were subordinate during times of scarcity. The section does not, though, define when "scarcity" exits.

The 1903 statute (L 1903, Ch. 100, §54) provides:

> …provided, that whenever the natural flow of any stream shall have receded in volume to the annual low water stage, then the rights of all users to such flow at such stage shall be deemed to be equal as to priority, and the water when at or below such stage, shall be apportioned pro-rata among said users, but in times of scarcity, while priority of appropriation shall give the better right as between those using the water for the same purpose the use for domestic purposes shall have preference over use for all other purposes and use for agricultural purposes shall have preference over use for any other purpose, except domestic use.

Minor changes were made in 1905. The legislature dropped the pro-rata distribution concept during low flow conditions in 1919, but limited the exercise of the domestic preference to those situations where a scarcity existed and conditioned that exercise on there being no unnecessary waste (L 1919, Ch. 67, §10). This version of the domestic preference law remained on the books unchanged until the 2009 General Session, when the section was repealed (H.B. 241, 2009 General Session). However, as a compromise to municipal interests, the sponsor of the bill agreed to defer the effective date of the repeal until May 11, 2010 to give interested parties time to work on possible amendments to the law that would salvage the domestic preference under certain circumstances.

Municipalities and others weighed in urging retention of the domestic preference — even though no one seemed to be aware of the preference ever having been asserted in recent history, and never by a municipality or public water provider. They argued that the repeal of the section would take away the incentive for parties to negotiate reasonably, leaving public agencies and municipalities only the choice of exercising their power of eminent domain to acquire water rights. Further, if a city or public agency had to resort to condemnation, they would certainly go after the earliest priority water right, as priority — in the absence of the preference statute — would provide the best drought protection. That argument led to an acceptable compromise bill.

Beneficial Use

Health, Safety & Welfare

Agricultural Purposes

Compensation

Limited Duration

States' Approach

Differing Applications

General Rules

Utah's New Preference Statute: Proposed Compromise

The Utah "Executive Water Task Force" proposed an amendment to Utah Code Ann. §73-3-21 that was enacted by the legislature in it 2010 General Session. The new preference statute retains the preference in times of a declared emergency, but limits the use of water to drinking water, sanitation, and fire suppression so that other existing uses are disrupted only to protect the basic public health, safety, and welfare needs of society.

The section now provides:

73-3-21.1. Priorities between appropriators.

(1) As used in this section, "temporary water shortage emergency" means a shortage of water:

(a) whether caused by drought, manmade, or naturally caused;

(b) for which the governor has declared an emergency; and

(c) that may not exceed in duration more than two consecutive calendar years.

(2) (a) Appropriators shall have priority among themselves according to the dates of their respective appropriations, so that each appropriator is entitled to receive the appropriator's whole supply before any subsequent appropriator has any right.

(b) Notwithstanding Subsection (2)(a), if there is a temporary water shortage emergency, the use of water for drinking, sanitation, and fire suppression has a preferential right over any other water right for the duration of the temporary water shortage emergency if:

(i) the water is used by:

(A) an individual water user;

(B) a county or municipality; or

(C) a public water supplier, as defined in Section 73-1-4; and

(ii) the water is used without unnecessary waste.

(c) Notwithstanding Subsection (2)(a), if there is a temporary water shortage emergency, the use of water for agricultural purposes, including irrigation and livestock water, has a preferential right over any other right, except as provided in Subsection (2)(b).

(3) A person using water preferentially during a temporary water shortage emergency shall pay annually to the appropriator whose water use is interrupted the reasonable value of the water use interrupted, crop losses, and other consequential damages incurred as a result of the interruption.

The preference can be asserted by any public water supply agency, a municipality, or an individual water user where an emergency situation exists as declared by the Governor. The preference may be asserted for only two consecutive years and is not available to relieve a community of its poor planning efforts, but only where a legitimate emergency situation exists — whether caused by drought, the loss of a well or other system failure, or other causes. The amendment also requires the payment of compensation to those water users whose use of water is interrupted by the assertion of the preference. At the end of the two year period, if the shortage persists the city or public water supplier asserting the preference would need to acquire the right through a negotiated purchase or through condemnation.

Preference Laws in other Western States

The domestic preference is not unique to Utah. The majority of the States using the Doctrine have a domestic preference statute in place. Only five of the seventeen prior appropriation States do not have an express "use" preference list: Montana, Nevada, Oklahoma, South Dakota and Washington. Even these states have recognized the need for some preference. For example, both Montana and Nevada have adopted use preferences for groundwater (*see* Mont. Code Ann § 85-2-506 (2007) and Nev. Rev. Stat. Ann. § 534.120(2) (2007)). South Dakota has declared domestic use the preferred use, but has declined to elaborate or rank other uses (S.D. Codified Law § 46-1-5 (2007); and Washington State has given authority to the State's Department of Ecology to reserve water for future uses — which implies a preference should be made (Wash. Rev. Code. Ann. § 90.54.050 (2007)). The remaining prior appropriation States all have use preference lists of one sort or another. Most all of the states have expanded the preference to include municipal use in recognition of the changing face of the West.

In general, use preferences have been applied: 1) as a factor in weighing which pending applications for appropriative rights should be approved when the resource is inadequate to support all applied for uses; 2) in the granting of conditional appropriations that are made subject to or subordinated to subsequent preferred uses; and 3) as a basis for exercising the power of eminent domain. *See* Robert E. Beck, *Use Preferences for Water*, 76 N.D. L. Rev. 753, 770-1 (2000) (citing Alan D. Gross, *Condemnation of Water Rights for Preferred Uses-A replacement for Prior Appropriation?*, 3 Willamette L.J. 263 (1965). A brief survey of preference law in each of the Doctrine States follows this article.

Some general observations and rules do exist. Generally, every State prefers domestic and municipal uses over other uses (*Id*. at 770.) In general, consumptive uses appear to be favored, with non-consumptive uses such as navigation, recreation, and power generation usually near the bottom of the list (*Id*.). Actual

Beneficial Use

use of the preference lists differs from State to state. The majority of the states use their respective preference statutes to determine priority when competing new applications to appropriate are being considered (Appendix A). A smaller majority use the preferences to determine priority among actual or existing uses or established water rights, allowing a higher use to condemn an existing lower preferred but prior use (*Id.*). A minority of the preferences elevates domestic and municipal use over all other uses, regardless of priority during a drought or other water emergency (Beck, *supra* n. 4 at 771; *see* e.g. U.C.A § 73-3-21 (2007)). Utah's law fit into this category. Many states also inject a "public interest" component into the preference determination. Beyond these general observations, each State treats their use preferences differently.

"Public Interest" Consideration

New Rights

Under the Doctrine in force in the 17 Western States, all water rights are appropriated subject to the "public interest." The approval of an application to appropriate is usually conditioned by the permitting agency to ensure other water rights are not interfered with by this new use of water. Additional conditions may be imposed that are designed to protect the "public interest" in water and in most of the appropriation states an appropriation may be denied if it would be detrimental to the public interest.

Subordination

Public interest conditions can take the form of ignoring priorities to allow a preferred use (domestic use, livestock water, etc.) to take priority over a previously filed application, if the use is deemed to be more in the public interest than the subordinated use. States have always reserved the power to limit private uses, and this power extends to the protection of other users and to the enhancement of State or community interests in water allocation (Tarlock, *Law of Water Rights and Resources*, §5:51, p5-82). Most western states have delegated the power to reject applications that are contrary to the public interest to the State administrative agencies (*Id.* at §5:52, page 5-82). That power allows the State administrative agency to reject a senior application in favor of a junior appropriation or to deny an appropriation even when unappropriated water is available in the source — if the approval of the appropriation would preclude a more beneficial use of the water. Utah Code Ann. Section 73-3-8.

Agency Rejection

Economic Benefits

Early examples of public interest determinations dealt mostly with a cost benefit analysis to compare competing applications and approved the one that appeared to maximize net economic benefits to the State (Tarlock, *supra*, §5:52, p. 5-83). Authority was gradually expanded to subordinate a prior power application to a junior multi-purpose application. *Tanner v. Bacon*, 103 Utah 494, 136 P.2d 957 (1915).

Colorado Exception

Colorado remains the exception to the public interest rules. Consideration of the public interest is limited to the (Colorado) water court's imposition of special conditions in conditional decrees to protect vested senior rights, including instream flow appropriations, since it is presumed that the State Engineer will perform his or her administrative and statutory duties to enforce priorities to protect prior rights from injury. See *Application of Hines Partnership*, 929 P.2d 718, 723 (Colo. 1996), citing *Board of County Commissioners v. Crystal Creek Homeowners Ass'n*, 891 P.2d 952, 972-975 (Colo. 1995), where the Court held that public interest objections are contrary to the doctrine of prior appropriation. Statutory law requires the State Engineer to determine when senior rights are being impaired and to enforce priority as necessary to avoid injury to the senior appropriators without regard to the effects on the environment, instream flows, or other public interest concerns.

Idaho Appropriations

Idaho has held that the State water agency may determine whether a proposed appropriation will conflict with the local public interest. *Hardy v. Higginson*, 849 P.2d 946 (Idaho 1993). In *Shokal v. Dunn*, 707 P.2d 441 (Idaho 1985), the court held that an applicant must show that the proposed appropriation was in the "local public interest." The local public interest is defined as the affairs of the people in the area directly affected by the proposed use. Where the appropriation will conflict with that local public interest, the State Engineer is authorized to deny the application. Idaho has weakened its public interest law by enacting a statute (Idaho Code §42-222) which precludes environmental groups from raising public interest arguments to contest change applications in the Snake River General Stream Adjudication.

Specificity Lacking

Most State public interest statutes lack specific guidelines on how the public interest is to be determined and applied, leaving the initial determination to the permitting agencies which is then subject to judicial review. An example would be Utah Code Ann. §73-3-8, which simply provides that the State Engineer may deny an application if it is detrimental to the public welfare. Alaska appears to be the exception in that its statute does provide some guidance to the agency in determining the public interest. These include a review of alternative uses that might be precluded by the appropriation and the effect upon public access to navigable waters.

Broad-Reading

The public interest should be read broadly to secure the greatest possible benefit for the public. Relevant elements and relative weights may vary with the local needs, circumstances, and interests. If the administrative agency gives weight to economic benefits, it should also give weight to economic detriments, effect on water quality, alternative uses that might be precluded, and its impact on scenic, recreation, lost economic opportunities in the area of origin, and other similar factors.

Beneficial Use

Rejection Authorization

Changing Attitudes

Competing Future Uses

Groundwater "Mining"

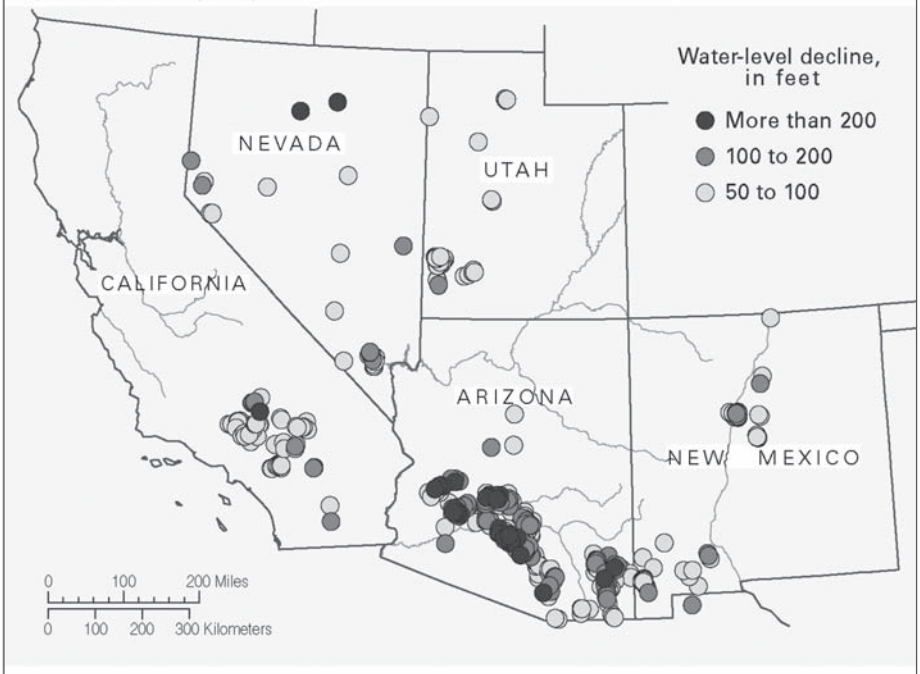
Public interest review is not a violation of the appropriator's right to appropriate water, even in those states like Idaho where the right to appropriate is constitutionally guaranteed, as all appropriated water rights are acquired subject to the public interest. Utah law requires the State Engineer to evaluate all applications to appropriate, as well as applications for a change of use, by applying the public interest (and other) criteria contained in Utah Code Ann. §73-3-8, which authorizes the State Engineer to reject an application found to be detrimental to the public welfare. *See* also *Bonham v. Morgan*, 788 P.2d 497 (Utah 1989).

Historically, priority has been the dominating factor in approving new applications to appropriate as well as those seeking a change of approved water use. While State Engineers generally paid lip service to the other statutory criteria — such as public interest considerations or whether a more beneficial use of water was being precluded by the appropriation — these other factors were clearly of secondary importance to priority. That attitude, however, is changing. This is especially true where a State has reached essentially full allocation of the available water resources. In those instances, priority can no longer be the sole governing criterion for approval.

One recent example comes from Beaver County, Utah. The neighboring county to the south (Iron County), through a local water conservancy district, has filed applications to appropriate essentially all of the very limited groundwater available for development in western Beaver County. The district's intent is to drill deep wells to access Beaver County groundwater and pipe it to Cedar City, in Iron County, to foster future long-term economic growth and development in Iron County. Beaver County has reacted as could be expected, protesting the applications and arguing that allowing Iron County to appropriate this limited resource would deprive Beaver County the opportunity for future economic growth and development. Beaver County points out that it has become a central player in alternative energy development in Utah. Wind generation, geothermal, and solar generation projects are all either under construction or being planned for this area of the county. Additional mining opportunities exist as well, and all of these new projects require water today — not in the distant future. In addition, unlike many areas of the State, Beaver County's agricultural economic sector is growing. Without reserving this limited groundwater resource for Beaver County's use, the new mining, alternative energy projects, and other opportunities for economic development would locate elsewhere or force the conversion of agricultural water to industrial use with the resulting loss to that growing sector of the county's economy. Thus, the county argues that it would be detrimental to the public welfare of the citizens of Beaver County — the area of origin of this limited groundwater resource — to allow a neighboring county to raid its water supply. The State Engineer's decision on Iron County's applications is expected to be issued within the next few months.

Groundwater Decline

Locations in the basins of southern California, Nevada, Utah, Arizona, and New Mexico where substantial ground-water level declines have been measured. In some areas, water levels have recovered in response to reduction in pumping and increased recharge efforts (Leake and others, 2000).



Adapted from USGS Fact Sheet 103-03, November 2003

Challenges to Groundwater Management

A "mined" aquifer is one where the groundwater in storage is being withdrawn more quickly than it can be replenished by annual recharge — thereby depleting the resource. A few years back the Utah State Engineer suggested that groundwater mining had reach crisis proportions in certain areas of the State. He followed this up with a meeting with the Legislature, looking for guidance in how to manage this problem. At the time, the only authorized tool was to administer groundwater rights strictly on a priority basis. The dilemma he faced, however, was that if priorities were strictly enforced many farmers would likely go bankrupt because the major groundwater users in the basin were junior priority right holders. These "juniors" all had vested water rights and had mortgaged their farms to the hilt to install efficient sprinkler systems. Without water, their crops would of course die and income would be lost, resulting in many defaulting on their loans. Lenders would have little recourse other than foreclosure.

Milford Valley in west-central Utah is a prime example of this particular problem. Following WWII, many new farmers settled

Beneficial Use

Overestimated Water Supply

in the valley and appropriated groundwater for irrigation. They drilled large wells and installed expensive sprinkler systems to use water in an efficient and economical manner. The cruel unknown, however, was that the State Engineer had over-estimated the availability of groundwater in the area. Recent studies show a steady decline in the groundwater levels in this area regardless of the condition of the surface stream. In some areas neighboring Milford Valley the water table has declined several hundred feet. Milford Valley users became concerned that if groundwater production was not curtailed in their aquifer it would also be "mined" — realizing that nature could not hope to catch back up if production levels stayed as they were. Yet, most of these farmers have vested water rights and collectively have invested millions of dollars in irrigation facilities in reliance on their vested water rights.

Utah Executive Water Task Force Recommendations

To address the water management challenges discussed above, the Utah Executive Water Task Force, a stakeholder group focussed on a wide range of water issues, came up with recommended options — some of which were acted upon.

"Unitization" — The Initial But Unused Concept

"Rule of Capture"

The Executive Water Task Force drew on a lesson from history and the experiences of the oil and gas industry. The "rule of capture" generally controlled ownership of oil and gas in all States, holding that overlying landowners owned the oil and gas beneath their soil and had the right to capture or develop as much as they could from their land even if they were draining oil from underneath their neighbor's land. Thus, there was a tremendous incentive on the part of landowners overlying oil and gas reservoirs to produce and capture as much of the product as they possibly could to maximize their return. This was done without regard to the impacts on their neighbors or on the oil and gas formations themselves. Wells were being drilled almost on top of each other, which in turn forced drilling of off-set wells by others to protect their ability to capture their share of the resource. The States stepped in, as did the federal government on federal leases, and through the exercise of their police powers imposed compulsory pooling arrangements, sometimes called communitization or unitization, on the owners and operators of oil and gas wells. A unit operator was named who operated all wells for the benefit of those common owners. Expenses and profits were shared in proportion to the land they brought into the unit. Well spacing orders were imposed to limit the number of wells that could be drilled in a given area to protect the formation from subsidence. Disputes over shares of production profits were settled in binding division orders that divided up the proceeds. The Water Task Force initially suggested that a similar approach could be used in critical groundwater basins to manage the available resource and avoid economic disruption to an entire community.

Compulsory Pooling

Groundwater Application

The State Engineer would need statutory authority to enforce groundwater unitization just as was required in the oil and gas context. Once that legislation is in place, the State Engineer could declare an area like the Milford Flat a critical groundwater basin and force the unitization of the groundwater resources. All water right owners within the unitized area would be required to join together in the unit. Not unlike a mutual water company, the water users would pool their available water rights and priorities for the benefit of everyone in the common groundwater pool.

Unit-Wide Regulation

A common unit operator could be appointed. Similar to a water master, this unit operator would have authority to regulate the diversion of water and use by everyone in the unit. The unit operator could be a public district, an irrigation district, or even a non-profit corporation formed by the community. Title to the unitized water rights would remain with the appropriators, so as to protect the property rights of the individual appropriators. Decisions on production levels and steps to be taken to protect the resource would be made by all stakeholders within the unit, under technical guidance from the State Engineer, the Division of Water Quality, and other interested parties and agencies.

Exclusivity Eliminated

Within the pooled resource, those who have early priorities would certainly have to give up the exclusivity afforded them by their priorities. Those with junior rights would gain access to some water, but would not be able to have everything they may want. However, the ability to have access to some water in times of shortage or until a "mined aquifer" has been rehabilitated is not a bad tradeoff.

If the State Engineer determined that a reduction in acreage was required for a period of years to allow the aquifer to recover, the members of the unit would decide how that reduction would be shared. One possibility would be for rights of a certain priority to simply not be diverted for a period of time (curtailed), with the rights protected against forfeiture by the administrative order requiring curtailment for a period of years. The diversions made would then come from the pooled rights with earlier priorities.

Diversion Options

Everyone in the unit would be allowed to divert some water and keep some land in production, rather than the senior right holders having a full water supply and juniors being shut off entirely. This would avoid total economic disruption within the unit. Acreage that would be allowed irrigation water during times of shortage could be traded or leased within the unit, so that a larger land owner who might better tolerate the reduction could transfer some of his allowed acreage to a smaller producer who is less able

Beneficial Use

to withstand the economic hit from reduced production. This unitization of water rights for the benefit of everyone in the unit would enable everyone within the unit to use some water under the combined or pooled priorities of all. Some legislators, however, thought this notion was too utopian and questioned whether such a system of groundwater management could work.

Unitization Benefits

Unitization certainly did work in the oil and gas context. While it was fought by some, it has proven to be the savior of all. In the water context, the benefit to the junior appropriator who would otherwise be cut off entirely is easily understood. However, one might question the incentive for a senior appropriator — protected by his priority and the "no-injury rule" — to participate in such a plan? (The "no injury rule" protects an appropriator's means and methods of diversion, use, and access to source and return flows against interference by subsequent appropriations or changes of use by other water users.) The answer is not quite as obvious but it is nevertheless there. The continued heavy "mining" of water from already over-taxed aquifers will cause subsidence in the formation (water table) and diminish the storage capacity of the groundwater system. Once subsidence occurs, it generally cannot be reversed, and the result is a loss of groundwater storage capacity for everyone, including the senior. Further depletion of groundwater reserves often causes impaired water quality, thus damaging the resource for many years. Further, if the strict enforcement of priorities drives even 50% of the farmers in the Milford Flat off their land, those who remain will clearly suffer economically. There will be less employment opportunities for their children in their dying towns and on non-existent farms. There will be fewer people engaged in agriculture to buy their forage, livestock, tractors and other farm vehicles, and the ripple effect through the local economy will be felt by everyone.

Historical Pooling

The Prior Appropriation Doctrine at its origin protected local communities. Mutual irrigation companies were formed almost everywhere in the West because communities saw the common good in pooling their water rights, blending their sources and priorities so that everyone in the company shared in the available resource, thereby buffering the harsh effects of strict enforcement of priorities. The economies of scale made the construction of large conveyance canals and storage facilities possible; facilities that would have been beyond the economic capacity of a few to do on their own. As a society, we have moved a long ways away from that historical beginning of irrigation in the West.

The unitization model could also work in urbanized areas where municipalities compete for the common water supply. The creation of large urban water districts has accomplished a lot of what a unitization plan could do in the context of new large water developments. However, when you get down to the level of the competing retail systems all seeking to use the same limited groundwater resource, the unitization approach may well save the day.

Actual Legislation: A Modified Approach to Groundwater Management

Management Act Passage

Lacking Legislative support for an actual unitization approach, the Task Force went back to the drawing board and developed the Groundwater Management Act that was adopted by the Legislature in its 2006 General Session. Groundwater Management Act (Act), Utah Code Ann. §73-5-15 (2006). Available at: http://le.utah.gov/~code/TITLE73/htm/73_05_001500.htm.

Triggering Event

It was the conclusion of the Task Force and the water community that supported this bill, that any new management tool must take a local focus. Aquifer conditions vary too much throughout the State to approach this with a one-size-fits-all solution. Any new management program must work within the existing Prior Appropriation Doctrine because groundwater rights are vested property rights and people's economic livelihoods depend upon the security and stability of these property rights. Priority administration had to remain a component of the law, because priority is a foundational principle of the Doctrine. However, there had to be some triggering event devised to justify the harsh remedy of priority administration. Otherwise, invoking priorities is simply too arbitrary. The triggering event agreed upon was when withdrawals exceed the determined safe yield of the basin.

Aquifer Safe Yield

In the surface water context, it is easy to see where stream flows drop off and junior rights need to be curtailed to protect more senior right holders. In the groundwater context, however, it is difficult to know when the available supply may be inadequate to meet the needs of everyone so as to justify curtailment of the more junior rights. Therefore, the Act tries to tie administration to safe yield of the basin and will not allow priorities to be enforced if the safe yield has not yet been exceeded. Even then, the Act promotes local options and solutions — in lieu of forced unitization — and will allow the affected local water users to devise by voluntary agreement a more equitable solution to management than strict priority administration.

Local Options

The threat of strict priority administration in the Milford Valley caused a rush by the more wealthy water users to acquire the most senior rights in the area as protection against the State's enforcement. They then attempted by change applications to force these earlier priority rights into the most heavily over-drafted area of the valley, which would enable them to force curtailment of the juniors' diversions. Some would argue that within our capitalistic economy, there is nothing wrong with allowing the market place to

Water Sales

Beneficial Use

Market Alternatives

Wind Erosion Prevention

Adaptive Doctrine

Reallocation Costs

"solve" the allocation issue. Water, however, is a public resource and one that all of society depends upon for the quality of life and the ability to pursue economic activities. Market solutions alone favor only one element of society and leaves the many other stakeholders out of the process altogether. One goal of the Act was to provide an alternative to market-based reallocation in recognition that junior appropriators had also made significant investments in their farms and should not be forced out of business because the State Engineer had erred in over-estimating the water available for appropriation many years in the past.

Other unintended consequences to market allocation can occur. One example has been the reversion of once-cultivated land to desert as water rights are transferred to other lands and once fertile lands are over-grazed and denuded of vegetation. The blowing sand conditions this creates are reminiscent of the Dust Bowl of the 30's. The State Engineer arguably has sufficient authority under his public interest powers to require a landowner to plant drought resistant vegetation if he or she is going to pull irrigation water off the land, to prevent this type of wind erosion. This requirement should be imposed as a condition to allowing the transfer of senior water rights from productive farmland to other perceived higher economic uses. Colorado has certainly taken that position and other states could do so as well to protect the land values of those who remain in agricultural production. *See City of Thornton v. Bijou Irr. Co*., 926 P.2d 1 (Colo. 1996)

Conclusion

The Prior Appropriation Doctrine can be an instrument of change. It can be used to promote more efficient utilization of appropriated water and to adapt to our changing notions of what constitutes a beneficial use of water. It can facilitate the reallocation of existing rights to new (but not necessarily economic) uses, and protect uses that are perceived to be more in the public's interest. The Prior Appropriation Doctrine has adapted and will continue to adapt to competing demands for water. While the system is far from perfect, the potential for constructive reform clearly is there, and in the face of the vested rights that exist in the West, it is not practical or really even possible to impose some entirely new system of water allocation.

Reallocation of water has a cost. Society must determine who should bear or who can best bear the cost of reallocation. If reallocation is forced through the application of the Public Trust Doctrine or through over aggressive use of the State Engineer's public interest powers, the costs of reallocation will likely be unfairly heaped on the agricultural water user. That user will be told that the property right he or she once had is reduced or gone simply because the rules of the game have changed. Society should be willing to pay the costs of retiring lands from irrigation or investing in greater irrigation efficiencies to make water available for other uses, including environmental and aesthetic uses. It truly is unfair to simply take water away from those who have vested rights and have invested fortunes on the assumed security of those vested rights. We also need to maintain farms in this county not only to feed ourselves, but also to help feed a growing world population. Converting all of our farms into condos is not in the public interest, but without creating some economic incentives for farmers to keep their lands in production, they have little reason to not cash out and reap the benefits of land value appreciation in developing areas.

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Steven E. Clyde is a Vice President, Shareholder and Director, and Chair of Natural Resources and Water Law Practice Group with the Clyde Snow law firm in Salt Lake City, Utah. Throughout his thirty-four years of practice, Mr. Clyde has specialized in natural resources law, including oil and gas, public land law, and mining law, with a primary emphasis in water law. He received his J.D. from the University of Utah College of Law (1975).

Mr. Clyde has represented many clients in the buying and selling of water rights and in the conversion of water rights from agricultural irrigation use to domestic, municipal, and industrial use for development of real property. He has represented parties in the negotiations of a Lease of Power Privilege on Bureau of Reclamation Facilities for the Central Utah Project and in the negotiation of power sales contracts from the hydroelectric facilities constructed under the lease. He is general counsel to the Central Utah Water Conservancy District and the sponsor of the Central Utah Project.

Steven has represented many individuals and entities before the State Engineer of the State of Utah, both as applicants and as protestants to water rights applications, and has litigated water rights appeals in the district courts, the Supreme Court of the State of Utah, and the federal courts. He also has experience in local government law and has represented many clients in planning and zoning activities before city and county planning and zoning authorities. Additionally, he has served on the Utah Legislature's Water Task Force and the Executive's Water Task Force from 2007 to 2009 to revise Utah's water laws.

Mr. Clyde has served in many capacities in both the Utah State Bar Association and the American Bar Association's Section on Natural Resources, Energy, and Environmental Law. He served on the governing Council of the ABA Section on Natural Resources, Energy and Environmental Law (1989-1991), and as Chair of the Water Resources Committee of that section (1985–1988).

Steven is a contributing author to the water law treatise Water and Water Rights. He has also served as an adjunct faculty member of the S.J. Quinney College of Law at the University of Utah, teaching water law. He has published several articles and frequently lectures at CLE conferences on topics related to Western water law.

STATE SURVEY OF DOMESTIC PREFERENCE LAWS

States Preference List Comments

Most of the 17 prior appropriation States have a use preference list. Oklahoma, has just recently abandoned its preference list. The preference statutes of the various prior appropriation states are materially the same. The uses are typically preferred in the same general order. There are, of course, local differences — like the mining emphasis in Idaho, and rail transportation and steam generation in Wyoming. The significant difference is in the application of the preference lists to applications, existing rights, or both.

A majority of the States allow the preferences to determine which of two competing applications will be approved. This seems to be the dominant purpose of the lists. Utah is in the minority in that it allows an actual preference in uses in times of shortage, rather than just limiting its application to new appropriations. Domestic use (but not municipal use) is universally preferred, with economic activities next, and recreational uses (when this is recognized as a beneficial use) being the least preferred. The obvious intent of these statutes is to make sure that domestic, or drinking water for human consumption, is protected. This is accomplished by approving applications for domestic and municipal uses over other uses, favoring domestic and municipal uses during times of shortage, and in a few cases conditioning approval on a conditional right of condemnation (typically only California does this).

Arizona

Arizona has a very well defined preference statute. However, the statute only applies during the initial application process: "As between two or more pending conflicting applications for the use of water from a given water supply, when the capacity of the supply is not sufficient for all applications, preference shall be given by the director according to the relative values to the public of the proposed use." Az. Rev. Stat. Ann. § 45-157(A). The preferred use is domestic and municipal (including gardens not exceeding one-half acre to each family). *Id.* at 157(B)(1). Because the preferences are not applied to uses under existing water rights, no property right is being disrupted, and therefore no condemnation requirement (i.e. subordinating of a private right to serve public purposes) appears to exist in Arizona.

California

The California statute applies to both the use of existing rights and the appropriation of new rights. Municipal and domestic needs are preferred over any other needs. In addition, California recognizes Pueblo Rights. The statute gives a preference to a qualifying municipality to the water necessary for municipal uses within its territorial boundaries. *See e.g. City of Los Angeles v. City of San Fernando*, 537 P.2d 1250 (Cal. 1975). The California code states that the application for a permit for the use of water for the municipality or the inhabitants thereof for domestic purposes shall be considered first in right, irrespective of whether it is first in time (Cal. Water Code Ann. § 1460 (West 2007). When any application to appropriate is filed, the State Water Board shall allow the appropriation for beneficial purposes under such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated. *Id.* at § 1253. In acting upon applications to appropriate water the board shall be guided by the policy that the domestic use is the highest use and irrigation is the next highest use of water. *Id.* at § 1254. This policy can include conditioning approval of the water right as a lesser right to a preferred use, typically a municipal use regardless of priority. *Id.* at § 1463.

Colorado

Colorado has both application and use preferences. Colorado's Constitution states that when the water of any natural stream is not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. Colorado Constitution art XVI § 6. However, this constitutional scheme of preferences is significant only for the purpose of establishing which use may be condemned upon payment of just compensation (6 Waters and Water Rights 433 (2007)). Essentially this is a prioritized condemnation list, with lesser uses to be condemned in favor of preferred uses upon payment of just compensation.

Idaho

The Constitution of Idaho grants the right to appropriate and divert the unappropriated waters of the state, and this [right] shall never be denied. Idaho Constitution art. XV § 3. Domestic use is the favored use, with agricultural use being second. *Id.* However, Idaho provides that in any organized mining district those using the water for mining purposes or milling purposes connected with mining, shall have preference over those using the same for manufacturing or agricultural purposes. *Id.* The usage by such subsequent appropriators shall be subject to such provisions of law regulating the "taking" of private property for public and private use. *Id.* Condemnation is required to assert the preference.

Kansas

Domestic is the favored use with municipal, irrigation, industrial, recreational water, and power uses filling out the list. K.S.A. § 82a-707(b) (2007). However, the date of priority of an appropriation, rather than the purpose of use determines the right to divert and use water at any time when the supply is not sufficient to satisfy all water rights that attach to it. *Id.* The holder of a prior water right for an inferior beneficial use of water shall not be deprived of the use of the water either temporarily or permanently as long as such holder is making proper use of it under the terms and conditions of such holder's water right and the laws of this state, other than through condemnation. *Id.* Thus the use preference is only realizable through condemnation.

In the application process, applications for domestic use receive the benefit of a priority date either from the date of the filing of the application in the office of the chief engineer or from the time the user makes actual use of water for domestic purposes, whichever is earlier. This may allow an existing domestic use to obtain an earlier priority date.

Montana

Montana only recognizes use preferences with regard to groundwater, where domestic is the favored use. Otherwise, there is no preference and priority is the only basis for use and appropriation.

Nebraska

Nebraska favors domestic use and then agricultural uses when the waters of any natural stream are not sufficient for the use of all those desiring the use of the water. Nebraska Constitution art. XV § 6. Condemnation does not appear to be required to exercise the preference. Further, there does not appear to be any preference in use, only during the application process.

Nevada

Nevada, like Montana, only has a use preference statute with regard to groundwater. Nev. Rev. Stat. Ann. § 534.120(2) (2003). There is no preference statute with regard to applications or uses. This is one of four states without a use preference list.

New Mexico

New Mexico has both use and application preferences. The New Mexico statute states: "[W]here it is not possible or reasonable to grant all applications, preference shall be given to the greatest need and to the most reasonable use, as may be determined by the board, subject to the approval of the court." N.M. Stat. Ann. § 73-14-47(I) (1978). Preference shall be given, first, to domestic and municipal water supply, and no charge shall be made for the use of water taken by private persons for home and farmyard use, or for watering farm stock; second, to supplying water used in irrigation, processes of manufacture, for the production of steam, for refrigerating, cooling and condensing and for maintaining sanitary conditions of stream flow; third, for power development, recreation, fisheries and for other uses. *Id.*

In case any party makes greater, better or more convenient use of the waters of the district without formal application, the fact of such use shall serve all purposes of an application, and the State Water Board may proceed to determine a reasonable rate of compensation for the displaced use, the same as though formal application has been made. *Id.* Thus, a more beneficial use can be recognized despite a failure to file a formal application. However, compensation must be paid to any claimant that has followed the statutory procedure and had their application denied as a result of the more beneficial use. New Mexico has recognized Pueblo rights, but these are not considered to be statutory rights.

North Dakota

North Dakota added its preference statute in 1963 and amended it in 1977. It states that when there are competing applications for water from the same source, and the source is insufficient to supply all applicants, the State Engineer shall adhere to the following order of priority: 1) Domestic use; 2) municipal uses; 3) livestock; 4) irrigation; 5) industrial; and 6) fish, wildlife and outdoor recreational uses. N.D. Cent. Code § 64-04-06.1 (2007). North Dakota only allows a change in the purpose of use if it is for a superior use. N.D. Cent. Code § 64-04-015.1 (2007). This requirement appears to be unique to North Dakota.

Oklahoma

Oklahoma has no express preference statute. However, in 1990 the Supreme Court of Oklahoma resurrected the riparian doctrine, making Oklahoma a dual system state. *Franco-American Charolaise v. Okl. Water Resources Board*, 855 P.2d 568, 577-578 (Okl. 1990); O.S. 82 §§105.1-105.32, and O.S. 82 §105.1A. This change allowed all riparian owners to divert water for domestic uses under the riparian rights doctrine, which recognized domestic use as an "elemental right" without a permit, but no "true" preference was created. Oklahoma still requires that a beneficial use be demonstrated for any appropriation, but there is no preference in uses when approving or rejecting applications.

Oregon

Oregon has a preference statute that applies to the application process. It provides: when proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption purposes over all other uses and for livestock consumption, over any other use, and thereafter other beneficial purposes in such order as may be in the public interest. O.R.S. 536.310(12) (1987). This is distinctly an application preference, but Oregon also has a use preference statute that comes into play during times of drought. Under this statute, after a declaration that a severe and continuing drought exists, the State may, notwithstanding the priority of water rights, grant preferences of use to rights for human consumption or stock watering use. O.R.S. 536.750(c). Oregon also provides for temporary changes in use, place of use or point of diversion of water without complying with the notice and waiting requirements during a severe drought. *Id.* at (b).

South Dakota

South Dakota has declared that the use of water for domestic purposes is the highest use of water and that it takes precedence over all appropriative rights if it is exercised in a manner consistent with the public interest. S.D. Codified Law 46-1-5 (2007). Beyond this, South Dakota does not recognize preferences in use or in considering applications. Priority is determined by date, but water appropriated for domestic purposes does not require a permit from the Water Management Board. S.D. Codified Law 46-5-8 (2007). Presumably, priority would attach to a domestic right on the date the first work occurred towards making the appropriation simply by applying traditional concepts of the appropriation doctrine.

Texas

Texas has application preferences, which are based on a comprehensive public policy. The preferences are typical of the other states: 1) domestic and municipal; 2) agriculture; 3) mining; 4) hydroelectric power; 5) navigation; 6) recreation and pleasure; and 7) other beneficial uses. Texas has adopted this public policy in order to preserve and properly utilize the State's water. Texas Water Code Ann. § 11.024 (2007). The uses stated above are to be used when making decisions regarding the appropriation of water. Texas Water Code Ann. § 11.139 provides that during times of emergency, authorizations may be made to deal with the drought, but these may require payment of compensation. Compensation may include the fair market value of the water transferred as well as for any damages caused by the transfer of use. Texas Water Code Ann. § 11.139 (2007).

Utah: Discussed in preceding article.

Washington:

Washington does not have a use preference list. The governing statute is very vague as to how water is to be appropriated. The statute gives authority to the State's Department of Ecology to reserve water for future use. Wash. Rev. Code. Ann. § 90.54.050 (2000). These reservations of water may be for agriculture, hydroelectric energy, municipal, industrial, and any other beneficial uses, and shall constitute appropriations. *Id.* at § 90.03.345 (2000). Thus, it seems that Ecology may decide what uses to reserve water for, and may deny applications to appropriate as a result, creating an informal statutory use preference. There is no condemnation language and it does not appear that one use may trump another, even during times of shortage.

Wyoming:

Wyoming provides that preferred uses shall include rights for domestic and transportation purposes, steam power plants, and industrial purposes. Existing rights which are not preferred may be condemned to supply water for such preferred uses in accordance with the provisions of the law relating to condemnation. Wyoming Stat. Ann. § 43-3-102(a) (2007). Preferred water uses shall have preference rights in the following order: i) water for drinking purposes for both man and beast; ii) water for municipal purposes; iii) water for the use of steam engines and for general railway use, water for culinary, laundry, bathing, refrigeration (including manufacture of ice), for steam and hot water heating plants, and steam power plants; and iv) industrial purposes. *Id.* at § 43-3-102(b). It is important to note that the Wyoming statute does not grant an express right of condemnation for the preferred uses of steam power plants and industrial purposes. *Id.* at § 43-3-102(c). However, if a party seeks a change of use to a preferred use and the application is approved, just compensation shall be paid as determined by the direction of the State Water Board. *Id.* at § 43-3- 103. Thus Wyoming allows for changes in use to preferred uses, but compensation is required for these changes.

NW Tribal Water

PACIFIC NORTHWEST TRIBAL WATER

KEY TRIBAL WATER DEVELOPMENTS IN THE PACIFIC NORTHWEST

by Duane Mecham, Senior Attorney
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INTRODUCTION

The US Interior Department's Solicitor's Office has an active Indian water law practice with practitioners in our Washington, DC, and several regional offices. With 45 federally recognized tribes in the Northwest, the Indian water law practice in the Pacific Northwest regional solicitor's office covers a full cross-section of Indian water issues.

Water Issues

KEY CURRENT TRIBAL WATER ISSUES INCLUDE:

- Indian water right litigation
- Comprehensive settlement of tribal water rights in McCarran Amendment adjudications
- Tribal water right administration and enforcement
- Creative solutions to tribal water needs

This article focuses on key developments arising out of tribal water cases in the Northwest.

LITIGATION

Adjudications

Over the past three decades, each State in the Northwest has initiated and actively pursued basin-wide general stream adjudications. In each instance, the State has initiated the adjudication in compliance with the terms of the McCarran Amendment, 43 USC §666, which allows a State to adjudicate in State court all federal and tribal reserved water right claims within the basin. In each of these adjudications, tribal water rights, among others, have been at issue.

NORTHWEST ADJUDICATIONS HAVE INCLUDED:

Washington — Yakima River Adjudication (Yakama Nation) and the associated *Washington Dep't of Ecology v. Acquavella* litigation

Idaho — Snake River Basin Adjudication (Duck Valley, Fort Hall, Nez Perce); Northern Idaho Adjudication (Coeur d'Alene, Kootenai Tribe of Idaho)

Oregon — Klamath Basin Adjudication (Klamath Tribes)

Montana — Montana General Stream Adjudication (state-wide; all tribal claims within Montana)

Minimum Instream Flow

The *Acquavella* State general stream adjudication in Washington determined the full extent of the Yakama Nation's tribal water rights in the Yakima River basin. Early in the adjudication, the court established that the United States generally holds in trust for the Yakama Nation a "diminished" Indian reserved water right with a priority date of time immemorial for "the specific 'minimum instream flow' necessary to maintain anadromous fish life in the river, according to the annual prevailing conditions as they occur [in the Yakima River and its off-reservation tributaries]." *Amended Partial Summary Judgment Entered As Final Judgment Pursuant to Civil Rule 54(b)* at 7-8 (Nov. 29 1990). These instream flow water rights were affirmed on appeal at the Washington Supreme Court. *See Washington Dep't of Ecology v. Yakima Reservation Irrigation District,* 850 P.2d 1306 (Wash. 1993). The *Acquavella* court has also resolved the Yakama Nation's on-reservation consumptive use rights, generally without significant controversy. Recently, the court initiated proceedings to complete this adjudication with a final decree.

TRIBAL WATER RIGHT SETTLEMENTS

McCarran Amendment

Comprehensive tribal water right settlements that resolve all of a tribe's water right claims and are approved by Congress have become the model for addressing tribal water rights over the past twenty years. As noted above, states and water user interests have pushed for final resolution of outstanding Indian water claims stemming from the original 1908 US Supreme Court decision in *Winters v. United States*, 207 U.S. 564 (1908) and its progeny. By the early 1980s, the US Supreme Court had clarified that, under the McCarran Amendment (43 U.S.C. §666), State courts have jurisdiction over all federal and Indian *Winters* reserved water rights. *See Arizona v. San Carlos Apache Tribe*, 463 US 545 (1983). Accordingly, when a State initiates a general stream adjudication that complies with the McCarran Amendment, the United States as trustee is obligated to pursue and defend all legally justifiable Tribal water right claims for all current and future water. Tribes also often appear on their own behalf in these adjudications.

Settlement Benefits

Early experiences litigating Indian reserved water right claims proved expensive and frustrating as well as inconclusive on key matters such as water right administration. This led many parties to pursue settlement of these claims. To address the significant rise in attention and effort to negotiate these claims, the United States has put in place infrastructure and policies enabling the federal government to participate in these negotiations.

NW Tribal Water

Negotiation Principles

While each of the completed Indian water settlements has unique characteristics, successful negotiations have universally been grounded in key principles.

KEY NEGOTIATION PRINCIPLES INCLUDE:

- Settlement is reached where existing water rights of current water users are recognized and kept whole.
- The parties have at their disposal available and adequate water resources that can be secured for current and future water needs for the tribe.
- The parties reach a "comprehensive" settlement that provides certainty for all parties within the basin or basins in which the Indian reserved water right claims are located.
- The parties reach agreement on legal mechanisms that secure enforceable water rights for the tribe and provide for tribal administration of its water resource.
- Congressional funding for the settlement provided to the tribe is justified by the compromise of the claims.

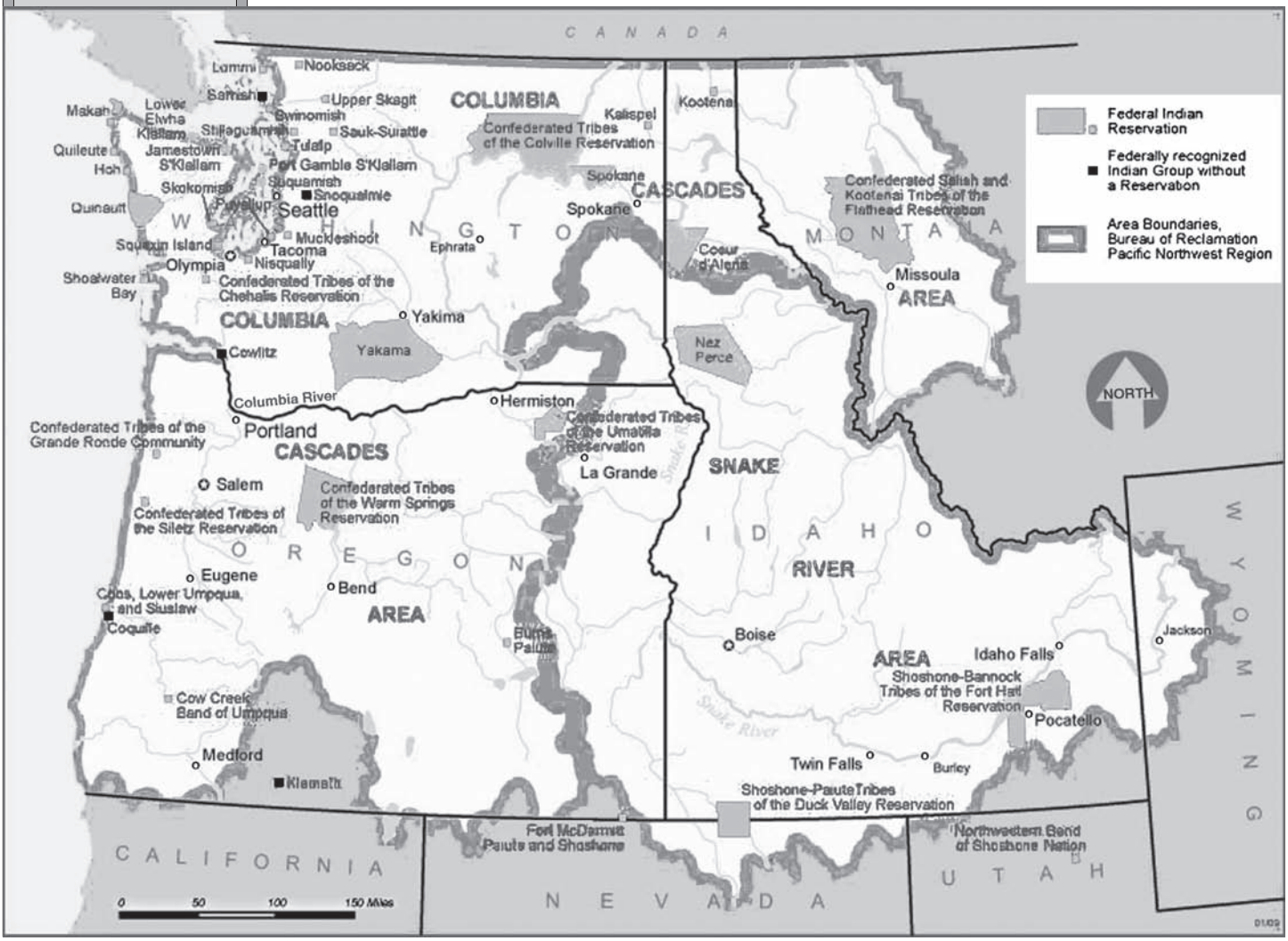
Interior Working Group

Involvement of the Department of the Interior in Indian Water Rights Settlements

The US Department of the Interior (Interior), working closely with the US Department of Justice, has the lead to negotiate on behalf of the United States with tribes, states and others to resolve tribal water right claims. Currently, Interior Secretary Ken Salazar has designated Letty Belin, Counselor to Deputy Secretary David Hayes, to be Interior's lead for tribal water right issues. As part of this responsibility, she chairs Interior's Working Group on Indian Water Settlements. The Working Group, which is comprised of all assistant secretaries and the Solicitor, has the policy lead for Interior's positions on proposed Indian water settlements and related matters. In addition, the Secretary's Indian Water Rights Office, directed by Pamela Williams, oversees over 40 federal negotiation and other teams.

Federal Criteria

In 1990, Interior published in the Federal Register the Criteria and Procedures that federal negotiation teams are to follow when negotiating tribal water settlements. The Criteria and Procedures remain the basis for federal involvement in Indian water right negotiations. *Criteria and Procedures for the Participation of the Federal Government in the Negotiations for the Settlement of Indian Water Rights*, 55 Fed. Rg. 9223 (March 12, 1990).



NW Tribal Water

Negotiations Supported

Recent Settlements

Klamath Goals

Montana "Compacts"

U of I Website

Recent Federal Legislative Activity

Beginning in early 2009, several bills have been introduced in Congress seeking Congressional ratification of tribal water right settlements. In many cases, the federal government was not actively involved in the negotiations leading to the introduced legislation. Thus, the Obama administration necessarily became actively engaged early with the 111th Congress to address issues raised by the introduced bills. In an October 22, 2009 letter Mike Connor, Commissioner of the US Bureau of Reclamation, on behalf of the Interior Department, set out the Administration's position on one of these bills, S965, the "Taos Pueblo Indian Water Rights Settlement Act." Of particular note, Conner explained Interior's preferred approach to negotiations:

> I want to begin by emphasizing…that for over twenty years, the federal government has acknowledged that negotiated Indian water rights settlements are preferable to protracted and divisive litigation. Our policy of support for negotiations is premised on a set of general principles including that the United States participate in water settlements consistent with its responsibilities as trustee to Indians; that Indian tribes receive equivalent benefits for rights which they, and the United States as trustee, may release as part of a settlement; that Indian tribes should realize value from confirmed water rights resulting from a settlement; and that settlements are to contain appropriate cost-sharing proportionate to the benefits received by all parties benefiting from the settlement. Ultimately this Administration's goal is to engage with settlement parties early so that we can address issues during negotiation rather than waiting until legislation is introduced in Congress.

Last July, after extensive discussions with Congressional committees and others, the Administration informed Congress that it could support amended legislation to enact a settlement of the Crow Tribe's water right claims. Interior also recently sent letters to Congress supporting the Taos and Aamodt settlements in New Mexico and the White Mountain Apache settlement in Arizona. In December 2010, Congress enacted the Claims Resolution Act of 2010 (HR 4783; Public Law No. 111-291), which authorized these four settlements.

Indian Water Settlements in the Northwest

This section lists the tribal water right negotiations that have reached settlement or are ongoing in the Northwest, by State.

Oregon

- Warm Springs Reservation — 1997
- Klamath Tribes – the Klamath Basin Restoration Agreement which requires Congressional ratification was announced by the parties in 2010. The agreement's goal is intended to result in effective and durable solutions which: (i) restore and sustain natural production and provide for full participation in harvest opportunities of fish species throughout the Klamath Basin; (ii) establish reliable water and power supplies which sustain agricultural uses and communities and National Wildlife Refuges; and (iii) contribute to the public welfare and the sustainability of all Klamath Basin communities through the measures provided in the agreement. (The agreement is not a full settlement of any water rights.)

Idaho

- Shoshone-Bannock Tribes (Fort Hall Reservation) — 1990
- Nez Perce Tribe — 2005
- Duck Valley Paiute Tribes (Duck Valley Reservation, including settlement of claims in Nevada portion of the Reservation) — 2009

Washington

- To date, no large-scale, Congressionally-approved water right settlements have been reached in Washington

Montana

- Several tribes and Montana have reached tribal water right settlements, called "compacts." To date, the compacts with the Crow Tribe, the Northern Cheyenne Tribe and the Chippewa Cree Tribe of the Rocky Boy's Reservation have been ratified by Congress. The Fort Peck Reservation water code was specifically set up to not require congressional ratification. Efforts to obtain Federal approval of the Blackfeet and Fort Belknap compacts are proceeding. The active negotiation to settle the claims of the Confederated Salish and Kootenai Tribes of the Flathead Reservation in western Montana is discussed below.

A more comprehensive discussion of the above may be found in *Negotiating Tribal Water Rights — Fulfilling Promises in the Arid West*, Colby et al., 2005, University of Arizona Press. In addition, the University of Idaho Law School will soon put on line a website containing all of the existing Indian water right settlements and archiving extensive background material for each approved settlement. The law school's website can be found at: www.uidaho.edu/law.

NW Tribal Water

BENEFITS OF SETTLEMENT — NEZ PERCE WATER SETTLEMENT

While each settlement is unique, a common thread is that each settlement reflects the water resource priorities of the tribe whose claims are settled, while also accommodating the interests of local water users and the involved State. The recently completed Nez Perce water rights settlement illustrates this point.

Water Rights Categories

Indian Reserved Water Rights for Instream Flows

In January 1993, the United States filed in the Snake River Basin Adjudication (SRBA) three categories of water right claims on behalf of the Nez Perce Tribe (Tribe): 1) claims for on-reservation consumptive uses based on the Tribe's 1855 Treaty (the standard *Winters*-type claims); 2) claims for instream flows to protect the fishing rights reserved to the Tribe in Article 3 of the 1855 Treaty; and 3) claims to springs, the access to which was expressly reserved in the Tribe's 1863 Treaty. The Tribe filed on its own behalf virtually the same set of claims. The on-reservation and instream flow claims included a "time immemorial" priority date reflecting the Tribe's historic fishing practice at its usual and accustomed fishing places, while the springs claims included an 1863 priority date.

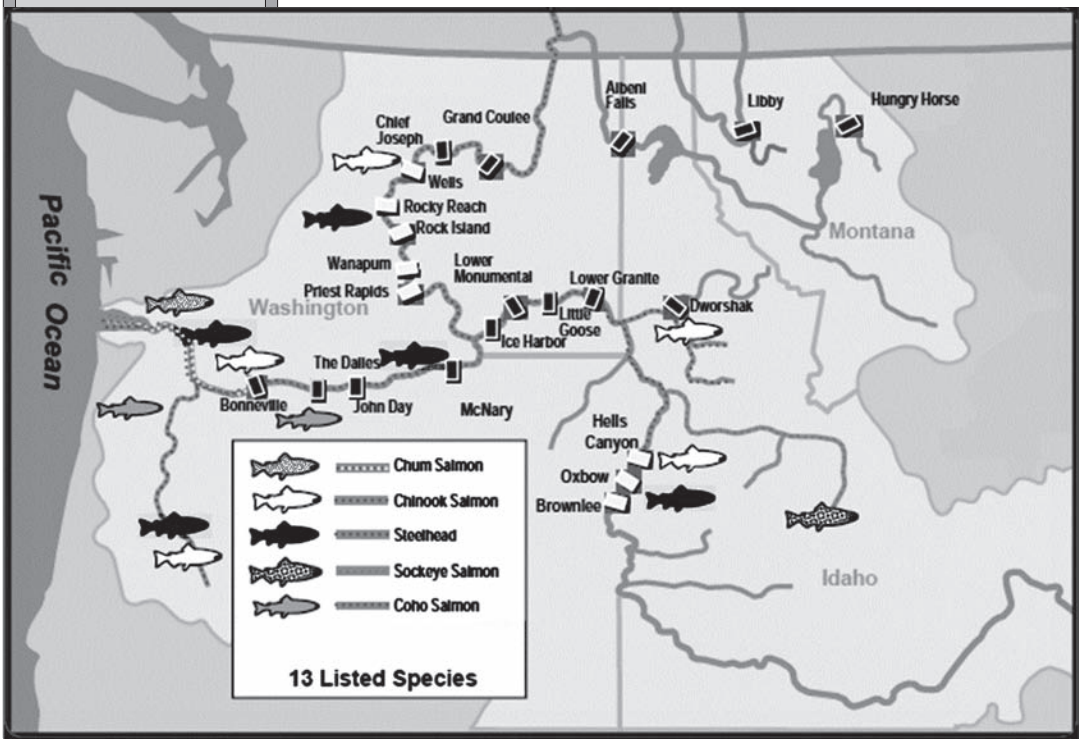
Instream Flow Claims

The off-reservation instream flow claims were, to understate things, controversial, and this article deals with the settlement of those claims. As noted by a commentator who was one of Idaho's attorneys in the SRBA:

> Many viewed the long-dormant [Nez Perce water right] claims as a Pandora's Box that, once opened, would wreak havoc upon the State's administration of water rights and upset long-established expectations of water availability and use. The reality proved worse than the expectations. In 1993, The Nez Perce Tribe…claimed instream flow water rights to essentially every drop of surface water in the Salmon River Basin, the Clearwater River Basin, and the mainstem of the Snake River. The claims, had they been decreed, would have prevented almost all private uses of water in the Snake River Basin and would have preempted traditional state sovereignty over water resources.
> Steven Strack, *Pandora's Box or Golden Opportunity? Using the Settlement of Indian Reserved Water Right Claims to Affirm State Sovereignty over Idaho Water and Promote Intergovernmental Cooperation*, 42 Idaho L. Rev. 633.

Damage Claims Resolved

After an initial round of litigation, the parties agreed to court-ordered mediation of the Nez Perce claims in 1998. In May 2004, more than a decade after the claims had been filed, the parties jointly announced the Nez Perce water rights settlement (Settlement) which was ratified by Congress later that year. Snake River Water Rights Act of 2004, Public Law 108-447, Division J, Title X, 108 Stat 3431 (the Settlement is often referred to as the "Mediator's Term Sheet" and is available from your author). Following the pattern of several previous Indian water right settlements, the Settlement resolved all of the Tribe's water right claims and damage claims relating to allegations of failure to protect the Tribe's water rights. In addition, as discussed below, Settlement provisions included extensive anadromous fish benefits within the Nez Perce Reservation and Idaho.



ESA Issues at Play

Around the time that SRBA was commenced, petitions to list several salmon and steelhead runs in the Columbia and Snake basins were filed pursuant to the federal Endangered Species Act (ESA) with the National Marine Fisheries Service (NOAA Fisheries). By the early 1990s, NOAA Fisheries had listed several Snake River salmon runs (sockeye, fall Chinook and spring/summer Chinook) for protection under the ESA. This triggered several ESA section 7 consultations with NOAA Fisheries addressing the impacts of federal actions on ESA-protected salmon runs.

NW Tribal Water

Storage Water Conflict

Among other measures to improve fish conditions, NOAA Fisheries determined that water stored in federal reservoirs was needed to augment flows in the Snake River to assist juvenile salmon migrating to the ocean. In southern Idaho, the US Bureau of Reclamation (Reclamation) operates many large storage reservoirs, and, to meet obligations under the ESA, Reclamation began to release stored water to provide flow. However, because most of that stored water was arguably needed to meet local needs in Idaho, the State of Idaho and Idaho water users strongly objected to using Reclamation's stored water to augment flows for salmon. In essence, the water user community saw Reclamation's ESA obligations in the same light as the Nez Perce instream flow water claims — as a water demand that would trump their established water rights and uses.

Key Interests of the Parties

Nez Perce Tribe

Nez Perce Priorities

Tribal statements from the Settlement succinctly state the tribe's overarching interests:

- The Nez Perce historically have been an independent and self-governing people, and the Tribe is now a federally-recognized Indian tribe;
- Since time immemorial, the Tribe occupied a vast geographic aboriginal area that included what is now central Idaho, northeastern Oregon, and southeastern Washington;
- The cultural and spiritual value of salmon to the Nez Perce people and to the Tribe is immense, in that salmon are an essential aspect of their nutritional health, spirituality, and cultural identity, and the annual return of the salmon allows the transfer of traditional values from generation to generation.

[These statements were adapted from Article I, Recitals, in the *Agreement between the United States of America and the Nez Perce Tribe Regarding Management of the Kooskia National Fish Hatchery and Joint Management of the Dworshak National Fish Hatchery*. This agreement was one among many that implemented provisions of the Nez Perce water rights settlement.]

Aquatic Needs

The Tribe brought to SRBA litigation and negotiations a laser focus on the aquatic needs for fish and fisheries improvements. This focus is reflected in the results of the settlement, discussed below. The Tribe also focused on a solution that would increase their governance over its water resources on the reservation and ensure that its water entitlement was ample enough to cover the present and future needs of the Tribe.

State of Idaho

State Sovereignty

There is a strong tradition within Idaho of supporting and defending the iconic salmon runs that migrate thousands of miles in-ocean and in-river to arrive at the headwaters of pristine streams in Idaho such as the Salmon River. *See, e.g., Idaho Department of Fish and Game et al. v. National Marine Fisheries Service et al.* 850 F.Supp 866 (D. Oregon 1994), where then-Governor Andrus successfully challenged one of NOAA Fisheries earlier biological opinions addressing the effects of federal dams on salmon. But this tradition did not translate into State support for tribal or federal instream flow water rights. At the heart of Idaho's intent in dealing with tribal water rights was the preservation of State sovereignty over water resources. See Strack, *supra*. Idaho took similar State-sovereignty positions when challenging Reclamation's use of storage water in Idaho for salmon migration instead of for agriculture.

Idaho Water Users

"Time Immemorial" Right

Several hundred irrigation districts, municipalities, corporations and individuals filed objections to the Nez Perce water right claims. If the Tribal claims were granted as claimed, the Tribe would be entitled to most of the flow of the Snake and its tributaries with a time immemorial priority date (i.e., the very first in time, most "senior" water right). The upstream irrigation and municipal water rights would shift from being among the most senior in the basin to being significantly junior to the tribal right. Thus, these water users perceived that they would have to forego their diversion rights to leave adequate water instream to meet the Tribe's instream flow downriver. These water users' objections presented a fundamental legal challenge to the Tribe's entitlement to instream flow water rights. As noted above, the water users also were concerned about calls arising from ESA protections for Columbia salmon downstream for more water from the Snake River reservoirs.

Federal Government

Federal Responsibilities

The federal government's role and interests in the Nez Perce settlement stem primarily from two federal responsibilities:

- Federal Trust Responsibility Toward Indian Tribes: The US Supreme Court has found that when a State initiates a general stream adjudications in compliance with the McCarran Amendment, the US must file in that State's court water right claims for Indian tribes who have reservations in that basin.
- Compliance With ESA: Several federal agencies take actions within the Columbia Basin that can affect listed salmon. Reclamation, as noted above, has several projects within Idaho. Also, NOAA Fisheries develops ESA recovery plans for listed salmon and steelhead in Idaho.

For further discussion of federal interests in the Settlement, see Ann R. Klee and Duane Mecham, *The Nez Perce Indian Water Rights Settlement – Federal Perspective*, 42 Idaho L. Rev. 595. Vol. 42 of the Idaho Law Review is dedicated to several articles on the Settlement representing several perspectives.

NW Tribal Water

Idaho Water Code

Fishery Protections

Reclamation Augmentation

Water Needs Balance

Stored Water Release

Fisheries Benefits from the Nez Perce Water Rights Settlement

The Nez Perce settlement represents considerable compromise on the part of all of the parties discussed above. Nonetheless, this compromise translated into tangible fisheries benefits as catalogued below.

Instream Flow Protections

From the outset of negotiations, the Nez Perce Tribe made clear that any settlement would have to address the instream flow needs for anadromous fish in the Clearwater, Salmon, and lower Snake Rivers in Idaho. Idaho also expressed interest in protecting the flows in these rivers. The settlement reflects this focus. The parties agreed to employ the Idaho Water Code, which provides for the establishment of minimum instream flow water rights, to protect over 205 Tribal priority stream reaches within the Salmon and Clearwater drainages where current salmon and steelhead habitat exists. These flows are held by Idaho in trust for the Idaho public as a whole. The rights are established with a priority date of April 20, 2004, so as not to injure existing rights, and are subordinate to some future water use.

Also tied to the Settlement are the minimum flows protections established in a US Forest Service settlement with Idaho addressing federal reserved water rights for a number of Wild and Scenic River segments in north-central Idaho.

Habitat Programs, Funding and Protections

A number of provisions in the Settlement secure protections and funding for salmon and steelhead habitat in the Clearwater and Salmon basins.

These habitat provisions include:

- Forestry Component: Under the Forestry Component, riparian and streambank protection measures will improve habitat. This program supplements existing Idaho Forest Practice Rules and is intended to maintain forestry practices that are compliant with ESA. Timber harvesters harvesting State and private landholdings are encouraged to participate.
- Habitat Trust Fund: In approving the Settlement, Congress established the Habitat Trust Fund. The Tribe and State each receive a portion of the fund, which will be used to improve habitat in the Clearwater and Salmon River basins

Flow Augmentation Program

Snake river flows

As discussed above, with ESA listings of several Snake River salmon runs, Reclamation had to ensure that its projects were in compliance with section 7 of ESA. Although there was no legal connection, the Tribal instream flow claims for the mainstem Snake River were essentially targeted at the same goal — i.e., increasing the flow in the Snake River for migrating juvenile salmon. The SRBA mediator, working with the parties, recommended that they seek to resolve ESA and SRBA flow issues in tandem. This position was endorsed by the parties.

In Part III of the Settlement — the "Snake River" component — the State of Idaho and Reclamation agreed to seek federal and State legislation that would authorize Reclamation to provide up to 487,000 **a**cre-**f**eet (AF) of water from project storage and natural flow water rights to augment the flow of the Snake and Columbia. This program was subsequently endorsed by Congress and the Idaho legislature. The Snake River component was incorporated by Reclamation into ESA section 7 consultations with NOAA Fisheries and the US Fish & Wildlife Service.

The State of Idaho is to be commended for its leadership in making this component happen. In essence, the State had to balance the water needs of a multi-billion dollar agricultural industry, a fast growing population and myriad other water demands with the instream flow needs for iconic Snake River salmon runs. This governmental effort led to the incorporation of Water Code provisions that provided extensive and streamlined authorities for providing fish flows and, more important, protecting these flows to the State border near Lewiston.

Flow augmentation from dworshak reservoir

Located on the North Fork of the Clearwater River and on the Nez Perce Reservation, Dworshak Dam is a US Army Corps of Engineers (Corps) Project. Since the initial ESA salmon listings in the early 1990s, the project, which can store over three million acre-feet, has been used as a source of flow augmentation, with releases through August 31. This has been particularly important because the water stored at Dworshak, being significantly cooler than the flows in the Snake River, has both temperature and flow benefits for some migrating salmon stocks. The Nez Perce Tribe, while endorsing the use of water stored at Dworshak for flow augmentation, advocated that some of that water should be reserved for release in September to benefit later-migrating stocks. The later release also benefits the local community and recreational users of Dworshak Reservoir by allowing access to boat-in campgrounds that cannot be reached after the Reservoir is drawn-down. The Dworshak Operations Memorandum of Agreement and Appendix, a sub-agreement of the Settlement (available from the author) dedicate 200,000 AF of stored water for use by the Tribe for benefits for fish, including release in September.

NW Tribal Water

Reservation Hatcheries

Hatchery Management

As part of its overall goal to promote Tribal sovereignty and management in Snake Basin fisheries matters, the Nez Perce Tribe negotiated a significantly increased management role in federal hatcheries on the Nez Perce Reservation. As a result of the Settlement, the Tribe became the manager of one federal hatchery on the Reservation and co-manager, with the Fish and Wildlife Service, of another. The mediation process proved to be an effective place for the Tribe to press their position that an increased Tribal management role for hatcheries on the Reservation was appropriate.

As explained by Nez Perce Tribal attorneys:

> The Tribe's management role in these federal hatcheries will complement the Tribe's work at its own Nez Perce Tribal Hatchery, a state-of-the-art supplementation hatchery. The Tribal Hatchery focuses on rearing spring and fall Chinook that are better adapted to living in the wild. That focus supports the overall goal of the Tribe's Fisheries Production Program to rebuild natural spawning runs and restore harvest opportunities for the Nez Perce people.
>
> K. Heidi Gudgell, Steven C. Moore & Geoffrey Whiting, *The Nez Perce Tribe's Perspective on the Settlement of Its Water Right Claims in the Snake River Basin Adjudication*, 42 Idaho L. Rev. 563, 591 (2006).

Compromise Beyond Adjudication

"Lessons Learned"

The Settlement represents a compromise on the part of all three governments. As noted above, if the claims had been decreed, substantial flows would have been protected for the Tribe with the earliest priority date. But legal risks were inherent in these claims. Although federal and State courts have found instream flow water rights for other tribes, the Nez Perce claims were unprecedented in scope and geography. The instream flow protections are less than the claims overall, but represent a significant step forward for protection of flows in a primary area of habitat for Snake River salmon, steelhead and other resident aquatic species in Idaho. In addition, habitat and other fishery improvement benefits were secured that could not been secured under an adjudication, which deals only with quantifying the water rights of a tribe. The Habitat Trust Fund, flow augmentation from Corps and Reclamation projects, and forestry practices protections for riparian areas may not have been available absent the Settlement.

TRIBAL WATER RIGHTS ADMINISTRATION

Jurisdiction & Authority

Beyond the confirmation of tribal water rights through litigation or settlement, one of the most vexing issues in the tribal water arena is the respective roles of tribal and State governments in the administration, management and enforcement of water rights on Indian reservations. Water right administration and its attributes — issuing licenses, enforcing existing water rights, determining abandonment of water rights, etc. — implies adequate sovereign jurisdiction to perform and enforce the responsibilities of administration. From both a tribal and federal perspective, tribes should be appropriately seen not only as water right holders but as holding sovereign authority over their tribal natural resources, including tribal water resources. States, of course, have traditionally filled the role of water administrator in western states and tend to measure any potential agreement for tribal water right administration against possible impacts on the administration role they routinely perform. Experience has shown that settling tribal water rights provides a critical platform for also resolving water right administration questions.

Tribal Administration

Tribal Water Codes — Shoshone-Bannock Tribes Example

The 1990 Shoshone-Bannock Tribes water rights settlement explicitly provided for a role for the Tribes in the administration of their water rights.

Article 8.3 of the Agreement states:

> The Tribes shall adopt and submit a Tribal Water Code to the Secretary for approval. The Tribal Water Code shall, in part:
>
> .i provide for a Reservation Watermaster
>
> .ii establish a Tribal Water Commission to manage the Tribal water delivery systems on the Reservation, and
>
> .iii provide for monitoring of and enforcement of Tribal water rights.

Tribal Licenses v. Perpetuity

Recently, the Shoshone-Bannock Tribes and the Interior Department approved the Shoshone-Bannock Tribal Water Code. As an example of how the Shoshone-Bannock Tribal Water Code clarified Tribal jurisdiction, the Code provides for Tribal members and non-members to receive licenses from the Tribal water commission to use a portion of the Tribal water right. However, in contrast to the standard practice that States follow of granting a new water right in perpetuity, the Tribal licenses are limited to a five-year period with the possibility of an automatic five-year extension. This ensures that as Tribal water policy matures, Tribal water right uses can be revisited.

NW Tribal Water

Dual Administration

Dispute Resolution

Contentious History

Jurisdictional Conflict

Management Board Proposal

Beyond Traditional Tribal Water Codes —— Confederated Salish & Kootenai Tribes Proposal

The Shoshone-Bannock Tribal Water Code is an example of the considerable progress that has been made in addressing water right administration in conjunction with settlements. Significant issues remain, however. Even with the approach taken in the Shoshone-Bannock and other tribal settlements, there will be questions about the extent of State jurisdiction over water resources on-Reservation.

In the Shoshone-Bannock settlement, the administration of State-law based water rights on the Reservation remains with the State of Idaho. Compacts that Montana has reached to date with tribes also reserve to the State jurisdiction to "administer all rights to the use of surface water and groundwater within the Reservation which are not part of the Tribal Water Right. The State shall have the final and exclusive jurisdiction to resolve all disputes between users of rights established under state law.…" See *Northern Cheyenne-Montana Compact*, Mont. Code Annotated 85-20-301. This approach leaves a dual water administration system with factual and jurisdictional overlaps; for example, where a single ditch on a reservation serves both Indian and non-Indian water right holders. In many instances, there are additional overlays, such as when there is a Bureau of Indian Affairs irrigation project on the reservation that serves both tribal and non-tribal members. Both of these settlements provide for tribal-State boards where disputes between tribal and non-tribal water right administration can be brought.

Currently, one of the most active tribal water negotiations in the Northwest is the effort to resolve the Confederated Salish & Kootenai Tribes' (CSKT) water right claims in western Montana. A primary focus for CSKT in the negotiations is how best to administer on-reservation water rights. Use of water on the Flathead Reservation has a long and contentious history. In the early 20th Century, significant portions of the Reservation were opened to non-Indian settlement and irrigation. Congress authorized the Bureau of Indian Affairs to construct a large irrigation project, but the project serves primarily non-Indian lands and dewaters or significantly reduces the flow of several on-reservation streams important for Tribal fisheries. In the 1980s, the CSKT successfully litigated their treaty right to protect flows on-reservation for fisheries — this right has a priority date of "time immemorial" thus trumping all non-Indian rights on the reservation. This forced further conflict with the project water users. This history of water use has left entangled tribal and non-tribal water rights.

With this history, Tribal attorneys have examined the "standard" dual administration approach used by Montana and elsewhere and, from the CSKT perspective, found the approach wanting.

In a written statement to the other parties, CSKT has explained:

> Water rights disputes can cross jurisdictional lines. Three different sovereigns with diverse jurisdictional requirements, limitations and immunities coexist within the Reservation. All prior Indian water compacts in Montana set up a water right dispute system where non-Indian water use is subject to Montana law, Indian water use is subject to Tribal law, and federal irrigation projects are subject to federal law. Disputes that cross State and Tribal sovereign authorities are submitted to a "Compact Board" for attempted resolution. If either party is dissatisfied with the results of that forum, they can seek judicial review in a "court of competent jurisdiction." In other words, it would be a race to the courthouse of personal choice with the jurisdictional issues to be fought over at that time. It is unclear whether the United States would submit to the Compact Board or waive immunity in either State or Tribal court, thereby increasing the complexity of any final dispute resolution. (February 2010 CSKT position document (available from your author))

At the same time, they recognize that exclusive jurisdiction by either the State or the Tribes is not politically supportable. In a proposal worthy of King Solomon, CSKT has proposed a single state/tribal water management board empowered with the full range of jurisdiction to administer all water rights — state- and Tribal-based — on the Flathead Reservation. Under the proposal, the State and CSKT would concurrently enact laws authorizing the creation of the "Flathead Reservation Water Management Board." The Board would consist of five voting members, two selected by the Governor and two by the Tribal Council and a fifth member selected by the other four members. The Board would have plenary and exclusive authority on the reservation to issue new water use permits, authorize change of uses, and resolve enforcement issues. The Board, which would be co-funded by CSKT and Montana, would also have authority to hire staff, including a "water commissioner" to oversee water uses on the Reservation.

State and federal negotiators have CSKT's proposal under active consideration. To date, no final determinations have been made whether the approach is acceptable to all the involved parties.

ADDITIONAL SOLUTIONS FOR TRIBAL WATER ISSUES

With all of the attention given to the comprehensive Indian water right settlements approach discussed above, one could be excused for concluding that this approach should be the model for addressing most if not all tribal water resource disputes. Your author has noticed, however, that even without the impetus of an active basin-wide adjudication, tribes are increasingly considering other solutions.

NW Tribal Water

Columbia Basin Settlements

Cooperative Restoration

Adjudication Question

Federal Assessment

The views expressed in this paper are the author's own and are not intended to represent or reflect the positions of the Office of the Solicitor or the Department of the Interior.

Examples of solution options include:

Columbia Basin Fish Accords

As discussed above, as part of ESA listings of Columbia River salmon and steelhead stocks, there has been considerable focus on the activities impacting these stocks. Several tribes in the basin have long had significant concerns about the impacts of federal dams on Columbia basin salmon, with some joining plaintiffs challenging Corps and Reclamation efforts to comply with ESA. In 2008, after a two-year, intensive collaboration among state, tribal, and federal governments in the basin, several tribes reached historic agreements with the federal agencies. These agreements greatly enhance tribal resources and oversight for salmon recovery. But some tribes have gone a step further and provided for access to additional water resources targeted at tribal priorities. In the agreement with the Confederated Colville Tribes, the Tribes arranged for Reclamation to provide an additional 500 AF of water for flows on-reservation in a critical reach of stream for salmon recovery.

Confederated Tribes of the Umatilla Indian Reservation

The Umatilla River Basin, in northeast Oregon, has distinguished itself as a model of cooperative conservation. Leaders from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the State of Oregon, and local irrigation districts and governments came together in the 1980s and began the process of restoring stream flows and repairing damage done to CTUIR treaty reserved fishing rights, while upholding a mutual commitment to keep agriculture whole in the basin. These efforts included obtaining Congressional approval of the Umatilla Basin Project (1988 Umatilla Basin Project Act, Public Law 100-557, 102 Stat. 2791-2795), which provided for large-scale restoration of flows and fisheries in the Umatilla River. The Project has resulted in the reintroduction of coho, and spring and fall Chinook in a river system where these salmon runs had been extirpated for nearly a century.

In the last several years, Oregon, CTUIR and the Westland Irrigation District have worked together to resolve the remaining water resource issues in the Umatilla River basin. The parties have understood, however, that past efforts have not secured adequate water resources to meet all current and future water needs of CTUIR. Also, unresolved legal questions about CTUIR's "*Winters*" or Indian reserved water right claims cast a cloud over non-Indian water rights in the basin. In particular, Oregon was adamant that a 1910s adjudication of water rights in the Umatilla effectively adjudicated all of CTUIR's water rights. The United States and CTUIR do not agree with Oregon, but recognize that significant legal hurdles exist to obtain more water resources for the Tribe through further litigation.

Motivated by these and related issues, CTUIR, Oregon and Westland asked the US Interior Department to appoint an Indian water rights assessment team in 2006. By letter dated March 19, 2007, Michael Bogert, Counselor to then-Secretary Kempthorne, responded by announcing the formation of a federal assessment team to evaluate whether conditions exist whereby the parties could negotiate a resolution of CTUIR's reserved water right claims. In the same letter, Counselor Bogert also requested that Reclamation do a study of water supply options that could potentially be used to resolve CTUIR's water rights claims. The assessment effort has focused all of the parties' attention on critical threshold issues, such as whether water resources can be made available to CTUIR under a legally binding agreement. The federal assessment work is ongoing.

CONCLUSION

As noted above, there are 45 recognized Indian Tribes within the Northwest Region of the Bureau of Indian Affairs. Over the past two decades, final water right settlements with four tribes have been reached and the water rights of a fifth tribe, the Yakama Nation, have been adjudicated. Needless to say, much work remains, but the successful settlements to date give foundation for future settlements, and the commitment of tribes, states, and federal agencies to pursue comprehensive negotiations continues to grow. In the meantime, the ability of tribes to pursue positive water resource solutions on their own also appears to be growing. Your author anticipates that the next two decades will see continued focus on resolving these difficult tribal water issues.

For Additional Information:
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Duane Mecham is a senior attorney with the Department of the Interior's Solicitor's Office based in Portland, Oregon. He advises several Interior agencies on tribal and federal water rights matters and on Endangered Species Act compliance issues arising out of impacts of federal hydropower and irrigation projects on salmon in the Columbia and other river basins. He was the chair of the federal government's negotiation team for the Nez Perce water right claims in Idaho and has been appointed as chair of the Umatilla (Oregon) and Salish-Kootenai (Montana) federal teams.

TRIBAL WATER DECISION IN NEVADA

GROUNDWATER CHANGE APPLICATION GRANTED

by David Moon, Editor

Change Application

Groundwater Use

On December 16, the Nevada Supreme Court (Court) affirmed a decision by the Nevada State Engineer that granted a change application for water rights in Washoe County's Dodge Flat Hydrologic Basin. *Pyramid Lake Paiute Tribe v. State Eng'r*, 126 Nev. Adv. Op. No. 48 (Dec.16, 2010). The decision results in the approval of a change application for groundwater use for Nevada Land and Resource Company, LLC (NLRC), which changes the proposed use from temporary to permanent and also changes the purpose from mining and milling to industrial power purposes.

"In 1980, NLRC obtained permits to appropriate Dodge Flat groundwater for temporary use in a mining and milling project. That project failed to materialize, but NLRC kept its water rights valid and in good standing. Twenty years later, NLRC applied to change its use from temporary to permanent and from mining and milling to industrial power generating purposes." *Slip Op*. at 2. The Pyramid Lake Paiute Tribe (Tribe) opposed the application and after the State Engineer approved it, filed the petition for review in district court.

Tribal Opposition

The Tribe opposed the change on three grounds under Nevada law: (1) there was no unappropriated water from the source (groundwater); (2) based on the hydrological connection between the Truckee River and the aquifer, groundwater pumping would interfere with existing water rights to the Truckee River; or (3) pumping groundwater threatens to be detrimental to the "public interest" because it would reduce Truckee River water quality and threatens the cui-ui fish and Lahontan cutthroat trout habitats. *See* NRS 533.370(5).

Substituted Evidence Standard

The Court ruled against the Tribe and affirmed the State Engineer's decision, basing its decision in part on its findings that there was substantial evidence to support the State Engineer's factual conclusions. The Tribe in this case had the burden of proof, as the party attacking the decision, to overcome the legal standard that the State Engineer's decision is prima facie correct (deference given to the State Engineer's decision).

Water Availability

On the first issue, the Court found substantial evidence existed to support the conclusion that there was unappropriated groundwater for permanent use. This finding, however, turned on the Court's ruling that the Tribe's current groundwater use of approximately 3520 acre-feet annually was unauthorized (i.e. there is no permitted right from the State and no federal implied right). The Tribe uses the groundwater for various uses, including irrigation, municipal, stock, domestic wells, and the tribal fish hatchery. The Court cited an earlier US Supreme Court case which held that the *Orr Ditch* water rights decree — which granted the Tribe the two most senior surface water rights from the Truckee River — "cannot be construed as anything less than a claim for the full 'implied-reservation-of-water' rights that were due the Pyramid Lake Indian Reservation." Thus, the Tribe was barred by the *Orr Ditch* decree from asserting any additional federally applied water rights for the Pyramid Lake reservation, including groundwater. *Slip Op*. at 3, citing *Nevada v. United States*, 463 U.S. 110, 133 and 145(1983). In other words, the "Orr Ditch decree fully adjudicated the Tribe's [federal] implied rights for the Pyramid Lake Indian Reservation." *Slip Op*. at 7.

Adjudicated Tribal Rights

Unauthorized Use

The Court concluded that the "State Engineer appropriately excluded the Tribe's unauthorized use to determine if the basin contained unappropriated water" (*Id*. at 8). The next step in the decision was the Court's holding that there was substantial evidence in the record to support the State Engineer's determination that there was unappropriated groundwater available for NLRC's permanent use.

Hydrological Connection

On the second issue regarding the hydrological connection between the groundwater and the Truckee River, the Court decided that the State Engineer correctly determined that the proposed change applications will not affect existing water rights. The Court relied on the fact that "the Tribe's own expert testified that the change use application would not interfere with the Tribe's [surface] water rights under the Orr Ditch decree." *Id*. at 7-8. The Tribe also maintained that the proposed use would adversely affect other parties' Truckee River water rights due to the hydrological connection between the aquifer and the river. The Court, however, found that the Tribe "has no authorization to use the Dodge Flat groundwater" and therefore "any effect on other parties' existing water rights is the result of the Tribe's unauthorized pumping in excess of the basin's perennial yield." *Id*. at 8.

Groundwater Yield Limitation

Finally, on the third issue, the Court decided the change use application does not threaten the public interest. "NLRC is only permitted to pump water up to the amount of the unappropriated perennial yield. The State Engineer imposed this limitation in part to protect the Truckee River water quality and native fish habitats. Any potential threat to the public interest is therefore not the result of NLRC's proposed change. Rather, the potential threat is again the consequence of the Tribe's continued pumping Dodge Flat groundwater without a permit or implied right." *Id*. at 8-9.

For info: Opinion is available at: www.nevadajudiciary.us/images/advanceopinions/126nevadvopno48.pdf

WATER BRIEFS

US - MEXICO AGREEMENT SW
COLORADO RIVER WATER DELIVERIES

On December 20, US Interior Secretary Ken Salazar and Mexican Environment and Natural Resources Secretary Juan Rafael Elvira Quesada announced the successful completion of an agreement, known as "Minute 318," to adjust water deliveries on the Colorado River to areas damaged by a devastating earthquake on April 4, 2010. Following their meeting in Mexico City, the Secretaries also announced a commitment by the two governments to initiate, in January 2011, high-priority discussions on a comprehensive long-term agreement between the US and Mexico on management of the Colorado River.

"Through this water agreement, the U.S., Mexico, and the seven Colorado River Basin states are bringing resources together for our mutual benefit and for the benefit of our neighbors whose irrigation systems and livelihoods have been damaged by the Easter Sunday earthquake," said Salazar, who was in Mexico City to discuss water, conservation, and natural resource issues with President Calderon and Mexican government officials. "Minute 318 is a remarkable achievement from a humanitarian perspective, but it also lays important groundwork for a much-needed comprehensive water agreement with Mexico on how we manage the Colorado River."

Under Minute 318, Mexico will be able to temporarily defer delivery of a portion of its annual Colorado River water allotment while repairs are made to the irrigation system in the Mexicali Valley of Baja California as a result of an April 4, 2010 earthquake. This agreement is founded on the 1944 Water Treaty between the U.S. and Mexico. Under the 1944 Water Treaty, Mexico is allotted a guaranteed quantity of Colorado River water each year. Absent surplus or extraordinary drought conditions, Mexico's annual allotment is 1.5 million acre-feet (maf).

Minute 318 allows Mexico to defer delivery of up to 260,000 acre-feet of its annual allotment through December 31, 2013. Beginning in 2014, Mexico could begin recovery of the amounts of Colorado River water deferred during the three-year period, subject to the progress of reconstruction of the Mexican irrigation system and the status of Colorado River reservoirs (Lake Powell and Lake Mead).

"Water users and stakeholders up and down the Colorado River have a strong interest in a comprehensive water agreement that would enhance reliability, certainty, and efficiency of water deliveries," said Bureau of Reclamation Commissioner Michael Connor, who coordinated with the seven Colorado River Basin States and the International Boundary and Water Commission to reach the Minute 318 agreement. In their December meeting, Secretaries Salazar and Elvira, Commissioner of Reclamation Connor, Director General of the Mexican National Water Commission Jose Luis Luege Tamargo, and IBWC Commissioners Drusina and Salmon discussed the need for a comprehensive agreement on Colorado River water management issues, particularly in light of ongoing drought conditions and the prospect of continuing declines in reservoir levels. Secretaries Salazar and Elvira identified the negotiations on a comprehensive agreement as a top priority for 2011.

Commissioner Connor noted that a comprehensive agreement is of particular importance in light of ongoing, historic drought in the Colorado River Basin. Since 2000, Colorado River basin reservoirs have dropped from nearly full to approximately 55% of total storage. Lake Mead currently stands at 39% of capacity, lower than it has been since it was filling in the 1930s. The last 11 years have been the driest in a century of recorded history, and among the driest 1% of periods in over 1,000 years. Current projections show that if current drought conditions persist, the Lower Basin (Arizona, California and Nevada) may be subject to the first-ever domestic shortage declaration on the Colorado River as early as 2012. The likelihood of shortage conditions by 2014 is approximately 35%.

For info: Kendra Barkoff, Interior, 202/ 208-6416

ENVIRONMENT PROTOCOL NM
PUEBLO & STATE MOA

On December 20, Santa Clara Pueblo Governor Walter Dasheno and New Mexico Environment Department (NMED) Secretary Ron Curry signed an historic, first-of-its-kind, comprehensive Memorandum of Agreement between the two sovereigns. The agreement establishes and formalizes a comprehensive and detailed protocol for inter-governmental cooperation and coordination on environmental protection pursuant to the government-to-government relationship between the Pueblo and the department. Once signed, the two sovereigns will continue to work together to carry out the Agreement and to promote greater NMED regulation on private, non-Pueblo claims in and around the Espanola area. The agreement also serves to ensure that communication is swift between environmental staff of both NMED and Santa Clara Pueblo as it relates to many joint areas of concern, including LANL operations and illegal solid waste dumping.

For info: Marissa Stone Bardino, NMED, 505/ 827-0314 or marissa.bardino@state.nm.us

KLAMATH TMDLS CA/OR
CA PLAN APPROVED

The US Environmental Protection Agency (EPA) recently approved California's water quality improvement plan for restoring salmon fisheries and water quality in the Klamath River. The plan calls for massive pollution reductions for the California portion of the river, including a 57% reduction in phosphorus, 32% in nitrogen, and 16% in carbonaceous biochemical oxygen demand (CBOD). The plan also calls for annual reductions in the river's reservoirs of more than 120,000 pounds of nitrogen, and 22,000 pounds of phosphorus.

Under the Clean Water Act, states and authorized tribes are required to develop a list of waters that do not meet water quality standards. For these "impaired" waters, jurisdictions must calculate the maximum amount of pollutants allowed to enter them so they can meet water quality standards into the future. These pollution limits are called Total Maximum Daily Loads or TMDLs. Today, the entire Klamath River is listed as "impaired."

The Klamath River, a federally protected "Wild and Scenic River," flows 255 miles southwest from Oregon through northern California, and empties into the Pacific Ocean. The Klamath drains an extensive watershed covering over 12,600 square miles. The Klamath and its tributaries support the highest diversity of anadromous fishes of any river in California, including salmon, cutthroat trout, steelhead and sturgeon. Upstream in Oregon, the river hosts the state's most robust population of redband and bull trout. Tribes that live along the Klamath rely on the river for subsistence, transportation and ceremony, as they have for thousands of years. These tribes

include the Yurok, Hoopa Valley, Karuk, Quartz Valley and Resighini Rancheria on the lower stretches of the river (California), and the Modoc and Klamath in the upper basin (Oregon).

In 1992, the California State Water Quality Control Board (Water Board) proposed that the Klamath River be listed for temperature, organic enrichment/low dissolved oxygen, and nutrients, requiring the development of TMDL limits and implementation plans. The Water Board subsequently added sediment and microcystin (an algal toxin) to this list for parts of the Klamath. The Klamath's aquatic habitat degradation is due to organic enrichment/ low dissolved oxygen, excessively warm water temperatures and algae blooms associated with high nutrient loads, water impoundments, and agricultural diversions. TMDLs for several water bodies in the Klamath Basin — the Trinity River, Scott River, Shasta River, Lost River, and the Klamath Straits Drain — are also being implemented to address impairments due to excessive pollution. Reductions vary for each reach of the Klamath River, with the most significant reductions required from Stateline through the Klamath Hydroelectric Project reservoirs.

This plan reflects a multi-year collaborative effort to develop pollutant limits for the full river. A partnership between EPA, California's North Coast Regional Water Quality Control Board and the Oregon Department of Environmental Quality (ODEQ) began in 2003. California's plan received extensive public review and was approved by both the Regional Board and the State Water Board prior to EPA's approval. The companion plan for the upper reaches of the Klamath River in Oregon was released by ODEQ on December 21, 2010; EPA's Pacific Northwest region is expected to act on Oregon's plan in January 2011.

California's plan identifies actions to improve water quality to restore salmon and other fisheries in the River, protect Native American cultural uses, and enhance general recreational uses of the Klamath River. ODEQ, the Regional Board, EPA and many other partners are developing a watershed-wide tracking program to increase the pace and reduce the cost of improving Klamath Basin water quality to support all water-related uses in the Basin. The plan also addresses water quality impacts of the Klamath Hydroelectric Project, establishes a policy to protect thermal refuges (cooler areas in the river that provide critical habitat for fish during high temperatures), and addresses nonpoint sources of pollution such as roads and agriculture.

For info: Water Board, Dave Clegern, 916/ 327-8239 or dclegern@waterboards.ca.gov; Mary Simms, EPA, 415/ 947-4270 or simms.mary@epa.gov; ODEQ TMDLs: see www.deq.state.or.us/WQ/TMDLs/klamath.htm

DRINKING WATER ISSUES TX

CONTAMINATION FROM FRACKING

EPA has ordered a natural gas company in Forth Worth, Texas, to take immediate action to protect homeowners living near one of its drilling operations who have complained about flammable and bubbling drinking water coming out of their tap. EPA testing has confirmed that extremely high levels of methane in their water pose an imminent and substantial risk of explosion or fire. EPA has also found other contaminants including benzene, which can cause cancer, in their drinking water.

EPA determined that natural gas drilling near the homes by Range Resources in Parker County (west of Fort Worth) has caused or contributed to the contamination of at least two residential drinking water wells. EPA ordered the company to step in immediately to stop the contamination, provide drinking water, and provide methane gas monitors to the homeowners. EPA also issued an imminent and substantial endangerment order under Section 1431 of the Safe Drinking Water Act.

In late August, EPA received a citizen's complaint regarding concerns with a private drinking water well. During the inspector's follow-up inquiry, EPA learned that the homeowner had previously complained to the Texas Railroad Commission as well as the company, but their concerns were not adequately addressed by the State or the company. EPA then conducted an on-site inspection of the private drinking water well with the homeowner and a neighboring residence, and returned to collect both water and gas samples. These samples were sent to an EPA certified laboratory for analysis. EPA scientists have conducted isotopic fingerprint analysis and concluded the source of the drinking water well contamination closely matches that from Range Resources' natural gas production well.

EPA has asked the company to conduct a full scale investigation and is requiring Range Resources under this order to: deliver potable water to the two residences; sample soil gas around the residences; sample all nearby drinking water wells to determine the extent of aquifer contamination; provide methane gas monitors to alert homeowners of dangerous conditions; develop a plan to remediate areas of the aquifer that have been contaminated; and to investigate the structural integrity of its nearby natural gas well to determine if it is the source of contamination.

As part of its press release, EPA noted that it believes that natural gas plays a key role in our nation's clean energy future and the process known as hydraulic fracturing is one way of accessing that vital resource. As EPA announced earlier this year, it is in the process of conducting a comprehensive study on the potential impact of hydraulic fracturing on drinking water. In the meantime, EPA has made energy extraction sector compliance with environmental laws one of EPA's National Enforcement Initiatives for 2011 to 2013. The initiative focuses on areas of the country where energy extraction activities such as hydraulic fracturing are concentrated, and EPA's enforcement activities will vary with the type of activity and pollution problem presented.

For info: Dave Bary, EPA, 214/ 665-2200 or r6press@epa.gov; Copy of order to the company: www.epa.gov/region6; EPA hydraulic fracturing study: www.epa.gov/hydraulicfracturing

GROUNDWATER ORDER MT

EPA ENFORCEMENT
OIL PRODUCTION CONTAMINANTS

In response to recent detections of low levels of oil production-related contaminants in the public water supply that serves the city of Poplar, Montana, and the Fort Peck Indian Reservation, EPA on December 16 issued an order to Murphy Exploration & Production Co. (Murphy), Pioneer Natural Resources USA, Inc. (Pioneer), and Samson Hydrocarbons Co. (Samson). EPA's order, issued under the Safe Drinking Water Act, requires the companies to monitor Poplar's municipal water supply wells and also the private wells of residents in the potentially affected area, upon resident request. The order also requires the companies to provide additional water treatment and/or alternate supplies if EPA determines the

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groundwater in wells is becoming a public health risk.

Murphy, Pioneer and Samson are, directly or through corporate acquisition, historic oil producers in the East Poplar oil field. The oil field has several known contaminated groundwater plumes caused by past production practices. "This order is necessary to ensure that more than 3,000 people who rely on the Poplar public water system have safe drinking water, now and in the future," said Jim Martin, EPA's regional administrator in Denver. "While treated water from the city's system is currently safe to drink, we expect the quality of the groundwater used by the system's wells to degrade over time. As companies responsible for historic production in the area, EPA is requiring Murphy, Pioneer and Samson to increase monitoring and prepare a contingency plan to provide an alternate water source." Poplar is the seat of the Fort Peck Assiniboine and Sioux Tribes. The Poplar-area public water system, the Fort Peck Tribe Water Resource, serves approximately 3,000 people, including tribal and non-tribal households.

Specifically, EPA's order requires the companies to provide funds to support: monthly sample collection and analysis from Poplar's municipal water supply wells to monitor for any public health risk; sampling and analysis at private wells located between the known locations of contaminant plumes and the city's public water wells, as requested by the owners; a study of area groundwater contamination and an assessment of cleanup options; and a contingency to provide a safe and reliable drinking water supply if the current water source is determined to present a public health risk.

The primary source of groundwater contamination in the East Poplar oil field is produced brine, highly saline wastewater extracted during oil production. Undiluted, produced brine can be significantly more saline than seawater, rendering water untreatable and undrinkable. This brine also contains elevated levels of metals, such as manganese, and organic compounds associated with oil production, including benzene and toluene. The edges of these plumes generally have lower concentrations of contaminants than in their centers.

The contaminated plumes have been moving in the local aquifer toward the city of Poplar. This aquifer is the only currently available source of drinking water for three public water supply wells that serve the surrounding area. While the most recent sample results analyzed by EPA indicate that produced brine has reached these wells, concentrations of contaminants in treated drinking water are at low levels and do not pose a risk to human health. EPA's order seeks to ensure that residents will be protected if the brine concentration in the water supply increases over time as the plume moves toward the city's wells.
For info: Phil Strobel, EPA, 303-312-6704

TRIBAL WATER LEASE AZ

CAP WATER TO MUNICIPALITY

The US Bureau of Reclamation (Reclamation) has issued a Finding of No Significant Impact (FONSI) on a proposed 100-year lease of 5,925 acre-feet of water annually to the town of Gilbert in Maricopa County, Arizona. The water is part of the Central Arizona Project (CAP) water entitlement currently held by the San Carlos Apache Tribe. The proposal calls for Gilbert to either treat and deliver, or recharge the CAP water. Adding this renewable water source would reduce the town's dependence on groundwater within its service area and lessen their reliance on excess CAP water. Reclamation's finding would not result in construction of new facilities or any land-disturbing activities. The EA and FONSI are posted for public review on Reclamation's Phoenix Area Office website: www.usbr.gov/lc/phoenix. A hard copy or CD version is available by calling the Environmental Resource Management Division at 623/ 773-6251, or by emailing jharagara@usbr.gov.
For info: Nichole Olsker, Reclamation, 623/ 773-6258

GROUNDWATER INJURY NM

MINING RELEASES SETTLEMENT

The New Mexico Office of Natural Resources Trustee (ONRT) and Freeport-McMoRan Copper & Gold Inc. (FMI) reached a $13 million settlement for the injury of groundwater resources resulting from the release of hazardous substances from FMI mine facilities in southwestern New Mexico. The settlement, announced December 30, includes $12,794,000 for the restoration of groundwater resources, plus an additional $206,000 for the reimbursement of outstanding damage assessment costs to be paid to ONRT. The proposed consent decree outlining the settlement was recently filed in District Court by the Attorney General's Office

"New Mexico has maintained a comprehensive statewide Natural Resources Damages program that has resulted in the settlement of the state's largest natural resource damage claim," Governor Bill Richardson said. "This settlement serves as a model for settling natural resource damage liabilities in New Mexico."

Under the federal Superfund statute, state trustees are authorized to recover damages for injuries to natural resources that have occurred as the result of releases of hazardous substances. Compensation for the resource injuries is provided by the responsible party and is used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources, in this case groundwater. ONRT will prepare a draft restoration plan that will propose restoration project(s) that can be implemented with restoration money from the settlement and will seek public review of the draft plan. "The multi-year assessment process for this claim was conducted under a cooperative assessment process to avoid costly litigation," said New Mexico Natural Resources Trustee Ron Curry. "The Office will now work with the public to determine the best method to restore groundwater resources."

"It has taken years of cooperative investigation and negotiation by many dedicated state employees to reach this historic settlement," said Stephen Farris, Director of the Water, Environment and Utilities Division of the New Mexico Attorney General's Office. "These efforts benefit all New Mexicans by protecting our most precious resource, water."
For info: Rebecca Neri Zagal, ONRT, 505/ 243-8087

SPECULATION IN WATER CO

MUNICIPAL RIGHTS & GROWTH

On December 3, Trout Unlimited (TU) announced that it reached a settlement in principle with the Pagosa Area Water and Sanitation District and the San Juan Water Conservancy District (districts) in long-running litigation on the districts' claims for new water rights for the so-called Dry Gulch Reservoir and Pumping Station project near Pagosa Springs. The settlement, which still must be written

WATER BRIEFS

into a decree and approved by District Court Judge Gregory G. Lyman, sets significant limits on the amount of water the districts can divert from the San Juan River for the proposed project.

The settlement represents a dramatic downscaling of the project. In 2004, the districts filed an application with the district court in Durango for water rights to serve future population growth in Pagosa Springs and Archuleta County. The districts claimed storage rights of 35,000 **a**cre-**f**eet (AF) in Dry Gulch Reservoir, a refill right for the reservoir of 35,000 AF, and the right to divert 180 **c**ubic **f**eet per **s**econd (cfs) of water per second from the San Juan River. Under their original application, the water districts could have diverted as much as 128,400 AF of water per year from the San Juan. Under terms of the settlement, the utilities can take no more than 11,000 AF from the San Juan River in any one year and no more than 9,300 AF per year on a 10-year rolling average.

The districts also are prohibited from diverting water if doing so will cause flows in the San Juan River to drop below minimum flow levels designed to protect fish and the environment. These flow levels are double the amount of the existing Colorado Water Conservation Board instream flow water rights for the river.

In 2006, TU appealed the decision of the district court awarding the utilities' 2004 water rights application. Citing concerns that the districts were speculating in water and claiming more water than they needed, in 2007 the Colorado Supreme Court (Supreme Court) reversed the water court decision and remanded the case. In so doing, the Supreme Court established new, stricter standards for public utilities claiming water rights for future population growth. *Pagosa I*, 170 P.3d 307 (Colo. 2007); see Water Briefs, *TWR* #45.

In 2008, the district court issued another decree awarding the districts water rights for a 25,000 AF reservoir and diversions of 150 cfs. TU appealed to the Supreme Court again, arguing that the revised water rights were still speculative and not consistent with credible future water demand projections.

The Supreme Court agreed with TU, again reversing the water court decision in November 2009. The Supreme Court reaffirmed its earlier ruling that public utilities must base the size of their water rights on credible evidence of future water needs. *Pagosa Area Water & Sanitation District v. TU*, Case No. 08SA354 (Nov. 2, 2009). See Water Briefs, *TWR* #69.

For info: Drew Peternell, TU, 303/ 440-2937 x102 or dpeternell@tu.org

GROUNDWATER RULES WA

NEW RULE FOR WITHDRAWALS

A permanent water management rule to manage Upper Kittitas County groundwater was signed December 22 by Washington's Department of Ecology (Ecology) Director Ted Sturdevant while work continues on approval of water connections that support local economic development. The rule allows new groundwater withdrawals in the upper county only if they are mitigated (backed by senior water rights), and will remain in place at least until a groundwater study commissioned with the US Geological Survey (USGS) is completed by September 2013.

Kittitas housing and business developers are securing senior water rights in private water banks established by Suncadia Resort and Northland Resources. The rights allow new water connections for individual or shared wells or small water systems. Ecology has approved more than 1,270 new connections so far. The significant economic activity generated by the water connections will benefit the local tax base without harming water right holders in the basin, according to Ecology.

Beginning in July 2009, an emergency Ecology rule halted new groundwater withdrawals in Upper Kittitas County west of Indian John Hill unless they are fully mitigated to offset impacts to senior water rights. In June 2010, Ecology filed a proposal for a permanent groundwater rule. In November 2010, Ecology made the determination that the final rule meets the criteria for being exempt from Gov. Chris Gregoire's suspension of non-critical rule-making by state agencies.

In addition to funding $642,000 of the $977,000 USGS study, the Washington state Legislature has provided $58,000 to Kittitas County for professional hydrogeologic consulting services to facilitate Kittitas County's participation in the Upper Kittitas County Groundwater Study Advisory Committee.

For info: Dan Partridge, Ecology, 360/ 407-7139 or dpar461@ecy.wa.gov; website: www.ecy.wa.gov/programs/wr/cro/kittitas_wp.html

ABANDONED COAL MINES US

CLEANUP GRANTS

Secretary of the Interior Ken Salazar on December 15th announced the availability of more than $395 million in grants to states and tribes to restore abandoned mine lands nationwide, generating jobs and eliminating health and safety hazards caused by past coal mining. The Fiscal Year 2011 funding for the grants administered by Interior's Office of Surface Mining Reclamation and Enforcement (OSM) represents an increase of more than $25 million over last year. The grants, which are funded in part by a per-ton reclamation fee levied on all coal produced in the United States, allow state and tribal Abandoned Mine Land (AML) programs to correct environmental damage from past mining, reclaim steep and unstable slopes, improve water quality by treating acid mine drainage, and restore water supplies damaged by mining, among other things.

OSM provides these grants to 28 coal-producing states and tribes according to a formula based on their past and present coal production. OSM will award grants to the states and tribes over the next nine months as they apply for specific reclamation projects. Of the total $395 million in FY 2011 grants, $150 million comes from the reclamation fees collected, while $245 million is derived from the US Treasury. Since 1977, when Congress passed the Surface Mining Control and Reclamation Act to create OSM and the AML program, OSM has provided more than $7 billion to reclaim more than 285,000 acres of hazardous high-priority abandoned mine sites.

For info: Kendra Barkoff, Interior, 202/ 208-6416

WASTEWATER FINE OR

PENALTY FOR CHLORINE DISCHARGES

The Oregon Department of Environmental Quality (ODEQ) issued a $278,794 civil penalty to the Medford Water Commission (Commission) on November 30 for long-term discharges of chlorinated wastewater into Lone Pine Creek at levels far exceeding the state's acute chlorine toxicity standard. The chlorine discharges, from the commission's Capital Hill Reservoir, were at levels harmful to aquatic life. The chlorine discharges date back to the late 1950s, decades before enactment of the federal Clean Water Act, which prohibits the discharge of

WATER BRIEFS

toxic substances into state waters in toxic amounts. ODEQ learned of the discharges in February 2010 through a complaint from the Oregon Department of Fish and Wildlife. The Commission has appealed the penalty and requested a contested case hearing.

The Commission owns and operates a municipal drinking water supply and distribution system. The Commission began adding chlorine to its water at the source beginning in the late 1950s. From late fall to early spring, when less water is used, the Commission discharges excess water from the reservoir through an overflow pipe which enters Lone Pine Creek, a tributary of Bear Creek. The Commission reported to ODEQ that it discharges an average of 5 million gallons of chlorinated water per day for approximately 150 days during the wet season. The discharged water has a chlorine concentration ranging between 0.50 to 0.60 milligrams per liter (mg/L). The state water quality standard for acute chlorine toxicity is 0.019 mg/L; the standard for chronic chlorine toxicity is 0.011 mg/L.

The most recent data available indicates the Commission discharged highly chlorinated water from Sept. 2009 through May 2010, during which there were 198 days where chlorine levels exceeded the state's acute toxicity level.

Nearly 70 percent of the $278,794 total penalty amount, or $192,394, reflects the economic benefit the Commission gained by avoiding the $13,000-a-year cost of applying dechlorinating chemicals to the excess treated reservoir water before discharging it. ODEQ computed the Commission's economic benefit back to 1997, when the state issued a guidance document clarifying its policy on disposal of chlorinated water. The policy requires certain management practices to reduce the potential for discharging chlorine at toxic levels; the Commission had not been implementing these practices.

In an April 8 letter to the Commission, ODEQ outlined corrective actions the commission was to take to correct the chlorine discharge problem. By mid-May, the Commission submitted a report reviewing the feasibility of eliminating overflows of chlorinated water into Lone Pine Creek. That report determined it is not practical to eliminate the overflows, and the Commission has chosen to install a dechlorination system. The system is now in place at Capital Hill Reservoir and will use calcium thiosulfate to remove chlorine from all future discharges to Lone Pine Creek.
For info: Jeff Bachman, ODEQ, 503/ 229-5950 or BACHMAN.Jeff@deq.state.or.us

MORATORIUM LIFT KS/OK/MO

GROUNDWATER AVAILABLE

A 2009 comprehensive model of the Ozark Plateau aquifer system shows that more groundwater is available for use without compromising the long-range water supply. "Based on what we learned from the model developed by the U.S. Geological Survey, it appears the supply can support about three times the amount of water that's currently authorized for use and still meet safe yield standards," said David Barfield, chief engineer of the Kansas Department of Agriculture's **d**ivision of **w**ater **r**esources (DWR). "Because of this, I will rescind the water rights moratorium that's been in place for the aquifer since 2004." The area will be opened through a regulation to be developed in 2011.

Safe yield for the area is defined as the use that can be sustained without reducing storage in the aquifer by more than 25 percent over the next 100 years. DWR calculates safe yield at 36,000 acre-feet, about three times more than is currently authorized. Safe yield was determined using a comprehensive model of the aquifer system developed by the US Geological Survey and MODFLOW software to analyze the effects of increased groundwater use on the long-term availability of groundwater.

The moratorium on groundwater appropriations that has been in place since 2004 will be lifted. Term permits issued since the moratorium can become regular appropriations. The moratorium exempted certain minor uses and allowed moratorium term permits from the Ozark Plateau aquifer until further studies could be completed.

The Ozark Plateau aquifer system is an important water source for southeast Kansas, southwest Missouri, northeast Oklahoma and a small part of northwest Arkansas. The system consists of two aquifers that have a discontinuous confining unit. The upper aquifer is the Springfield Plateau aquifer; the lower is the Ozark aquifer.
For info: Lisa Taylor, KDA, 785/ 296-2653 or lisa.taylor@kda.ks.gov; website: www.ksda.gov/subbasin/content/297

WATER SUSTAINABILITY AZ

RECYCLING & CONSERVATION

Governor Jan Brewer's Blue Ribbon Panel on Water Sustainability has released its final report outlining recommendations to improve statewide water sustainability through increased recycling and water conservation. The 139-page final report analyzes 26 priority issues and makes 63 recommendations on how to improve and promote water recycling and conservation by the Arizona Department of Water Resources (ADWR), Arizona Corporation Commission (ACC) and Arizona Department of Environmental Quality (ADEQ).

Among the recommendations: coordinate and streamline permitting and data submission requirements to foster the increased use of reclaimed and recycled water; promote research on human health effects of low levels of contaminants, such as pharmaceuticals, typically found in reclaimed water to ensure that the use of reclaimed water remains safe; gain a better understanding of the energy needs to produce water and the water needs of energy production; examine ways to safely expand the use of reclaimed water for environmental purposes in recognition of the derived net ecological benefits; develop a comprehensive approach to matching the quality of water supplies to appropriate uses to save both water and energy; establish financial and rate-making guidelines for regulated water utilities that mirror programs currently in effect for energy producing utilities.

The Blue Ribbon Panel was formed in August 2009 and conducted regular meetings about water resource issues for more than a year. The 40-member panel included stakeholders from large and small cities, counties, agriculture, industry, Native American tribes, environmental interests, Arizona universities, legislative leaders, and other experts. The panel's charge was to identify and overcome obstacles to increased water sustainability, a matter vital to the future of the state.
For info: Report available at: www.azwater.gov/AzDWR/waterManagement/BlueRibbonPanel.htm

WATER BRIEFS

DAIRY PERMIT DENIED NM

HISTORY OF NONCOMPLIANCE

On December 22, the New Mexico Environment Department (NMED) denied a discharge permit for Ruch Dairy in Hobbs because of repeated noncompliance with state groundwater regulations. The dairy operated without an authorized permit from NMED. The owners of the dairy, John and Marta Ruch, sought a discharge permit of up to 40,000 gallons a day of dairy wastewater and land application of that wastewater to 100 acres of crop land.

The facility has a history of noncompliance with state groundwater regulations, including confirmed groundwater contamination and numerous spills of wastewater, stormwater, and potable water. Four members of the community urged Secretary Curry to deny the permit because of issues from the dairy related to odors, flies and noncompliance with groundwater regulations. The Ground Water Bureau told the dairy in November 2009 that it did not have permission to discharge until the Bureau issued a final version of the dairy's permit. The dairy owners, however, continued to operate without a valid permit. "This dairy has been a flagrant violator of state environmental laws, including operating without a valid permit," said New Mexico Environment Department Secretary Ron Curry. "The dairy's owners failed to operate in a responsible manner that would protect New Mexico's limited groundwater supplies."

The denial requires the dairy owners to remove cows from the property within 60 days of the issuance of the Secretary's denial. The dairy must at that time cease discharges on the property until a new groundwater discharge permit is approved. Pete Domenici Jr., who is Governor Susana Martinez's Environmental Transition leader, is the attorney for the dairy owners.

For info: Marissa Stone Bardino, NMED. 505/ 827-0314 or marissa.bardino@state.nm.us

NEVADA WATER LAW NV

NEW PUBLICATION

The Nevada Law of Water Rights is a new book to be published in January. Coauthored by two of Nevada's most experienced water lawyers, Ross E. de Lipkau and Earl M. Hill, the book is designed for lawyers, landmen, and executives concerned with water rights or real property in Nevada. The book discusses practical aspects of water rights practice in Nevada, including the authors' experiences in working with the State Engineer of Nevada, whose office oversees all applications and uses of water in the state. Topics addressed include US policies affecting Nevada water law, interstate issues, adjudication of water rights, groundwater and surface water, and geothermal resources. The Nevada Law of Water Rights cites numerous authorities, including US federal court decisions relevant to all western states water lawyers, and includes references to water rights papers given in annual and special institutes of the Rocky Mountain Mineral Law Foundation. The book includes a brief, informative history of the development of water rights law in Nevada, from pre-statehood to the present.

For info: Mark Holland, RMMLF, 303/ 321-8100 x106, mholland@rmmlf.org or www.rmmlf.org

ENFORCEMENT RESULTS US

EPA 2010 COMPLIANCE REPORT

EPA announced on December 6 the release of its annual enforcement and compliance results. In fiscal year (FY) 2010, EPA took enforcement and compliance actions that require polluters to pay more than $110 million in civil penalties and commit to spend an estimated $12 billion on pollution controls, cleanup, and environmental projects. These actions when completed will reduce pollution by more than 1.4 billion pounds.

As a result of water cases concluded in FY 2010, EPA is ensuring that an estimated 1 billion pounds of water pollution per year will be reduced, eliminated or properly managed and investments in pollution control and environmental improvement projects from parties worth approximately $8 billion will be made. EPA's civil enforcement actions also led to commitments to treat, minimize or properly dispose of more than an estimated 11.8 billion pounds of hazardous waste.

EPA's criminal enforcement program opened 346 new environmental crime cases in FY 2010. These cases led to 289 defendants charged for allegedly committing environmental crimes (the largest number in five years), 198 criminals convicted, and $41 million assessed in fines and restitution.

This year's annual results include an enhanced mapping tool that allows the public to view detailed information about the enforcement actions taken at more than 4,500 facilities that concluded in FY 2010 on an interactive map of the US and its territories. The map shows facilities and sites where civil and criminal enforcement actions were taken for alleged violations of environmental laws regulating air, water, and land pollution. The mapping tool also displays community-based activities like the locations of the environmental justice grants awarded in FY 2010 and the Environmental Justice Showcase Communities.

For info: FY 2010 Report and message from Asst. Administrator for the Office of Enforcement and Compliance Assurance Cynthia Giles: www.epa.gov/compliance/resources/reports/endofyear/eoy2010/index.html

SURFACE STORAGE CA

PROGRESS REPORT BY CDWR

The Director of the California Division of Water Resources, Mark W. Cowin, recently released the CALFED Surface Storage Investigations Progress Report. According to Cowin, the report represents "a new era in surface storage planning, where projects are conceived to support multiple objectives that combine ecosystem restoration and water quality improvements with more traditional purposes of water supply reliability, hydropower, and flood protection. These projects would include aquatic and riparian ecosystem restoration in the Delta and its tributaries, improved drinking and habitat water quality, and greater water supply reliability for California's growing population and diverse economy. Consistent with the 2009 Comprehensive Water Package, the storage project formulations presented in this Progress Report would provide significant public benefits, including ecosystem restoration, water quality, flood protection, emergency response, and recreation."

Director Cowin's Message went on to note that the "Progress Report is an update on how surface storage could be configured and operated under various future conditions and illustrates how potential projects would provide flexibility to achieve water management objectives in an uncertain future."

For info: Report at: www.water.ca.gov/storage/CALFED Progress Report 2010/

WATER BRIEFS

WATER DEMAND WEST

WESTERN GOVERNORS' ASSESSMENT

The Western Governors Association (WGA) met in Las Vegas in early December to discuss how best to manage increasing demand for water across the region in the face of dropping water levels. Potential solutions include greater efficiency, more water banking, and dealing with an aging water infrastructure. Attending the meeting were Governors C.L. "Butch" Otter (ID), WGA Chairman; Brian Schweitzer (MT); Bill Ritter (CO); Gary Herbert (UT); Jim Gibbons (NV); and Governors-elect John Hickenlooper (CO) and Matt Mead (WY). Joining the governors were Anne Castle, Asst. Secretary for Water and Science at the US Department of Interior; Jeff Sterba, President of American Water; Paul Mulroy, General Manager of Southern Nevada Water Authority's Las Vegas Valley Water District; and Debra G. Coy with Svanda & Coy Consulting.

"The whole idea of how we utilize water, share it and store it has long been an issue that has faced each and every state and federal administration," Otter said. "We recognize the problems, but we have to ramp up our efforts in achieving greater water efficiency and reuse and in addressing new infrastructure to store water." Pat Mulroy touted water use efficiency projects Las Vegas has employed. The Governors concurred, with both Colorado and Utah citing significant and aggressive water savings goals they have set for the coming decades. However, the panelists agreed that water conservation alone would not solve the problem. Coy said there are billions of dollars in private capital ready to be deployed for new water supply infrastructure. "We will need to overcome legitimate concerns about the role of the private sector in water supply and provide a reliable return on investment, but the capital is ready to be put to work," Coy said.

The group had a spirited exchange on market-based water transfers. Several governors and panelists noted that water markets can provide a useful tool for transferring water to high economic value uses, particularly during water shortages. Gov. Ritter shared Colorado examples of farmers using rotating fallowing to free up water that is then leased to cities. Mulroy cited the successful water transfer agreement between Metropolitan Water District and Palo Verde Irrigation District in Southern California. Gov.-elect Mead of Wyoming expressed concern about the loss of agriculture and food production, noting that it can be difficult to return land to agriculture once it has been fallowed.

Gov. Ritter noted the important connections between energy and water in the West. Many traditional and renewable energy sources require water to operate. "We need to do a better job of integrating energy policy and water policy in the West," Ritter said. The WGA is leading a project to analyze the energy-water nexus in the context of transmission planning in the Western US.

Following the water discussion, NOAA Administrator Dr. Jane Lubchenco described the NOAA Climate Service. Lubchenco noted that the Service is being designed to help decision-makers make informed decisions about water management and other key Western resource issues, including forests, wildlife, and energy. She urged the governors to work with NOAA to shape the climate service so it serves the states and addresses the highest priority questions.

The governors wrapped up their two-day meeting with a discussion on "Fixing What's Broken with the Endangered Species Act." Western governors have been strong advocates for species and habitat protection, but also have called for common sense changes to ESA to make it more effective in recovering species and preventing listings. Officials of the Obama Administration joined the discussion.
For info: Tom Iseman, 303/ 378-6102 or www.westgov.org

FLUORIDE ASSESSMENTS US

DRINKING WATER STANDARDS

The US Dept. of Health and Human Services (HHS) and EPA on January 7 announced important steps to ensure that standards and guidelines on fluoride in drinking water continue to provide the maximum protection to support dental health, especially in children. HHS is proposing that the recommended level of fluoride in drinking water can be set at the lowest end of the current optimal range to prevent tooth decay, and EPA is initiating review of the maximum amount of fluoride allowed in drinking water. These actions will maximize the health benefits of water fluoridation, an important tool in the prevention of tooth decay while reducing the possibility of children receiving too much fluoride. The Centers for Disease Control and Prevention named fluoridation of drinking water one of the 10 great public health achievements of the 20th century.

HHS and EPA reached an understanding of the latest science on fluoride and its effect on tooth decay prevention, and the development of dental fluorosis that may occur with excess fluoride consumption during the tooth forming years, age 8 and younger. Dental fluorosis in the United States appears mostly in the very mild or mild form — as barely visible lacy white markings or spots on the enamel. The severe form of dental fluorosis, with staining and pitting of the tooth surface, is rare in the US.

HHS' proposed recommendation of 0.7 milligrams of fluoride per liter of water replaces the current recommended range of 0.7 to 1.2 milligrams. This updated recommendation is based on recent EPA and HHS scientific assessments to balance the benefits of preventing tooth decay while limiting any unwanted health effects. These assessments will also guide EPA in making a determination of whether to lower the maximum amount of fluoride allowed in drinking water, which is set to prevent adverse health effects.

Comments regarding the EPA documents, Fluoride: Dose-Response Analysis For Non-cancer Effects and Fluoride: Exposure and Relative Source Contribution Analysis should be sent to EPA at FluorideScience@epa.gov. Notice of the proposed recommendation will be published in the Federal Register soon and HHS will accept comments on the proposed recommendation for 30 days at CWFcomments@cdc.gov. HHS is expecting to publish final guidance for community water fluoridation by spring 2011. You may view a prepublication version of the proposed recommendation at: www.hhs.gov/news/press/2011pres/01/pre_pub_frn_fluoride.html.
For info: EPA's fluoride assessment website: http://water.epa.gov/action/advisories/drinking/fluoride_index.cfm

CALENDAR

January 18 OR
The River Forum, Portland. UO White Stag Bldg., 6-8pm. Sponsored by City of Portland. For info: Ann Beier, City, 503/ 823-7681 or www.portlandonline.com/ohwr/index.cfm?c=53830

January 18 WA
EPA's Unified Guidance: Statistical Analysis of Groundwater Data Course, Seattle. Mountaineers Club. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

January 18-20 ID
Idaho Water Users Ass'n Annual Meeting, Boise. DoubleTree Hotel Riverside. For info: IWUA, 208/ 344-6690 or www.iwua.org/

January 19 AZ
Statistical Risk Benchmarking in the Environmental Risk Assessement Brownbag, Tucson. Water Resources Research Ctr. For info: Jane Cripps, WRRI, 520/ 621-2526, jcripps@cals.arizona.edu or http://cals.arizona.edu/azwater/programs/conf2011/index.html

January 20-21 CA
NEPA 7th Annual Conference, San Francisco. Hotel Nikko. For info: CLE International, 800/ 873-7130 or website: www.cle.com

January 20-21 FL
Natural Resource Damages in the Gulf, Miami. Hotel InterContinental Miami. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

January 20-21 CA
Green Building Seminar, Santa Monica. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

January 20-21 AZ
Watershed Technical Training in Green Infrastructure Workshop, Tucson. For info: Tory Syracuse, WMG, 520/ 396-3266, tsyracuse@watershedmg.org or www.watershedmg.org/tech-trainings

January 21 AK
Permitting Strategies in Alaska Seminar, Anchorage. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

January 21 CA
CEQA & Climate Change: An In-Depth Update, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

January 22 CA
California Water Law Symposium 2011 - The End of Paper Water: Unlimited Demands, Natural Limits & Reliable Supply, San Francisco. Golden Gate University School of Law. For info: www.waterlawsymposium.com/

January 23-27 WA
Second Conference on Weather, Climate & the New Energy Economy, Seattle. Sponsored by American Meteorological Society. For info: www.ametsoc.org/meet/annual/

January 24-26 TX
2011 Underground Injection Control Conference, Austin. Radisson Hotel. Sponsored by Ground Water Protection Council. For info: www.gwpc.org/meetings/uic/uic.htm

January 25 CA
The Global Water Crisis: Challenges & Opportunities for Clean Energy Annual Conference, Sunnyvale. AMD Commons Auditorium. For info: SD Forum, www.sdforum.org/

January 25-26 CA
Managed Aquifer Recharge Symposium, Irvine. Atrium Hotel at Orange Co. Airport. For info: www.nwri-usa.org/RechargeSymposium.htm

January 25-27 CA
Brownfield Restoration Training, Oakland. Washington Inn Hotel. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

January 26 OR
2011 State Legislature - Outlook for Sustainability Luncheon, Portland. Schwabe Williamson & Wyatt Office, 1211 SW Fifth Ave., Noon-1:15pm. Sponsored by OSB Sustainable Future Section. For info: RSVP to Amie Jamieson, amie@mcd-law.com

January 26 MT
Water Conservation in the Gallatin Valley: Great Gallatin Watershed Council Annual Meeting, Bozeman. Holiday Inn. For info: www.greatergallatin.org/

January 26 OR
Biomass as a Renewable Energy Source Seminar, Portland. World Trade Center, 121 SW Salmon. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

January 26 OR
Green Professionals Conference 2011, Portland. For info: www.green-professional.com

January 26-27 NV
Hunting & Fishing Rights for Tribes & Tribal Organizations Conference, Las Vegas. Hard Rock Hotel. For info: Falmouth Institute, http://falmouthinstitute.com/

January 26-28 WY
Wyoming Water Well Assn 2011 Convention, Casper. Parkway Plaza. For info: www.wywaterwell.org

January 26-28 CO
Colorado Water Congress Annual Convention, Denver. Hyatt Regency Denver Tech Ctr. For info: CWC, 303/ 779-1234 or www.cowatercongress.org

January 27 MI
2011 Agriculture's Conference on the Environment, Lansing. Lansing Center. For info: www.maeap.org/maeap/events/ace

January 27-28 WA
Endangered Species Act Conference, Seattle. Grand Hyatt Seattle. Also Live Webcast. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

January 27-28 DC
Environmental Impacts on Energy Development Conference, Washington. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

January 29 CA
California 2020: A Vision for the Next Decade (Planning & Conservation League Annual Environmental Legislative Symposium), Sacramento. Sheraton Grand. For info: www.pcl.org/events/index.html

February 1-2 AZ
Disaster Management for Water & Wastewater Utilities, Tucson. El Conquistador, 10000 N. Oracle Road. Hosted by ADEQ. For info: Noah Adams, ADEQ, 602/771-4511, nra@azdeq.gov or www.water-emp.com

February 1-3 WA
10th Annual Stream Restoration Design Symposium, Stevenson. Skamania Lodge. For info: www.rrnw.org/pageview.aspx?id=32242

February 1-3 CA
Waste Management & Pollution Prevention, San Diego. Mission Valley Resort. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

February 1-4 FL
National Assoc. of Clean Water Agencies Winter Conference, Ft. Lauderdale. Hyatt Regency Pier 66. For info: National Assoc. of Clean Water Agencies, 202/ 833-2672 or www.nacwa.org

February 2 WA
Stormwater Regulation Update Luncheon, Seattle. Rock Salt on Lake Union, 1232 Westlake Ave. N. For info: Sue Moir, NEBC, 503/ 227-6361, sue@nebc.org or www.nebc.org

February 2 OR
3rd Solar Power Projects & Permitting Seminar, Portland. World Trade Center. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

February 2 MD
TMDL for the Chesapeake Watershed Seminar, Baltimore. Sheraton Inner Harbor Hotel. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

February 2-5 Australia
Int'l Conference on Integrated Water Management, Perth. Murdoch University. For info: www.etc.murdoch.edu.au/pages/conf1.html

February 3 CA
Thresholds of Significance in Environmental Planning Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 3-5 OR
Implementing the Human Right to Water in the West Conference, Salem. Willamette University College of Law. For info: Tom Dimitre, Willamette University, tdimitre@willamette.edu

February 7 WA
Stormwater Management & Permitting Conference, Seattle. Washington Convention Ctr. For info: Holly Duncan, 503/ 282-5220, hduncan@elecenter.com or www.elecenter.com

February 7 WA
Innovative Energy Management Workshop, Yakima. Sponsors: EPA Region 10, Evergreen Rural Water of WA and NW Energy Efficiency Alliance. For info: Cyndi Grafe, EPA, 208/ 378-5771 or grafe.cyndi@epa.gov

February 7-10 LA
6th Int'l Conference on Remediation of Contaminated Sediments, New Orleans. Sheraton Hotel. For info: www.battelle.org/conferences/sediments/

February 8-9 WA
Human Health Risk Assessment Course, Kirkland. Computer Classroom Seattle. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

February 9 CA
Surface Mining & Reclamation Act Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 10 CA
Making Effective Use of Mitigated Negative Declarations Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 10-11 CA
NEPA 7th Annual Conference, Los Angeles. Millennium Biltmore. For info: CLE International, 800/ 873-7130 or website: www.cle.com

February 10-11 CA
Environmental Planning & Site Analysis Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 11 CA
Water Resources Planning & Urban Growth Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 15 GA
Carbon Credits Seminar, Atlanta. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

The Water Report
Water Rights, Water Quality & Water Solutions in the West
260 N. Polk Street • Eugene, OR 97402

CALENDAR

(continued from previous page)

February 15-17 UT
Nutrients & Water Quality: EPA Region 8 Collaborative Workshop, Salt Lake City. Hilton City Center. For info: www.cwi.colostate.edu/nutrients

February 15-16 WA
Principles of Environmental Sampling Course, Issaquah. NWETC Hdqtrs. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

February 16 GA
Solar Power: Projects & Permitting Seminar, Atlanta. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

February 16 CA
CEQA Update, Issues & Trends Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 16-17 AZ
2011 Tamarisk Research Conference, Tucson. Marriott University Park. For info: www.tamariskcoalition.org

February 17-18 GA
Wetlands & Water Law in the SE Seminar, Atlanta. Sheraton Atlanta Hotel. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

February 18 OR
Water Supply & Management Seminar, Portland. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

February 19 CO
Water Tables 2011 Dinner, Fort Collins. Colorado State University. For info: Ashley Lapsley, CSU, 970/ 491-6823 or Andrea.Lapsley@Colostate.edu

February 22-25 OR
American Fisheries Society 2011 Oregon Chapter Annual Meeting, Bend. Riverhouse Hotel. For info: Colleen Fagan, 541/ 786-8953, Colleen.e.fagan@state.or.us or www.orafs.org/meeting2011/Annual11.htm

February 23 AZ
Environmental Crimes & Penalties Seminar & Free WEBCAST, Phoenix. Complimentary Live Webcast. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

February 23 MD
TMDL in the Chesapeake Watershed Seminar, Baltimore. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

February 23 AZ
Securing Water for the Environment: An Update on Conserve to Enhance Brownbag, Tucson. Water Resources Research Ctr. For info: Jane Cripps, WRRI, 520/ 621-2526, jcripps@cals.arizona.edu or http://cals.arizona.edu/azwater/programs/conf2011/index.html

February 23-25 CA
Water Law Conflicts in Practice: ABA Water Law Conference 29th Annual, San Diego. Westin San Diego. For info: ABA, www.abanet.org/environ/programs/waterlaw/2011/home.shtml

February 23-25 TX
"Balancing a Three-Legged Stool: The Environment, Human Needs, and the Economy - Winter Conference of the Western Coalition of Arid States, Fort Worth. Worthington Renaissance Hotel. For info: WESTCAS, www.WESTCAS.org

February 23-25 OR
Environmental Negotiations for Scientists & Resource Managers Course, Portland. North Ramada Airport. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

February 23-25 NV
Family Farm Alliance 23rd Annual Meeting & Conference, Las Vegas. Monte Carlo Resort. For info: Dan Keppen, FFA, 541/ 892-6244 or www.familyfarmalliance.org

February 24 AK
ESA - Impacts on Alaska, Anchorage. Dena'ina Convention Ctr. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

February 24 CA
Endangered Species Regulation & Protection Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or www.extension.ucdavis.edu/landuse

February 24-25 TX
Texas Wetlands Conference - 21st Annual, Austin. Omni at Southpark. For info: CLE International, 800/ 873-7130 or website: www.cle.com

February 24-25 Ontario
Conference on Stormwater & Urban Water Systems Modeling, Brampton. Marriott Ctyd. Toronto Brampton. For info: www.chiwater.com/Training/Conferences/conferencetoronto.asp

February 24-25 WA
Aquatic Ecosystems Training, Seattle. The Holiday Inn. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#

February 28-March 1 CA
Contaminant Source Tracking & Age-Dating Course, San Diego. Mission Valley Resort. For info: EOS Alliance: www.eosalliance.org/schedule/calendar/courses-eos#