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Water Rights, Water Quality & Water Solutions in the West

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WATER LAW ADAPTABILITY

INCREASING WATER USE EFFICIENCY
MEETING THE COMPETING NEEDS OF GROWING POPULATION AND SUSTAINABLE AGRICULTURE

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

OVERVIEW

The Prior Appropriation Doctrine (Doctrine) — whereby those earliest in putting water to beneficial use are granted a prioritized right to continue using that water flow — was adopted throughout the American West as a means of addressing the region's physical realities. The West's irrigable lands were rarely located immediately adjacent to the streams. To make the land productive, water had to be diverted from the streams and carried considerable distances in ditches and canals to reach farm lands. The construction of diversion and conveyance facilities was an arduous undertaking, in earlier days generally accomplished by hand and with primitive scrapers pulled by teams of horses or mules. The work rarely could be accomplished in a single irrigation season. The Doctrine's priority system protected appropriators' investments and provided assurance that their claim to water would be preserved while they completed the diversion works, cleared the land, and were able to put the water to beneficial use.

The Doctrine served the West well during the 19th Century. It facilitated the settlement of the West and the expansion of its economy. However, the security afforded by priority also excluded access to water by others in times of shortage, regardless of how inefficient or wasteful senior users were in the use and application of water. That is the harsh reality of the "first in time first in right" tenet of the Doctrine. To blunt the harsh edge of the Doctrine, storage facilities were constructed to capture high spring flows that were in excess of anyone's beneficial use needs at the time. The availability of storage assured junior users they would have some water late in the season, even after their direct flow rights in the stream had been curtailed in deference to prior rights.

"Fresno" scrapers being used for irrigation canal construction circa 1910
Source: Rowley, *The Bureau of Reclamation: Origins and Growth to 1945* (Reclamation 2006)

Water Law Adaptability

IRRIGATED
HOMESTEAD
LANDS

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75 Choice 40- and 80-acre Farms lying west of Fallon open to entry September 22, 1914

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THE LAND is FREE

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Cultivation of 1-4 of irrigable area in 3 years, and 1-2 in 5 years is required

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CHURCHILL COUNTY

is one of the best sections in the Entire West for dairying, stock raising, truck gardening, sugar beet culture and general farming. Fallon has a half million dollar beet sugar factory which will operate next season, under extremely favorable price conditions. Fallon has the most up-to-date creamery plant in Nevada, and high-grade cows can be bought on the easy payment plan.

The Opportunity of a lifetime for the homeseeker exists RIGHT NOW in Churchill County. For further information Communicate with

Project Manager U. S. Reclamation Service

or Sec. Churchill County Chamber of Commerce, Fallon, Nev.

Source: Rowley, *The Bureau of Reclamation: Origins and Growth to 1945* (Reclamation 2006)

The Water Report
(ISSN 1946-116X)
is published monthly by
Envirotech Publications, Inc.
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Eugene, OR 97402

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Subscription Rates:
$299 per year
Multiple subscription rates available.

Postmaster: Please send address corrections to
The Water Report,
260 North Polk Street,
Eugene, OR 97402

The second major tenet of the Doctrine — that "beneficial use is the measure and limit of the water right" — holds that the actual amount of water being put to beneficial use determines the amount of water allocated to the water right. Ergo, if you use less you have a right to less. In addition, water right holders face the penalty of losing the right through non-use by common law abandonment or statutory forfeiture for non-use. Combining these tenets, it is not too hard to understand why the Doctrine has not been conducive to conservation and why change and adaptation have come so slowly. Historically, during shortage conditions priority has prevailed.

Until quite recently, 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 different meanings. Due to the influence of an expanding range of 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 a senior water right holder is protected by priority and by the "non-impairment" aspects of the Prior Appropriation Doctrine, senior appropriators have had little incentive to conserve water. Those who enjoy the Doctrine's protection have seen little reason to change the law to their possible detriment.

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. Significant municipal and industrial uses emerged later in the 20th Century as the West began its unrelenting march towards urbanization. The early allocation of most of the available water and vesting of property rights left many out of the water allocation process. These stakeholders are now seeking a seat at the table, adding new pressures on this scarce resource.

The Doctrine has evolved over time in response to changing societal values, but those changes have occurred very slowly. As a common law doctrine — i.e., subject to continuing development through case law — the Doctrine is inherently flexible. 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 clearly limited by the public interest, and this reality creates avenues for change to occur. Unfortunately, there is significant institutional resistance to change.

In discussing these issues, it is helpful to remember just how important irrigated agriculture remains to our society and economy. In Utah, as is also generally true throughout the western United States, about 80% of the water is still devoted to irrigated agriculture. [Editors' note: Nationally, cooling for thermoelectric plants accounts for close to 50% of all withdrawals, however 98% of these waters are quickly returned to their source, see Graphs, next page.] A very interesting white paper — *Agricultural Water: Protecting the Future of our Nation* — noted that "nearly half of all U.S. crop economic value is grown on the 16% of agricultural land that is irrigated. The remaining 84% of agricultural lands (farms not irrigated) produce just over 50% of the crop value." King Ranch Institute White Paper, October 2012, p.12; available at: http://krirm.tamuk.edu/. Irrigated agriculture is therefore very important to the economic well-being of Utah as well as the nation, not to mention the practical necessity of feeding our ever-expanding population. The agricultural processing and production sectors together account for $17.5 billion in total economic output in Utah after adjusting for multiplier effects. Combined, irrigated and non-irrigated agriculture accounts for about 78,000 jobs and income of approximately $2.7 billion, and 14.1 percent of total State output, which represents a 1.4 percent growth rate since 2008. Agricultural production and processing grew by 15.1 percent from 2008 to 2011. Agriculture cash receipts, statewide, were up to about $1.6 billion in 2011. *Economic Contribution of Utah Agricultural*, Utah State University (2013), available at: http://ag.utah.gov/news/USUEconStudy2013.html.

This article will provide an overview of the institutional framework of the Doctrine, considering both how its more rigid aspects create roadblocks to conservation and more efficient water use on farms, as well as how its inherent flexibility might be used to free up water for expanding urban populations and evolving ecological concerns.

PRIOR APPROPRIATION DOCTRINE DEVELOPMENT

The Prior Appropriation Doctrine originated from custom and usage in the early mining camps and irrigated farms of the West, fostered by the federal policy of benign neglect that allowed States to control the allocation of water. *See generally* Steven E. Clyde, *Adapting to the Change Demand for Water Use Through the Continued Refinement of the Prior Appropriation Doctrine: An Alternative Approach to*

Water Law Adaptability

Basic Tenets

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).

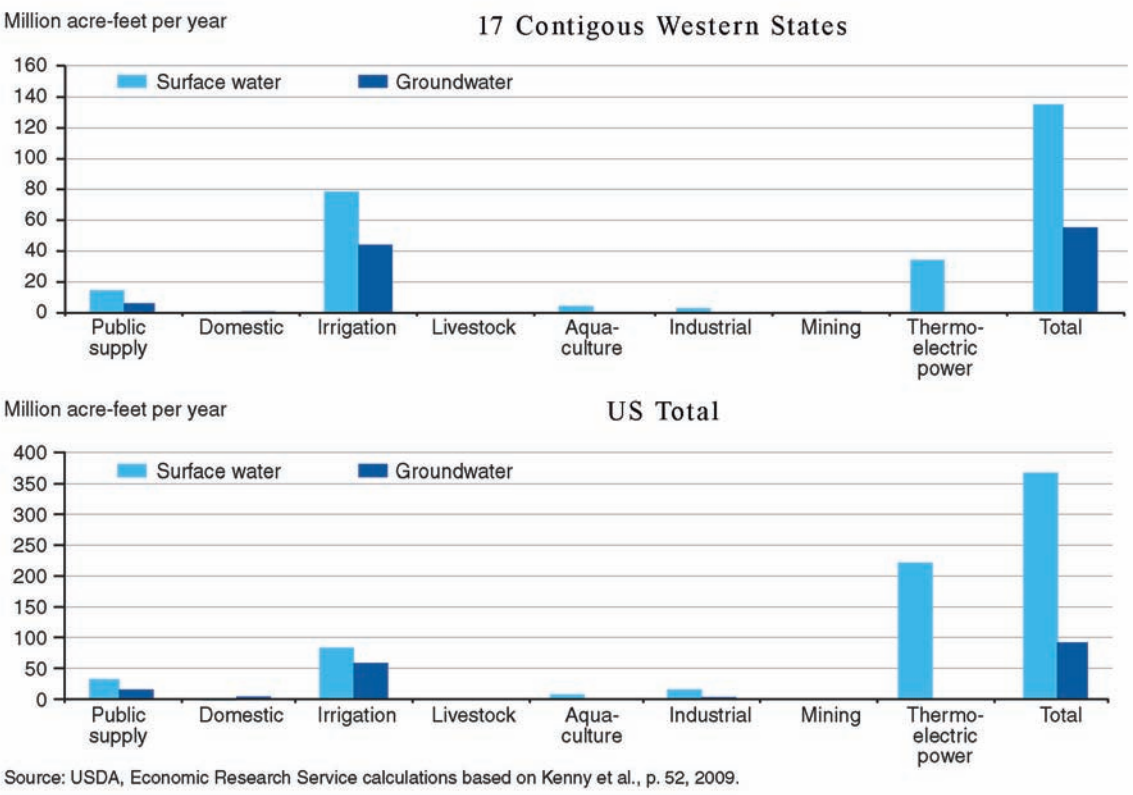
Property Interest

Once perfected, the water right becomes a vested, perpetual, property interest subject only to prior rights and the possible assertion of dominant federal interests. Perfection means that water has physically been put to use, and that use has been approved as a water right by a State agency. Once an application is approved, the applicant is given a specific amount of time within which to complete the construction of diversion works and to place the water to beneficial use. An applicant may be granted additional time within which to complete the appropriation upon a showing of diligence or reasonable cause for delay. Diligence requires the applicant to make a reasonable effort to accomplish the undertaking with the dispatch expected of those engaged in a like enterprise, who desire a speedy accomplishment of their designs. *Carbon Canal Co. v. Sanpete Water Users Ass'n*, 10 Utah 2d 376, 353 P.2d 916 (1960). 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); and *Town of Sterling v. Pawnee Ditch Ext. Co*., 42 Colo. 421, 94 P. 339 (1908).

Maximum Use

The policy of most Western States has been to maximize the economic development and use of its water resources. In *Waymen v. Murray City Corp*., 23 Utah 2d 97, 458 P.2d 861(1969), the court said that "Because of the vital importance of water in this arid region both our statutory and decisional law have been fashioned in recognition of the desirability and of the necessity of insuring the highest possible development and of the most continuous beneficial use of all available water with as little waste as possible." *See also* 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.

Water withdrawals, by water source and water-use category, 2005



Source: USDA, Economic Research Service calculations based on Kenny et al., p. 52, 2009.

Water Law Adaptability

Five Categories

Salvaged

Developed

Non-Tributary

Return Flow

Wastewater

PRIOR APPROPRIATION WATER CATEGORIES

Most Western States recognize five categories of water under the Prior Appropriation Doctrine. An individual's right to make more efficient use of this water varies depending upon its character or the category into which it falls. The recognized five categories are: (i) salvaged or saved water; (ii) developed water; (iii) return flow; (iv) wastewater; and (v) imported water; although the law concerning imported water is essentially analogous to that of developed water.

Salvaged or Saved Water

Salvaged or saved water is water that has been previously lost to the water system either due to seepage or to water-loving plants that line one's ditch or canal. *Howcroft v. Union & Jordan Irr. Co*., 25 Utah 311, 71 P. 487 (1903); see also *City and County of Denver v. Fulton Irr. Ditch Co*., 179 Colo. 47, 506 P.2d 144 (91972); and *Law of Water Rights and Resources*, Tarlock, A. Dan, §5:18, Thomson Reuters, 2013.

Developed Water

Developed water is water that is new to the stream system, and that would not have been available to the river system but for the acts of an individual who developed the supply. *Silver King Consolidated Mining Co. v. Sutton*, 85 Utah 297, 39 P.2d 682 (1934); *Mountain Lake Mining Co. v. Midway Irr. Co.*, 47 Utah 346, 149 P.2d 929 (1915). In Utah, the party who claims to have developed a new source of groundwater must prove by a preponderance of the evidence that he is not intercepting the tributaries of appropriated streams or the sources of supply of prior appropriators. All appropriators of the waters of natural springs and streams, by virtue of their appropriations, acquire an interest or right in and to the head-waters which feed or supply such springs or streams and have a right to follow their water supply to its source in order to protect their water rights from interference.

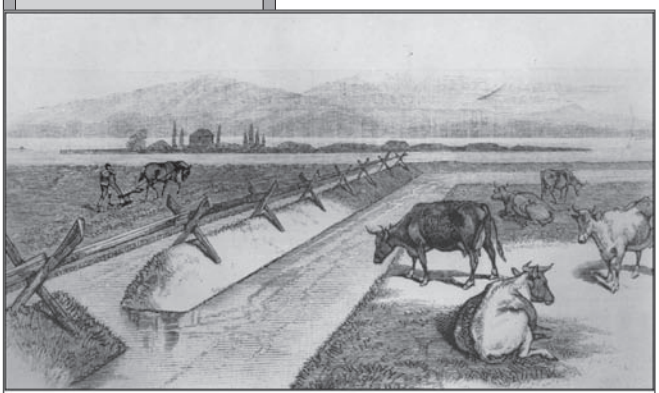
For example, the presumption, until overcome by satisfactory proof, is that the water encountered in a mine tunnel is tributary to the surface stream — and that the right to use the water is vested in the prior appropriators of the stream. If the presumption is rebutted and the water is determined to be developed and thus non-tributary, title vests in the developer and that title is essentially absolute. The law is well-established that water that has been developed by the efforts of an appropriator and which would not otherwise have been available to the stream but for their efforts, belongs to the party who developed it. The developed water is free from the "call" of the river by senior users ("call" to regulate off junior users so that the senior user obtains all of their water right). It may be wasted, recaptured, reused, and fully consumed by the party who developed it. Downstream users may use the water while it is available to them, but they acquire no vested rights as against the developer to compel the developer to discontinue wasting it for their benefit.

Return Flow Water

Return flow is generally defined as seepage water, which if not intercepted after its initial use, returns to the stream from which it was diverted, and is therefore considered part of the stream available to downstream right holders. In *Salt Lake City v. Telluride Power Company*, 17 P.2d 281 (Utah 1932), the court held that "We are of the opinion that, after the water has run through the canals and been used upon the lands of the parties operating the pumps, they have no interest or right in the water after it leaves their lands and finds its way again into the main channel, either as run-off water, or as seepage water, for as soon as it reaches the main channel, its identity is lost, and it again becomes a part of the natural flow." Downstream appropriators can obtain vested rights in return flows and are entitled to protection against interference by changes of use upstream, to insure the continued availability of return flows.

Wastewater

Wastewater is water that has been applied to land and then captured by the appropriator *before* it leaves his control. Wastewater can also be water that has flowed or seeped from the land of the original appropriator and is captured by an adjoining landowner and put to beneficial use *before* the water returns to the stream. Water users may appropriate the wastewater that another had made available. The appropriation is good against other junior appropriators, and the re-appropriator can even acquire a vested right as against other juniors. However, the right does not vest as against the senior appropriator who made the wastewater available, and the wastewater is subject to recapture and reuse by the original appropriator for use on the original land and for the original use (or possibly other uses). *Estate of Steed v. New Escalante Irrigation Company*, 846 P.2d 1223 (Utah 1992); *Steven v. Oakdale Irr. Dist.*, 13 Cal. 2d 343, 90 P.2d 58 (1958); and *Hidden Springs Trout Ranch, Inc. v. Hagerman Water Users, Inc*., 101 Idaho 677, 619 P.2d 1130 (1980).



A nineteenth-century *Harper's Weekly* lithograph of irrigated farms near Salt Lake City
Source: Rowley, *The Bureau of Reclamation: Origins and Growth to 1945* (Reclamation 2006)

Water Law Adaptability

Imported

Imported Water

Water imported by the acts of man into a drainage or stream to which it is not naturally tributary is treated as a source of foreign or developed water that has been added to the stream. The law rewards the importer by holding that the water belongs to the party who imported it. *Tanner v. Bacon*, 103 Utah 494, 136 P.2d 957 (1943). Imported water has the same attributes of title as a developed water source, in that it can be wasted, recaptured, reused, and fully consumed without regard to downstream users who may have used it in the past. Downstream users have no legal right to rely on the continued availability of this foreign water to support their water rights. *Hidden Hollow Ranch v. Fields*, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185 (2004); *City and County of Denver v. Fulton Irr. Ditch Co.*, 179 Colo. 47, 506 P.2d 144 (1972); and *City of Thorton v. Bijou Irr. Co*., 926 P.2d 1, 65-78 (Colo. 1996).

Common Law Attributes

PRIOR APPROPRIATION DOCTRINE PRESSURES

The Prior Appropriation Doctrine is inherently flexible and that flexibility may enable society to adapt the Doctrine to meet today's changing economic, social, and environmental concerns. However, this is a common law doctrine, and if it is left to the courts to shape the Doctrine, changes will occur very slowly. Courts typically address only the factual issues before them and do not always appreciate the broader policy implications and ramifications of their decisions.

Economic Pressures

Changing economic forces in the West will drive reform more quickly than any other influence. Agriculture and livestock grazing, as well as mining and other traditional extractive industries continue to lose ground to urbanization and an economy dependent upon recreation and the service industries that cater to it. This shift in economic focus is forcing the reallocation of water from agricultural use to accommodate increased municipal and industrial growth. The recent resurgence in natural gas development, fostered by hydraulic fracking, is adding to the demand for water.

Population Growth

The additional pressures coming to bear on Utah's limited water supply provide a good example. Currently, approximately 80% of the State's water resources are utilized in the agricultural sector (*Utah Water Resources: Planning for the Future*, Utah Division of Water Resources, page 35, (2001), available at: www.water.utah.gov/waterplan/SWP_pff.pdf). Utah's population is expected to double in the next 40 years and this surge in population growth will create additional demand for conversion of these agricultural rights to support municipal growth (Governor's Office of Planning and Budget at http://governor.utah.gov/DEA/projections.html). The population of Utah in 2012 was 2.8 million. The 2012 Preliminary Base Line Population Estimates show the population increasing to 5.154 million people by 2050, and to 5.811 million people by 2060 — all of whom will need water to drink, food to eat, housing, and an economy to meet their needs.

Water Supply

Unfortunately, in the West growth and development continues to occur as we if had an endless supply of water. Without tying growth to water availability, land use decisions are being made in a vacuum and we risk growing beyond the ability of our available water supply to sustain that growth. *See generally* 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 Ass'n 26th Annual Water Law Conference, San Diego, CA, February 21-22, 2008.

Federal Law Impacts

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

Reform Tools

Reform is nevertheless possible by the Western states themselves. For example, Utah law provided for equitable sharing of water among domestic users during shortage conditions without regard to priority. Utah Code, L 1903, Ch. 100, §54. The California Supreme Court held that perfected water rights may be reconsidered where their exercise threatens certain public values in water resources. *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). Other examples of reform are evident by examining the following cases: *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); and *Montana Coalition for Stream Access, Inc. v. Curran*, 210 Mont. 38, 682 P.2d 163 (1984). These examples illustrate that the tools for reform are already there in the Doctrine itself and in the statutory authority given State regulators. However, State Engineers will need some courage — and both Legislative and judicial support — to push beyond the traditional application of the rules. Clyde, *supra*, note 1, p. 62. Alternatively, if States resist reforming the Doctrine, they risk having that reformation take place in the courts.

Water Law Adaptability

Competing Policies

PRIOR APPROPRIATION'S EXCLUSIONARY NATURE

The Prior Appropriation Doctrine is exclusionary by nature in that it favors those who arrive first over later arrivals. It rewards and protects economic development, diversions, and depletions while ignoring large elements of society. Those left out may have been silent in the past, but many are becoming much more vocal now in demanding a seat at the water policy and allocation table. These newly active stakeholders include those from areas of water origin where the water has been purchased and stripped from the land for use in distant communities. They include recreationists who enjoy floating and fishing in a live and active stream. They include Indian tribes who have waited far too long for their opportunity to have water developed for their benefit. In addition, the influx of new Western immigrants 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. Many of these stakeholders have a strong sense of the inherent value of simply leaving water running in the stream rather than diverting every available drop of water. Their notion of value and of use, however, are at odds with the basic tenets of the Doctrine — i.e., the tenets that make beneficial use the measure and limit of the water right, that validate only those rights that divert water from the stream for application to some economy-producing endeavor, and which subject the right 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).

PRIOR APPROPRIATION DOCTRINE UNDER ATTACK

The Prior Appropriation Doctrine is under siege; indeed some have even declared it dead as Wilkinson entertainingly did so twenty years ago. Charles F. Wilkinson, *In Memoriam, Prior Appropriation 1848-1991*, 21 Envtl. L. xxix (1991). Twenty years on, the Doctrine is still alive and kicking.

Review Needed

The Doctrine's resilience, however, does not obviate its need for review. It remains incumbent upon us to determine whether the Doctrine is meeting the needs of today's society and, if not, how it might be improved to allow our farms to remain productive while meeting the needs of our expanding populations. As noted above, it would appear preferable to pass well thought-out legislation as opposed to waiting for common law to evolve, hopefully in the right direction, on a case-by-case basis. A Washington State Supreme Court dissenting opinion by Justice Guy provides a good summation of the tasks before us:

Review Factors

> The Legislature must consider whether western water law meets today's societal needs, given the understanding that water is not an infinite resource. The Legislature must now examine the water resources of this state and determine, for example (1) who controls those resources; (2) the extent of all government allocations of those water resources; (3) the present water usage from all sources, allocated and unallocated; (4) what water resources will be available in the future; (5) what future water needs will be; (6) how water allocations should be made; (7) what public interest is involved in water allocations and use; and, (8) if water allocations are to be changed as to existing users, whether under existing law that constitutes a taking for which compensation must be paid.

Rettkowski v. Dept. of Ecology, 122 Wash.2d 219, 858 P.2d 232, 245 (1993).

In the absence of meaningful State water law reform, the federal government (e.g., by asserting regulatory controls under the Endangered Species Act and the Clean Water Act) is inserting itself into the allocation process, once viewed as the exclusive province of the western states. When you add to that the impacts of the public trust doctrine and the assertion of broader public interest criteria in the allocation decisions, it is not too hard to envision the demise of the appropriated water right as we know it.

Resistance

Of course, there are many reasons to resist change. Those with the water whose manner and nature of use are protected by their priorities and the non-injury rule see little need for reform. After all, the Doctrine mandates that junior rights be curtailed in times of shortage, even where the junior water right may be used in a more beneficial and more efficient fashion than the prior (senior) irrigation rights. For the most part, junior appropriators are the most efficient water users; they have become so out of sheer necessity, since they have essentially been relegated the "leftovers" and often have to make do with much less water.

PROTECTION OF EXISTING RIGHTS: THE RULE AGAINST INTERFERENCE

No-Injury Rule

One area where the Prior Appropriation Doctrine might be changed to address the competing needs for water is the "no-injury rule," applied during a change of use (transfer) proceeding. A water right acquired under the Doctrine becomes a vested, perfected property interest. *Hunter* at 153. It is entitled to protection against unreasonable interference from other water users. Colo. Rev. Stat. Ann. § 37-92-301 (1987); N.M. Stat. Ann. § 72-5-23 to -24 (1985); Utah Code Ann. § 73-3-3 (Supp. 1988); and *East Bench Irrigation Co. v. Deseret Irrigation Co*., 271 P.2d 449 (Utah 1954). An appropriator may change their place of use, nature of use, or point of diversion. *E.g*., Utah Code Ann. § 73-3-3 (Supp. 1988). The right to change is held to be an inherent, but not absolute, right. *See Langenegger v. Carlsbad Irrigation Dist*., 483 P.2d 297 (N.M.

Water Law Adaptability

Reallocation Limits

1971); *White v. Wheatland Irrigation Dist*., 413 P.2d 252 (Wyo. 1966). It is a qualified right because a change of use may be made only so long as no other rights, whether junior or senior in priority, are injured. *See* "No-Injury" box, below.

Under most change of use statutes, appropriators may reallocate their water to other beneficial uses any number of times without losing their original priority date. *E.g*., Utah Code Ann. § 73-3-3 (Supp. 1988). This is important because it allows appropriators to reallocate their water to new uses while still having their priority protected. All appropriators are also protected against interference by others who may change their manner of use. The requirement of non-interference, however, limits the nature and extent of any such change of use by an appropriator, because the proposed change of use may not interfere with the vested rights of other users, nor may the water right be expanded by virtue of the change. Idaho Code Ann. § 42-222 (Supp. 1988); *W. S. Ranch Co. v. Kaiser Steel Corp*., 439 P.2d 714 (N.M. 1968); and *Tanner v. Humphreys*, 48 P.2d 484 (Utah 1935).

Interference

Interference means the denial of water. It may occur in any number of ways. For example, an appropriator may seek to change the point of diversion along a stream, or from a surface stream to groundwater. The new point of diversion may enable the appropriator to intercept water that previously reached the points of diversion of others downstream, thereby depriving them of the water they need to satisfy their vested rights. The appropriator may change the place of use so that the return flow from this new use returns to another drainage basin, or the water may return at a point in time when the downstream appropriator may no longer needs it or be able to use it — again resulting in interference. The point of return may also change so that water returns to the same watercourse, but at a point *below* where downstream users may gain access to the water. Any such disruption may entitle the injured water user to injunctive relief to prevent the change and even monetary damages.

Static Conditions

Downstream water users generally acquire a vested right against all upstream water users to have stream conditions remain substantially as they were when they first made their appropriations. *Orr v. Arapahoe Water & Sanitation Dist*., 753 P.2d 1217 (Colo. 1988); *Piute Reservoir & Irrigation Co. v. W. Panguitch Irrigation & Reservoir Co*., 367 P.2d 855 (Utah 1962); and *E. Bench Irrigation Co. v. Deseret Irrigation Co*., 271 P.2d 449 (Utah 1954). This right to static stream conditions entitles them to the continued receipt of historic return flows at their respective points of diversion, at the same time and without a reduction of quantity or quality. *East Bench Irrigation Co. v. Utah*, 300 P.2d 603 (Utah 1956). Traditionally, any disruption to the established return flow patterns by an upstream water user is not tolerated if these fluctuations unreasonably interfere with other vested rights. The law requires this result, and the rule has been strictly enforced. *United States v. Dist. Court*, 242 P.2d 774 (Utah 1952).

Return Flow Impacts

The necessity of protecting vested rights against unreasonable interference can be a deterrent to the reallocation of water to new uses. The difficulty exists because one farmer's waste of water is another farmer's return flow. That return flow may be necessary for downstream users to satisfy their vested water rights. If the upstream user lines their canal or applies irrigation water more efficiently in an effort to reduce waste, the downstream water user may receive less water than they had historically and may be entitled to seek relief for interference with vested rights. The question for the future is whether return flows must be protected against any reduction — even at the expense of promoting conservation, greater efficiency, and reallocation of the conserved water to other valuable uses.

"NO-INJURY" STATUTES & CASES

Alaska Stat. § 46.15.160 (1987); Ariz. Rev. Stat. Ann. § 45-172 (1987); Cal. Water Code §§ 1700-1706 (West 1971); Colo. Rev. Stat. § 37-92-302 (Supp. 1987); Idaho Code Ann. §§ 42-108-211 (Supp. 1988); Kan. Stat. Ann. § 82a-708b (1984); Neb. Rev. Stat. § 46-250 (1984); Nev. Rev. Stat. §§ 533.325, .345 (1986); N.M. Stat. Ann. § 72-5-24 (1985); N.D. Cent. Code § 61-04-15.1 (1985); Okla. Stat. Ann. tit. 82, §§ 105.4, 105.5 (West. Supp. 1989); Or. Rev. Stat. § 540.510 (1987); S.D. Codified Laws § 46-5-31 (1987); Utah Code Ann. § 73-3-3 (Supp. 1988); Wash. Rev. Code Ann. §§ 90.03.380, .390 (Supp. 1987); Wyo. Stat. Ann. §§ 41-4-404, -405 (1987); *Ackerman v. City of Walsenburg*, 467 P.2d 267 (Colo. 1970); *Zezi v. Lightfoot*, 68 P.2d 50 (Idaho 1937); *Thompson v. Harvey*, 519 P.2d 963 (Mont. 1974); *City of Roswell v. Reynolds*, 522 P.2d 796 (N.M. 1974); and *Vandehey v. Wheeler*, 507 P.2d 831 (Or. Ct. App. 1973). Until 1965, Wyoming law did not provide for changes in the point of diversion. *White v. Wheatland Irrigation Dist.*, 413 P.2d 252 (Wyo. 1966); see 1965 Wyo. Sess. Laws 374 (current version at Wyo. Stat. Ann. § 41-3-104 (Supp. 1988)); Frank J. Trelease & Dellas W. Lee, *Priority and Progress—Case Studies in the Transfer of Water Rights*, 1 Land & Water L. Rev. 1 (1966).

Water Law Adaptability

Conservation Incentives

The White Paper referenced above recognized the concerns imposed by the non-interference rule and penalties — such as forfeiture — that hinder rather than promote conservation and efficiency in use. The Paper recommended the following changes to align water management objectives and incentives to conserve:

> Water rights and water permit agencies, in the experience of the participants, all impose a "beneficial use" requirement. This requirement is often described as "forfeiture" or "use it or lose it." This backbone principal cannot be repealed or ignored, but it creates enormous disincentives to wise water use. Such requirements instead might be coupled with statutes to allow agricultural water users to file water use plans that would set aside water rights for future food production needs. The water permitting agency would be authorized to recognize such plans as a legitimate reason to hold a water allocation for future use rather than risk forfeiture. This concept could be taken one step further by paying for agriculture water to not be used to make water available for cities elsewhere in the river basin or aquifer. These combined policies would promote conservation, preserve water for future food production, and help farmers cooperate with cities to meet urban water demands.

King Ranch Institute, *supra* at 26.

This is a fairly forward-looking policy for agricultural water users to espouse — it also reflects reality. In Utah, where 80% of the water is used for irrigated agriculture and livestock, the State's rapidly growing cities tend to view farms as the easy place to find water for growth. Money talks and Utah has a vibrant water market. Marginal farming operations may sell their water and take land out of production.

CHANGE OF USE & CONSERVATION: INCENTIVES NEEDED

Enlargement & Interference

A water right cannot be enlarged by virtue of a change of use. The enlargement or increased consumption of water may cause interference with the rights of downstream appropriators. Thus, an appropriator who changes their point of diversion from one tributary to another cannot withdraw more water from the new point of diversion than would have been available to them at their historic point of diversion. *Rocky Ford Irrigation Co. v. Kents Lake Reservoir Co*., 104 Utah 202, 135 P.2d 108 (1943). Similarly, an appropriator generally cannot use the water he or she saves through employing more efficient means of application to irrigate additional land, as this increases depletion and decreases return flows to the detriment of those downstream. *Salt River Valley Water Users Ass'n v. Kovacovich*, 411 P.2d 201 (Ariz. Ct. App. 1966). Since water rights are limited to that quantity beneficially used or actually needed for the purposes of the original appropriation, such an expansion is prohibited.

Carrier Water

Water lost through seepage or evaporation in open irrigation ditches and canals can be saved through a variety of conservation measures. Cement lining or piping an open ditch is expensive. Because the law is unsettled as to who actually owns the water salvaged through conservation efforts, the economic return is rarely worth the investment. *Reno v. Richards*, 178 P. 81 (Idaho 1918); *Howcroft v. Union & Jordan Irrigation Co*., 71 P. 487 (Utah 1903). The Utah Supreme Court held in *Brian v. Fremont Irrigation Co*., 186 P.2d 588 (Utah 1947) that the appropriator who no longer needed carrier water due to improvements to the conveyance facilities had a duty to return this water to the water system for use by others, giving the appropriator no return for the investment in conservation. ("Carrier water" is recognized as additional water, beyond the amount needed for a crop, which is used to carry the water from the diversion (headgate) to the place of use.) Clearly, if the appropriator cannot benefit from their investment in conservation, no incentive exists for them to try. This approach must also change.

Flood Irrigation

The Utah Supreme Court (Court) took steps in that direction in the case of *Estate of Steed v. New Escalante Irrigation Co.*, 846 P.2d 1223 (Utah 1992). This case involved water in a natural drainage known as Alvey Wash, which is situated south of the town of Escalante, Utah, just outside the Grand Staircase-Escalante National Monument. The wash is a horseshoe-shaped natural drainage that drains about a 102 square mile watershed area. New Escalante Irrigation Company (Irrigation Company) diverts water from the Escalante River, and for over one hundred years its shareholders applied this water by flood irrigation to their lands. The irrigated lands were located south of the town within the inside bend of the horseshoe formed by Alvey Wash. The Escalante River flows generally in a west to east direction and is tributary to the Colorado River at Lake Powell. Water from the Irrigation Company's irrigated lands seeped into Alvey Wash, and Steed appropriated it along with the natural waters of the wash, which Steed also used for irrigation. Alvey Wash empties into the Escalante River about twenty-five miles downstream from the irrigated lands of the Steeds and the Irrigation Company. The Escalante River does not naturally contribute any water to the flows of Alvey Wash.

Efficiency Impacts

In 1982, the Irrigation Company improved its reservoir, converted to a pressurized sprinkler system, and closed its old open earthen canals. By applying water more efficiently, it significantly reduced the

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seepage water reaching Alvey Wash. Steed filed suit seeking an injunction to force the Irrigation Company to continue allowing the same amount of runoff and seepage to hit the wash, where it would be available for his use under his appropriation. The trial court held that since there was no natural contribution from the Escalante River to Alvey Wash, Steed had acquired no vested right against the Irrigation Company — either by appropriation, adverse use, or otherwise — under which he could compel it to continue wasting water for his benefit. Steed appealed.

Wastewater Law

The Utah Supreme Court affirmed, upholding a long line of Utah cases supporting the general rule that appropriators may recapture and reuse their wastewater before it escapes their control and make a beneficial use of it, even if the subsequent use deprives a downstream user who has used that water in the past. A re-appropriator of wastewater cannot obtain a vested right against the original appropriator to force the continued wasting of the water for their benefit.

"Return Flow" Identity

The Court noted two well-recognized exceptions to this rule: (a) the rule did not apply when the runoff or wastewater returned to the stream from which it was diverted; and (b) it did not apply to groundwater that had rejoined the natural underground water table. In both instances, the water returning is considered "return flow" water that has lost its identity as the appropriator's property and becomes part of the public water supply available for appropriation and use by others. Neither exception applied in this case.

Steed argued for a change in the rule. He agreed that conservation was a valuable pursuit, but that it was unfair for him to suffer a loss of water at the hands of an upstream irrigator who made more efficient use of his water. He thought the Court should impose an equitable resolution and force the Irrigation Company to share the water saved by the installation of its sprinkler system. The Court denied Steed's request, even though it was a harsh result. "The law simply favors the first user." *Estate of Steed v. New Escalante Irrigation Co*., 846 P.2d 1223, 1228 (Utah 1992). In holding for the Irrigation Company the Court made a bold policy statement (*Id*. at 1229):

Court's Policy Statement

> Because Utah is an arid state, efficient and beneficial use of water should be encouraged. In furtherance of that objective, an appropriator should be encouraged to apply water in the most efficient manner. Any technique which conserves water consumption and reduces waste is commendable. It is unfortunate that Steed lost some water which previously found its way to augment the water in Alvey Wash. However, absent a natural connection between the water in the wash and the water New Escalante diverted from the Escalante River, Steed acquired no vested right to compel New Escalante to allow the water applied to irrigation to run off their shareholders' lands.
>
> Significant amounts of irrigation water can be lost through evaporation, seepage, or other means. We must encourage greater efficiency through water-saving techniques. As former Chief Justice Crockett so appropriately noted in *Wayman v. Murray City Corp*. some 23 years ago: "Because of the vital importance of water...both our statutory and decisional law have been fashioned in recognition of the desirability and of the necessity of insuring the highest possible development and of the most continuous beneficial use of all available water with as little waste as possible."

23 Utah 2d 97, 100, 458 P.2d 861, 863 (1969) (citations omitted).

This decision could have been a major victory for conservation and efficiency, as it appeared to enable the upstream water user to gain the benefit of its investment in efficiency. I represented the Irrigation Company in this litigation and have a different view. I saw the case as nothing more than upholding the arcane distinction between wastewater and return flows of the past. Because of the geography of the area, the water from the Escalante River was considered artificial water in Alvey Wash; therefore, downstream water users on the Wash could not gain vested rights as against the original appropriator in this waste or artificial water. Had Steed's farm been located below the confluence of Alvey Wash and the Escalante River, the water seeping from the upper lands of the company's shareholders would have become return flow to the river of origin. In that instance, Steed most likely would have been able to claim vested rights in the return flows and, under traditional rules of non-interference, probably enjoined the company and forced it to make water available to him. Therefore, Steed lost because of a fluke of geography rather than the Court's adoption of a conservation ethic.

Arcane Distinction

Limited Precedent

This case truly would have been a milestone for future conservation decisions had it been a return flow case and the Court ignored Steed's rights and held that the right to return flow as a matter of public policy is not paramount to conservation. Instead, we must be content with the policy statement of the Court and hope that it will foster conservation efforts. It remains to be seen whether this is just rhetoric or if the Court will actually protect conservation over return flows.

There is ample legal authority in the Prior Appropriation Doctrine to reach that result. That authority stems from the fact that all appropriated water rights are established subject to the public interest. The courts and State legislatures are best suited to discern what uses are in the public interest and favor those

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Beneficial Use & Reasonable Efficiency

uses that conserve water and use it most efficiently. A water user should have the right to retain water that they saved through personal efforts and investment, so long as it is done without unreasonably interfering with the vested rights of others or causing other legal injury. What is "unreasonable" probably requires judicial interpretation on a case-by-case basis as different situations are presented and analyzed.

The vested right to the continued receipt of return flows does not require an inefficient irrigator to continue inefficient irrigation practices. Professor Dan Tarlock suggests that the exercise of a water right is embodied in all its aspects with the requirement of beneficial use, and that beneficial use mandates that the water right be exercised in a reasonably efficient way to prevent unnecessary waste. A. Dan Tarlock, Law of Water Rights and Resources 5–73 (1988 & Supp. 1989–1998). Other cases in this vein include *Schodde v. Twin Falls Land & Water Co*., 224 U.S. 107 (1912), that denied an appropriator's claim to the full natural flow of the river to power a water wheel, which would have prevented construction of a dam downstream by junior appropriators; *Empire Water & Power Co. v. Cascade Town Co.*, 205 F. 123 (8th Cir. 1913), where the court rejected use of an entire waterfall to support pleasure ground; and *A-B Cattle Co. v. United States*, 196 Colo. 539, 589 P.2d 57 (1979), where a claim of compensation for loss of silt-laden water used to seal a leaky canal was rejected because it would prevent the construction of reservoirs.

Non-Expansion

No downstream appropriator should be able to compel another to continue to waste water for the benefit of another. *Lasson v. Seeley*, 238 P.2d 418, 422–23 (Utah 1951); *Bower v. Big Horn Canal Ass'n*, 307 P.2d 593 (Wyo. 1957). The corollary is also true. No downstream water user should be able to *force* an upstream appropriator — who is using the usual and ordinary means of diverting and using their water — to employ more efficient diversion and conveyance systems so that more water is available to the downstream user. *United States v. Gila Valley Irrigation Dist*. 31 F.3d 1428 (9th Cir. 1994). The upper water user may quit irrigating altogether, or the user may modify irrigation practices to use the water more efficiently. So long as the initial appropriation is not expanded (bringing new acreage into production) through this process, no downstream appropriator should have any legal grounds for complaint if less return flow water is available at the point of diversion as a result of the elimination of waste upstream.

Avoiding Impairment

The solution, if not an appropriator's obligation, is for all appropriators to maintain their own efficient means of effectuating their water right. *City of Colo. Springs v. Bender*, 366 P.2d 552 (Colo. 1961); *Baker v. Ore-Ida Foods, Inc*., 513 P.2d 627 (Idaho 1973); *Woodsum v. Twp. of Pemberton*, 412 A.2d 1064 (N.J. Super. Ct. Law Div. 1980); and *Wayman v. Murray City Corp*., 458 P.2d 861 (Utah 1969). If that means they, too, must become efficient and the gain in efficiency is within their economic reach, why should they not be required to move that direction? Such a rule could not be implemented in a rigid fashion, as there are stream systems, such as the Sevier River in Utah, where the water rights of downstream users are almost entirely comprised of return flows from upstream use. Greater efficiency upstream will deprive the lower users of the majority of their water supply, and no greater investment in efficiency will enable the lower water users to maintain viable operations. Therefore, the rule would need to be applied on a case-by-case basis to determine the levels of reasonable efficiency, and return flows would need to be maintained to avoid serious impairment of water rights. However, unless the law allows the party who saves water through conservation measures to benefit from that effort and investment, they will have little incentive to do so. Economic incentives can be created to encourage conservation.

ECONOMIC INCENTIVES: AN EXAMPLE

Economic incentives can be created to encourage conservation. One such effort is ongoing in the Imperial Irrigation District of California (District) as a result of a 1984 decision of the California State Water Resources Control Board. Imperial Irr. Dist. v. State Water Resources Control Bd., 186 Cal. App. 3d 1160, 231 Cal. Rptr. 283 (1986); Elmore v. Imperial Irr. Dist., 159 Cal. App. 3d 185, 205 Cal. Rptr. 433 (1984). The Board concluded that the Imperial Valley irrigators were wasting water in violation of Article X, Section 2 of the California Constitution. The District was ordered to eliminate its high seepage loss and excessive return flow to the Salton Sea. The District and the Metropolitan Water Board of Los Angeles (MWD) are working to salvage water previously lost to seepage and evaporation. MWD offered to provide the financing for the water conservation activities. The economic incentive to MWD is the acquisition of approximately 100,000 acre-feet of additional water annually for municipal and industrial use in Los Angeles. This water has previously been lost to everyone. The incentive to the irrigators is the elimination of potential liability for flood damages to land adjacent to the Salton Sea, plus the prospect of selling this salvaged water to Los Angeles (via MWD). Thus, a liability has the potential of becoming a salable, valuable asset.

The Imperial Valley is essentially at the tail end of the Colorado River system. There are few downstream appropriators in the US who could assert a prior claim to this salvaged water. Mexico's share of the Colorado River is protected by Treaty and questions remain as to the impacts of the project on approximately 500,000 acres in Mexico. Treaty Respecting the Colorado, Tijuana, and Rio Grande Rivers, Feb. 3–Nov. 14, 1944, United States-Mexico, 59 Stat. 1219, T.S. No. 944. California has also adopted a statute that rewards the conserver of water with title to the salvaged water. This insures the appropriator has the right to sell and obtain a return on the dollars invested in conservation. Pomona Land & Water Co. v. San Antonio Water Co., 152 Cal. 618, 93 P. 881 (1908); Cal. Water Code §§1011, 1012, 1013 (1987); and Cal. Water Code §1010 (1978). See 1 H. Rogers & A. Nichols, Water for California 375 (1967).

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Title to Saved Water

Every appropriator has the obligation to maintain their own efficient means of utilizing their water right. The old notion of headgate duties (carrier water), i.e. the quantity of water required to efficiently deliver water to flood irrigated land, ought to be reexamined. Modern sprinkler irrigation equipment is very efficient. Because of that efficiency, a farmer may no longer need to divert four or five acre-feet per acre to efficiently irrigate their land — thus freeing up water for other uses. To make the economics of this work, the irrigator who has become more efficient should have a vested title in the water so saved, which can be sold to others or possibly applied to other lands to help the irrigator recoup some of their costs of gaining efficiency. Under the current rule, this saved water is considered carrier water that reverts back to the system without compensation for the benefit of others in satisfaction of their water rights. Thus, the current rule creates no economic incentive to conserve.

SALVAGED WATER & CONSERVATION: CHANGES NEEDED

Title & Priority

Legal uncertainties over title and the right to use or sell salvaged water impede conservation efforts within the agricultural community. As noted above, the risks and expenses often outweigh the gains needed to make conservation worth the effort. The law should reward those who conserve by giving them clear title to the water they salvage through conservation. Title alone may not be sufficient incentive to promote conservation. If the priority of the salvaged water is the most junior on the stream, the existence of a valid title provides little comfort during times of shortage as junior water rights face curtailment. State Engineers or Legislatures could add incentives for conservation by defining the salvage practice to be in the "public interest" and allowing conservation uses to leapfrog other pending applications in priority. An application to appropriate salvaged water could be moved ahead of a prior pending application which the State Engineer considers to be less in the public interest. Granting a salvaged water appropriation a priority earlier than other pending applications could afford a degree of protection for this conserved and appropriated water right — thus encouraging its development.

Deferred Expenditures

Implementing water conservation is usually expensive and the financial rewards are rarely realized quickly. This is especially true in a municipal setting, where water system infrastructure has been constructed with debt financing that must be paid off with system revenues. Conserving water therefore does not translate into lower water bills because the fixed debt must still be paid. Instead, savings come much later in the form of deferred new capital expenditures made possible by stretching out the available supply through conservation and efficient utilization of the resource.

State Conservation Approaches

Montana is a good example of a State that has promoted conservation. Montana Code Ann. §85-2-419 provides that a water user who has implemented a water-saving method may retain title to the salvaged water and make beneficial use of that water. However, if the salvager wants to sell the water or use it on other lands, he must obtain change application approval. Salvaged water rights in Montana may also be leased for instream flow purposes to the Montana Department of Fish Wildlife and Parks. MCA§85-2-436.

Title Retention

California has also adopted legislation to provide the party who conserves water title to the water so conserved. Cal. Water Code §§ 1011, 1012, 1013 (1987); Cal. Water Code § 1010 (1978); and *Pomona Land & Water Co. v. San Antonio Water Co.*, 93 P. 881 (Cal. 1908). *See* Harold E. Rogers & Alan H. Nichols, Water for California 375 (1967).

Priority Retention

Oregon has adopted an approach of allowing the conserving farmer to share in the benefits of conservation by splitting the savings from an approved conservation plan between the water user and the State. Generally, the State is allowed to allocate 25% of the saved water to instream flows and the appropriator receives 75%. ORS 537.470. Where the public gains a tangible benefit such as this, the public may be more willing to make an investment in conservation to assist the farmer in freeing some water for allocation to other uses. [Editor's Note: As highlighted on the Oregon Water Resources Department website, "The percentage of saved water that may be applied to new uses or lands depends on the amount of state or federal funding contributed to the conservation project. The law requires that the remaining percentage of the saved water be returned to the stream for improving instream flows, if needed. The original water right is reissued to reflect the quantity of water being used with the improved technology and the priority date stays the same. Another water right certificate is issued for the new use with either the same priority date or a priority date of one minute after the original water right. This process gives a water right holder the option of extending the use of their right without applying for a new permit or transferring an existing permit." *See* www.oregon.gov/owrd/pages/pubs/aquabook_conservation.aspx].

Proof Issues

Cement lining or piping a canal are examples of water savings activities. The salvaged water may be used on the land historically irrigated, but absent some legislative changes, it would be difficult today to move to other lands and other uses. Title alone may not provide enough incentive to promote conservation without also providing a priority that makes the right of use meaningful. Difficulties lay in proving that the water is in fact being salvaged and that it is not water being relied upon by downstream users. For example, when a canal is constructed, the banks are void of all vegetation. Over the course of many years, trees, shrubs and other vegetation become established on the canal banks and start to consume

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water. If the cottonwood trees are removed, the water they consumed will of course be saved — but has there really been any net savings of water to the system or is the canal owner simply back to where they started? Salvaged water really has to be water that has not ever been appropriated to meet the common law definition, and proving that case is very difficult. The burden of proof is on the party claiming to have in fact saved the water.

PUBLIC INTEREST CONSIDERATIONS

As noted, under the Prior Appropriation Doctrine all water rights are appropriated subject to the public interest. In most Western States an appropriation may be denied if it is determined that it would be detrimental to the public interest.

Preferred Uses

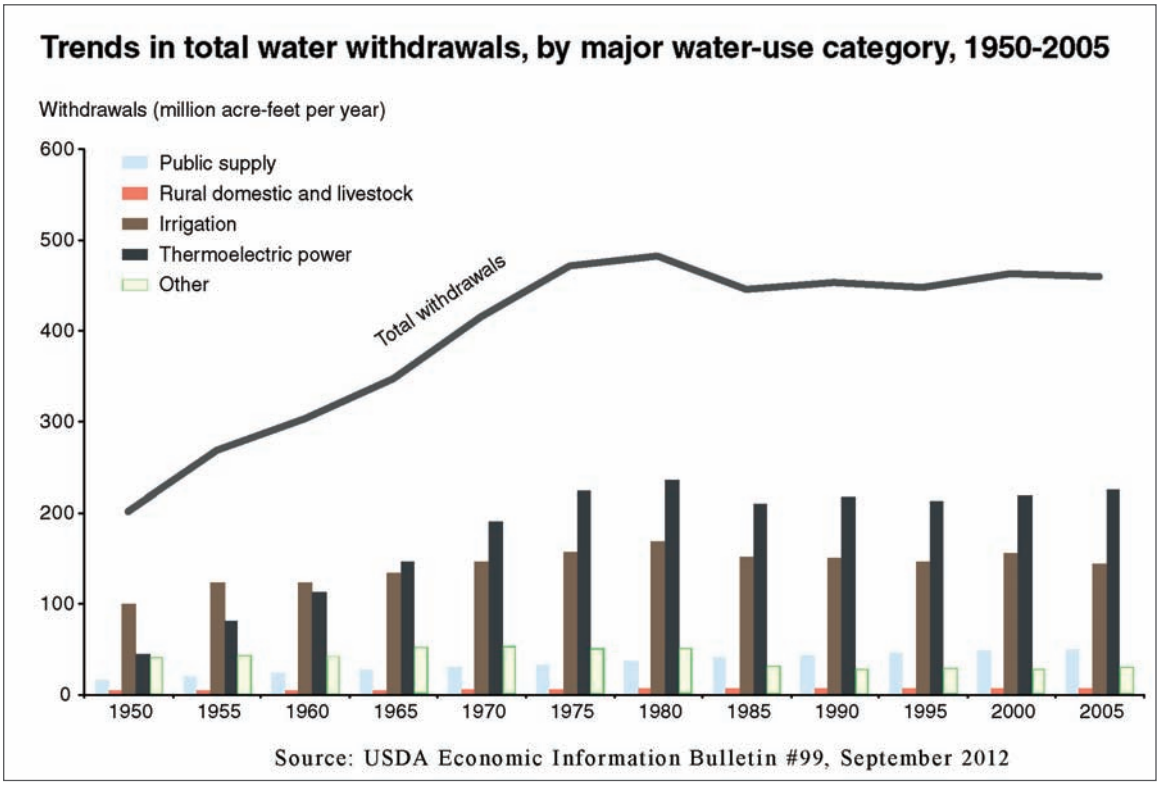
Public interest conditions can take the form of ignoring priorities to allow a preferred use (e.g., domestic use, livestock water, etc.) to take priority over a prior filed application, if the use is deemed to be more in the public interest than the subordinated use. States have always reserved the power 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, p. 5-82. 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, p. 5-82. This power allows the State 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.

Cost-Benefit Analysis

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

Idaho Public Interest

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). Another case, *Shokal v. Dunn*, 707 P.2d 441 (Idaho 1985), 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 to some extent by enacting Idaho Code §42-222, which precludes environmental groups from raising public interest arguments to contest change applications in the Snake River General Stream Adjudication.



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Utah law requires the State Engineer to evaluate all applications to appropriate as well as applications for a change of use by the criteria contained in Utah Code Ann. §73-3-8, and authorizes the State Engineer to reject an application found to be detrimental to the public welfare. *See Bonham v. Morgan*, 788 P.2d 497 (Utah 1989).

Colorado Exception

Colorado remains an exception to the public interest rules. In Colorado, consideration of the public interest is limited to the State 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 the administrative and statutory duties to enforce priorities to protect prior rights from injury. *Application of Hines Partnership*, 929 P.2d 718, 725 (Colo. 1996), citing *Board of County Commissioners v. Crystal Creek Homeowners Ass'n*, 891 P.2d 952, 972-975 (Colo. 1995). In that case, the Colorado Supreme Court held that public interest objections are contrary to the Prior Appropriation Doctrine. Statutory law requires the Division Engineer in Colorado 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.

Alaska Guidance

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. Alaska appears to be the exception in that its statute does provide some guidance to the agency in determining the public interest. Alaska Stat. §§46.15.040–080(a) provides that in determining the public interest, the commissioner shall consider:

(1) the benefit to the applicant resulting from the proposed appropriation;
(2) the effect of the economic activity resulting from the proposed appropriation;
(3) the effect on fish and game resources and on public recreational opportunities;
(4) the effect on public health;
(5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;
(6) harm to other persons resulting from the proposed appropriation;
(7) the intent and ability of the applicant to complete the appropriation; and
(8) the effect upon access to navigable or public water.

Public Interest Criterion

My personal view is that the public interest criterion should be read broadly to secure the greatest possible benefit for the public. Relevant elements and the relative weight given to various uses and impacts may vary with local needs, circumstances, and interests. If the administrative agency gives weight to economic benefits, it should also give weight to the economic detriments, the 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. 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 — again, all appropriated water rights are acquired subject to the public interest.

Historically, priority has been the dominating factor in approving new applications to appropriate as well as those seeking a change of use. State Engineers might have payed 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 — but these other factors were clearly of secondary importance. Such attitudes are changing, especially where a State has reached essentially full allocation of the available water resources. In those instances, priority and water availability can no longer be the only criterion for approval.

AREA OF ORIGIN CONCERNS & PUBLIC INTEREST

Ripple Effect

Because most water in use in the West is for irrigated agriculture, the purchasing and transferring of water rights from current users to use in often distant locations has the potential to cause harm to the area of origin beyond simply loss of the water supply. The loss of productive farming has a ripple effect throughout the local economy, resulting in a general reduction in farm-related jobs. With fewer farmers active in an area, support industries tend to drop off as well and the economic effect can be profound on a small community. Further, if the water is stripped from the land and moved to another location, the area of origin may lose future economic opportunities for economic growth and development in other industries because the water that would have made it possible has been taken from them.

Local Impacts

One such example comes from Beaver County, Utah. The neighboring county to the south, Iron County, through a local water conservancy district filed applications to appropriate essentially all of the very limited groundwater available for development in the west side of Beaver County. The district proposed to drill deep wells, develop the groundwater resource and pipe the water to Cedar City to foster future but long-term economic growth and development in Iron County. Beaver County protested the

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applications, arguing that allowing Iron County to appropriate this limited resource would deprive Beaver County the opportunity for its future economic growth and development. Beaver County pointed 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 or in the not to distant future.

Reservation of Water

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 argued that it was 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. *See* Water Right File for 14-118, Central Iron County Water Conservancy District application to appropriate 15,000 acre-feet and materials filed by Beaver County in protest at: waterrights.utah.gov/docImport/0534/05340963.pdf . A decision has been delayed in part because of the controversy over the efforts of the Southern Nevada Water Authority to appropriate groundwater in Snake Valley, a regional groundwater aquifer shared by Utah and Nevada.

PUBLIC INTEREST IMPOSED UNDER FEDERAL LAWS & REGULATIONS

Federal Interests

Historically, the federal government acquiesced in the settlement of its western lands and the appropriation of its water under State law. However, these State-created water rights remained subject to the assertion of dominant federal interests. These federal interests have the potential to curtail and even displace State-created water rights. The disruption may result from the assertion of federal reserved rights, from its sovereign powers to regulate commerce and navigation, or through the imposition of federal regulatory controls. In the early eighties, the US Supreme Court rocked the West by holding that water and water rights were commodities capable of being bought and sold in the marketplace and that those state-created water rights, as commodities, were subject to federal regulatory control in interstate commerce. *Sporhase v. Nebraska*, 458 U.S. 941 (1982). The *Sporhase* decision alerted those wishing to buy and sell water rights to water's inherent marketability and re-emphasized the fact that State-created water rights remain subordinate to dominant national interests. *Id.* at 947, n. 27.

***Sporhase* Decision**

Federal Acts

There are primarily three major federal regulatory programs that give the federal government authority to disrupt, if not displace, vested state-created water rights: 1) Section 404 of the Clean Water Act; 2) the Federal Power Act; and 3) the Endangered Species Act. Professor Tarlock suggests that these regulatory programs have, in effect, created a new class of federal water rights that differ from other federal reserved rights or State-created rights. Tarlock, *supra* note 35, at 9–28. The principal difference is that they lack any definitive date of priority, which makes their integration into a State priority-based system of water rights administration almost impossible. Further, there is no requirement that these regulatory rights ever be beneficially used and they are not subject to forfeiture. *Id.*

Taking v. Adjustment

While these regulatory rights have the potential to "take" State-created rights, so far that has not proven to be the case because all State-created water rights are appropriated subject to the public interest. *See Sporhase v. Nebraska*, 458 U.S. 941 (1982); *Hughes v. Oklahoma*, 441 U.S. 322 (1979); and Clyde, *Legal and Institutional Barriers*, *supra* note 5, at 243. Therefore, water rights are subject to adjustment to meet the changing demands caused by competing interests for our water resources. Generally, vested rights should not be curtailed but merely reduced to protect other public interest values in the water resources. Where the vested rights are reduced to protect the public interest, compensation should be provided to off-set the economic harm a reduction in water use will cause the appropriator.

CONCLUSION

Inherent Flexibility

Some argue the Prior Appropriation Doctrine is not the best way to have allocated water in the West. Charles Wilkinson called the Doctrine "...possibly the stupidest body of law we've ever created." *The Fourth West*, 2009 Wallace Stegner Lecture, University of Utah Press, p. 5 (2009). The Doctrine will nevertheless survive because there really is no better option for water allocation in this very dry region. The riparian rights doctrine utilized in the eastern US 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. While it is in need of reform, the beauty of the Doctrine is its inherent flexibility. This is what has distinguished it from riparian rights. "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." Tarlock, *The Future of Prior Appropriation in the West*, 41 Nat. Resources J. 769, (2001).

Water Law Adaptability

Marketplace Reallocation & Public Interest

Water rights acquired by appropriation are inherently marketable, as they are interests in real property that may be sold with the land as an appurtenance or severed and sold separately. That has always been the case under Western Water Law. However, the necessity to fully use a water right or risk forfeiture, the necessity to protect other vested rights from injury in any transfer process, and the disincentives to conservation that exist within the Prior Appropriation Doctrine create legal barriers to transfer in the marketplace. In addition, marketplace reallocation is, by its very nature, exclusionary — as there are many potential stakeholders who simply lack the financial resources to compete for water in the marketplace.

Environmental, aesthetic, and other values and interests in water resources should not be precluded from the reallocation process. In the absence of State law reform, these interests are being asserted through federal regulatory controls that operate *outside* the Doctrine and perhaps insulate these public interest values and uses from the marketplace. When that is true, they do so at the risk of eroding the very security an appropriated water right afforded: that of priority, protection against unreasonable interference, and the protection of quality as well as quantity.

Incentives

Uncertainties in the law need to be resolved in favor of creating incentives to conserve and better use our existing appropriated water resources. When this occurs, water rights will more freely move in the marketplace to other uses. If appropriators do not react to marketplace incentives, State Engineers should use their public interest powers to provide additional incentives to investors and other water users to undertake conservation measures as an alternative to developing additional water supplies.

Reallocation Fairness

We cannot lose sight of the fact that reallocation 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, federal regulatory controls, or overly aggressive use of the State Engineer's public interest powers, the costs of reallocation will likely be unfairly heaped on agricultural water users. These users will be told that the property right they once had is reduced or gone because the courts have redefined the rules of the game.

Society should be willing to pay the costs of retiring lands from irrigation or investing in greater irrigation efficiencies to make water available for both irrigation and environmental and aesthetic uses. It truly is unfair simply to take water away from those who have established vested rights through considerable investment in their lands and irrigation equipment based on the assumed security of those vested rights.

Competing Demands

It is also necessary to maintain farms in this country not only to feed US citizens but also to help feed a growing world population. Converting all our farms into condominiums 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. These are the challenges for the future.

The Prior Appropriation Doctrine is inherently flexible. It has adapted and will continue to adapt to the competing demands for water and the dynamics of the 21st Century. While the system is far from perfect, the potential for constructive reform clearly exists. In the face of the vested rights that exist in the West, it is not practical or really even possible to impose an entirely new system of water allocation on those who have relied on the current system for over 150 years.

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Acknowledgment: A portion of this article was included in an article by Steven Clyde, *Market Place Reallocation in the Colorado River Basin, Better Utilization of the West's Scarce Water Resources*, Journal of Land, Resources & Environmental Law, University of Utah, Vol. 28, No. 1 (2008).

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Tribal Water

INDIAN COUNTRY WATER RIGHTS

PERMIT-EXEMPT USES IMPACTING PROTECTED INSTREAM FLOW CHAMOKANE BASIN WATER ADMINISTRATION & *UNITED STATES V. ANDERSON*

by Robin G. McPherson, Assistant Washington State Attorney General (Seattle, WA)

Editors' Introduction: Earlier this year, governmental parties to the *United States v. Anderson* adjudication covering water use the Chamokane Basin in eastern Washington provided briefs on their views concerning a court-ordered hydrologic study of the Basin conducted by the United States Geologic Survey. The study included findings on the Basin's hydrologic connectivity and the impacts of water withdrawals — including certain water permit-exempt uses — on instream flow levels set to protect a Tribal reserved fishing right. This article provides an overview of the adjudication's history and legal setting, salient issues leading to the report, and an overview of report findings and the positions outlined in governmental briefs.

BACKGROUND

Adjudication

United States v. Anderson is a water rights adjudication filed in the United States District Court for the Eastern District of Washington (Federal District Court) in 1972 (pleadings and papers on file in *United States v. Anderson et al*., Eastern Dist. of Wash. No. CV-72-3643-JLQ). The lawsuit was filed by the United States (on its own behalf and as trustee for the Spokane Tribe of Indians) against the State of Washington and a number of named individual water users. The Spokane Tribe of Indians (Tribe) is an intervener in the case.

The water at issue is that of the Chamokane Basin in eastern Washington, which includes Chamokane Creek, its tributaries, and groundwater basin. The Federal District Court issued an order on adjudication in 1979 and, after requests for modification and amendment by all parties, issued a clarifying order in 1982 (together, "Orders"). The Orders did not apply to domestic water uses or to the upper area of the Chamokane Basin. To implement the adjudication, a court-appointed federal water master regularly reviews water levels in Chamokane Creek to provide for the protection of the water rights of the Tribe and other senior water rights holders.

9th Circuit Decision

All government parties appealed the Orders in the 1980's. The Ninth Circuit Court of Appeals (Ninth Circuit) ruled that waters associated with lands re-acquired by the Tribe in 1958 and 1968 (see below) are entitled to a priority date as of the time of re-acquisition, unless perfected prior to their release. The Ninth Circuit also ruled that the State may allocate waters of non-Indians within the Reservation, but only as to "excess waters" — i.e., waters available after senior water rights are satisfied. *United States v. Anderson*, 736 F.2d 1358 (9th Cir. 1984).

Federal Water Master

Since that time, the federal water master has administered the Chamokane Basin by regularly monitoring stream flow and ordering the curtailment of junior water rights when needed to protect surface water flows in Chamokane Creek. The federal water master regularly submits updates to the Federal District Court. Over the years, summertime low flows, at times, have been below the protected instream flow level as set by a federal court order in 1988 (see below). The federal water master determined that a number of "exempt wells" (i.e., exempt from State permitting requirements) had been completed in the aquifer since the adjudication, and raised the issue of whether the adjudication included pre-1917 (Claims Registry, see below) uses or should be modified. Additional questions emerged about area hydrology. In 2006, the Federal District Court asked the three government parties to formulate certain issues and provide briefing for the Court's review. The United States and State shared the cost of a hydrologic study by the United States Geologic Survey (USGS), completed in 2012. Each government party provided briefing in March, May, and June of 2013. Oral argument on this briefing has been requested, but no dates are set.

USGS Study

THE SPOKANE RESERVATION

The Spokane Indian Reservation was established by agreement of peace and friendship between the United States and the Tribe in 1877. *Northern Pacific Ry. Co. v. Wismer*, 230 F. 591, 144 C.C.A. 645 (1916).

"Checkerboard" Ownership

The Tribe's reserved water rights include rights to the use of Chamokane Creek for irrigation and fishing. Like many Washington State reservations, ownership of land within the Spokane Reservation has been "checkerboarded" through federal programs encouraging homesteading, allotments, and fee ownership. Allotments are parcels of lands allotted from trust ownership to individuals for private ownership. Some land set aside by the 1908 Homestead Act was never claimed and was restored to the Tribe in 1958. Additional property was reacquired by the Tribe and returned to trust status in 1968.

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THE CHAMOKANE BASIN

The Chamokane basin (tributaries and underlying aquifer) is 179 square miles, with timber in the highlands and agriculture (grazing and hay production) in the lowlands. Chamokane Creek originates in the Huckleberry Mountains, north of the Reservation, flows east through Camas Valley and Ice Box Canyon (near Springdale), then south through the Chamokane Valley and Walkers Prairie, where it forms the Reservation's eastern boundary. There are two fish hatcheries on Chamokane Creek near the town of Ford. At Chamokane Falls, mean stream flow in September is typically 27 **c**ubic **f**eet per **s**econd (cfs) according to USGS records (1971-2008). The Creek then discharges into the Spokane River.

Location of the Chamokane Creek basin, Stevens County, Washington

The non-Reservation areas of the Chamokane Basin are closed by federal court order to additional permits for groundwater or surface water appropriation. Since domestic, stock-water, and small industrial uses are exempt from permitting under State law, the scope of this closure essentially relates to new irrigation uses off-Reservation.

WATER RIGHTS IN THE STATE OF WASHINGTON

Water rights under the law of the State of Washington are premised on the Prior Appropriation Doctrine, as was first codified in 1917 when the state Legislature enacted Washington's Water Code. The Water Code established a permit system for obtaining surface water rights. RCW 90.03. In 1945, the Legislature enacted the Groundwater Code, which extended permitting requirements to groundwater. RCW 90.44. *Hillis v. Dep't of Ecology*, 131 Wn.2d 373, 383, 932 P.2d 139 (1997). The Washington State Department of Ecology (Ecology) is the agency charged with administering the Water Code. In reviewing applications for water right permits, Ecology must determine: that water is available; that the applicant proposes to put the water to a beneficial use; and that the proposed use will not impair other existing water rights or be detrimental to the public interest. RCW 90.03.290. After a permit is "perfected" — by actually putting the water to beneficial use in a State-approved manner — the right is certificated by the State and the holder's interest in the right is vested into a water right. RCW 90.03.

Claims to water rights established prior to the codification of permitting requirements (1917) have seniority according to their priority date, but for such rights to be recognized they must be documented by statements of water rights claims forms filed in the water rights Claims Registry under provisions of RCW 90.14.

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Groundwater Uses

Permit Exempt Uses

The Washington Legislature exempted certain uses of groundwater from permitting altogether. These permit-exempt uses include "any withdrawal of public groundwaters for stock-watering purposes, or for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area, or for single or group domestic uses in an amount not exceeding five thousand gallons a day...or for an industrial purpose in an amount not exceeding five thousand gallons a day… ." RCW 90.44.050. Although they are not subject to the permit and certificate process, such uses are nevertheless "entitled by a right equal to that established by a permit... ." RCW 90.44.050.

Stock-Water Exemption

The Washington Supreme Court has ruled that the permit exemption for stock-watering, unlike that for domestic or industrial use, is not subject to the statutory limit of 5,000 gallons per day. See RCW 90.44.050; *Five Corners Family Farms v. State*, 173 Wn.2d 296, 313, 268 P.3d 892 (2011).

Priority System Applies

Exemptions must comply with all other aspects of law governing water rights, including the beneficial use requirement, and are subject to the priority system. RCW 90.44.040, .020, .060. Permit-exempt groundwater rights are therefore still "subject to the basic principle of water rights acquired by prior appropriation that the first in time is the first in right. '[T]he first appropriator is entitled to the quantity of water appropriated by him, to the exclusion of subsequent claimants... .'" *Dep't of Ecology v. Campbell & Gwinn, L.L.C.*, 146 Wn.2d 1, 9, 43 P.3d 4 (2002), quoting *Postema v. Pollution Control Hearings Bd.*, 142 Wn.2d 68, 81, 11 P.3d 726 (2000).

Enforcement Limitation

Regulation Limits

The Washington Legislature has granted Ecology the authority to regulate when it appears that a person is violating the state water code. RCW 90.03.600–.605; RCW 43.21A.064(3). However, this does not include authority to determine the relative priorities between existing water rights; the only process for determing relative priorities is through a court action. A vested water right is an interest in property that cannot be deprived without due process of law. *Lummi Indian Nation v. State*, 170 Wn.2d 247, 265, 241 P.3d 1220 (2010); *see also Fitzpatrick v. Okanogan Cnty.*, 169 Wn.2d 598, 624, 238 P.3d 1129 (2010)("Water rights are valuable property rights... ."). Washington law does not allow Ecology to exercise its regulatory authority to carry out enforcement when doing so will effectively adjudicate the relative priorities of water rights documented by statements of claims with other classes of water rights. In a scenario involving different classes of water rights, Ecology has no authority "to issue cease and desist orders without…a general adjudication...to determine the existence, amount, and priorities of the water rights claimed." *Rettkowski v. Dep't of Ecology*, 122 Wn.2d 219, 232, 858 P.2d 232 (1993).

Conjunctive Use Impacts

In *Rettkowski,* ranchers who had long used Sinking Creek surface waters alleged that area irrigators were withdrawing groundwater that diminished the creek flow. Ecology found that well withdrawals did impair stream flow, over time, due to hydrologic connectivity. Based on staff site visits and interviews, Ecology determined that the ranchers' rights were superior and issued cease and desist orders against the irrigators. The Washington Supreme Court held that Ecology cannot "allocate water resources solely on the basis of its own determination of priorities." The Court found that Ecology had violated due process rights by issuing orders unilaterally, without notice and opportunity for the irrigators to present evidence on their own behalf. *Rettkowski,* 122 Wn.2d at 234.

County Obligation

Development and Adequate Water Supply

Under RCW 58.17.110, local governments must determine that there is an adequate potable water supply before any subdivision application can be approved. Similarly, under RCW 19.27.097, local governments must find that there is an adequate water supply before any building permits can be issued. RCW 58.17.110. For development in the Chamokane Creek Basin, off of the Spokane Reservation, it is the role of the local permitting authority (in this case, Stevens County), to regulate area development. In doing so, Stevens County has the obligation to ensure available water exists, and to deny applications for land use development projects that cannot be supported by available water. This means that the county is responsible for determining that water is not only factually available, but legally available, notwithstanding statutory water permit exemptions. *Kittitas Cnty. v. E. Wash. Growth Mgmt. Hearings Bd.*, 172 Wn.2d 144, 179–180, 256 P.3d 1193 (2011).

CHAMOKANE ADJUDICATION & WATER ADMINISTRATION

Instream Right Establishment

Tribal Rights

The 1972 lawsuit involved the United States (as plaintiff), the State of Washington and various private water right holders as defendants, and the Tribe as intervenor. In 1979, after extensive briefing by the parties, the Federal District Court found that the Tribe owned and held "a reserved right to a sufficient amount of water to preserve fishing in Chamokane Creek" of at least 20 cfs and additional water as necessary to maintain a temperature of 68 degrees Fahrenheit or less. This established an instream flow right for Chamokane Creek in support of the Tribe's reserved fishing right with an 1877 priority date. (The

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original Orders, setting an instream flow right based on maintaining a water temperature, were modified in 1988 to require a specific flow of 24 cfs (as to prior rights) and 27 cfs (for subsequent rights), regardless of temperature). Tribal water rights for irrigation for most of the Reservation (8,460 acres) were recognized with a priority date of 1877. Irrigation rights for lands (562 acres) that passed from Tribal ownership and were reacquired by the Tribe in 1958 and 1968 were recognized with a priority as of the date of reacquisition. Water rights for irrigation purposes were also confirmed for some non-Tribal members who own land on the Spokane Indian Reservation.

Groundwater Uses

Excepted Uses

The adjudication specifically excepted certain groundwater uses as follows: "Groundwater withdrawals in the Upper Chamokane region have no impact upon the flow of Chamokane Creek because groundwater in the Upper Chamokane region is part of a separate aquifer." *Memorandum and Order Granting in Part, Motions to Amend*, Aug. 23, 1982. The Federal District Court ruled that domestic uses "are not included in the judgment and should always be available." The Order also excepted stock-water associated with the "carrying capacity of the land," without impoundment. *U.S. v. Anderson Memorandum and Order Granting, In Part, Motions to Amend Memorandum Opinion and Order*, August 23, 1982 (1982 Final Order) E.D. Wash. ECF 252 at page 16. This limitation in the Orders is narrower than the potentially unlimited use of stock-water exempt from state permits as described in the *Five Corners Family Farms* decision.

Monitoring & Administration

Water Master Regulation

In regulation of Chamokane Basin waters, the federal water master monitors flows on a regular basis. The responsibility of the water master is to "administer the available waters in accord with the priorities of all the water rights as adjudicated." *United States v. Anderson*, 736 F.2d at 1365; *Jicarilla Apache Tribe v. United States*, 601 F.2d 1116, 1122 (10th Cir.1979). To date, domestic and stock-water uses have not been brought under the jurisdiction of the Orders or regulated by the federal water master.

JURISDICTIONAL ISSUES

Disputed Implications

Since the time of the Orders, the government parties have disputed the implications of the Federal District Court's ruling. The United States challenged the priority dates of Tribal water rights where lands had been released and then reacquired by the Tribe at later dates. The Tribe argued that State water law had no application within the Reservation. The State argued that State law was not preempted by any Congressional act; the State therefore had viable authority over water use of non-Indians for waters on non-Indian owned lands within the Reservation. This would apply only to "excess waters," recognizing senior water rights reserved for the Tribe are to be regulated by the federal system.

"Excess Waters"

The Ninth Circuit ruled as follows:

> ...because water per se lies within the exterior boundaries of an Indian reservation does not necessarily negate a state's interest in overseeing its usage along with the other in-state water systems. Washington is obligated to regulate and conserve water consumption for the benefit of all its citizens, including those who own land within a reservation in fee. *See* 25 U.S.C. § 349. Therefore, the state's special concern is shared with, not displaced by, similar tribal and federal interests when water is located within the boundaries of both the state and the reservation. The weight of the state's interest depends, in large part, on the extent to which waterways or aquifers transcend the exterior boundaries of Indian country.

Anderson, 736 F.2d at 1366.

Non-Indian Use Regulation

The Federal District Court and the Ninth Circuit found that the State had authority for this regulation. In analyzing preemption, the Ninth Circuit looked to whether a consensual agreement furnished the basis for tribal regulatory authority or whether there was a direct threat to political integrity, economic security, or health and welfare of the Tribe. Finding none, the Ninth Circuit ruled that the "state may regulate only the use, by non-Indian fee owners, of excess water."

"Required" Lands

On the question of "reacquired" lands, the Ninth Circuit applied principles of Western Water law (codified in the Washington State Water Code) to determine priority dates.

The Ninth Circuit ruled as follows:

> We hold that those perfected water rights appurtenant to homesteaded lands will not have a priority as of the date of reacquisition of the property by the Tribe; instead, they will carry a priority as determined under state law. Homesteaded lands where the water right has not been perfected or the rights have been lost, will have a priority date as of the date of reacquisition, rather than an original, date-of-the-reservation priority. We hold that those water rights appurtenant to lands reacquired after allotment and sale to non-Indians carry a priority date, as to those water rights not lost to nonuse, as of the date of the creation of the reservation.

Anderson, 736 F.2d at 1361–62.

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State Regulation

Excess Water Determination

Cumulative Impacts

Connectivity Questions

Permit-Exempt Use Impacts

USGS Connectivity Findings

Permit-Exempt Use Impacts Findings

In essence, perfected rights and allotment rights were awarded their original priority date; unperfected rights were recognized with priority as of the date of reacquisition by the Tribe.

It's important to note that the Ninth Circuit anticipated "no jurisdictional confusion" from the State allocation of surplus water, as the State could only allocate water rights subordinate (junior) to those with seniority, including the Tribe's. The Ninth Circuit stated that "it is clear that the state may exercise its regulatory jurisdiction over the use of surplus, non-reserved Chamokane Basin waters by nonmembers on non-Indian fee lands within the Spokane Indian Reservation." *Id*. at 1366. This is with the understanding that State permits "will be subject to all preexisting rights and those preexisting rights will be protected by the federal court decree and its appointed water master." *Id*. It's also important to note that the Ninth Circuit did not address (State) permit-exempt, domestic, stock-water or other de minimis uses.

Subsequently, the Federal District Court applied this to the administration of the Chamokane Basin by explaining that the "[w]ater master has responsibility and authority to determine available and existence of surplus or excess waters, and during what times and under what circumstances said waters are available to satisfy water rights permits and certificate hereafter established." *Findings, Conclusions, and Order on Tribe's First Cause of Action* (June 11, 1987).

By 2006, the federal water master determined that some cumulative impact from permit-exempt uses may be impairing, in hot dry summers, the Tribe's senior right to instream flows of Chamokane Creek. The water master also indicated an interest in regulating (essentially curtailing, or ordering temporary cessation) irrigation rights associated with the State Claims Registry but not listed on the Orders as subject to the adjudication. The federal water master asked the Federal District Court for guidance; the Court determined that additional legal and factual research was required.

FEDRAL DISTRICT COURT'S QUESTIONS & USGS REPORT FINDINGS

Federal District Court's Questions

Issue 1. Should the finding at page 3 of the July 23, 1979 Opinion and page 4 of the August 23, 1982 Orders, that groundwater in the upper Chamokane Creek basis [sic] is "unconnected to the Chamokane drainage system," be modified?

Factual Question for Issue 1: Is the groundwater of the upper basin separate or connected from that of the middle and lower basin areas?

Issue 2. Are all surface and groundwater uses in the middle and lower Chamokane Creek areas subject to the *United States v. Anderson* orders?

Issue 3. Given current conditions, what level if any of uses such as "domestic" and "stock-watering" should be excepted from regulation by the *United States v. Anderson* water master due to their de minimis effects on Chamokane Creek?

Factual Questions for Issues 2 and 3:

a) Do all surface and groundwater uses in the middle and lower Chamokane areas impact flows in Chamokane Creek?

b) What are the cumulative impacts of: i) Claims Registry use; and ii) permit-exempt wells on the flow in the Chamokane Creek?

c) If there are any impacts identified in questions a) and b) that are sufficiently large to affect the flows, how do those impacts affect the frequency and severity of regulation by the water master?

d) Is there a level of domestic or stock-water use that is too small or difficult to regulate? If so, what is that level?

USGS Report Conclusions

The USGS was retained to conduct a study to answer the factual questions above. The study simulated stream flow for the years 1999–2010, using a base condition of 4.04 cfs and altering groundwater pumping conditions to assess impacts of withdrawals on stream flow.

USGS conclusions can be summarized as follows:

Factual Question for Issue 1: Is the groundwater of the upper basin separate or connected from that of the middle and lower basin areas? The upper basin groundwater is connected with the middle basin. To determine this, USGS modeled with a value for double the upper basin groundwater withdrawals (an increase of 0.08 cfs). Results suggest connection between groundwater systems of the upper and middle basins. Septic returns cause a short-term increase in stream flow, but a net decrease over the long-term.

Factual Questions for Issues 2 and 3:

a) Do all surface and stock-water uses in the middle and lower Chamokane areas impact flows in Chamokane Creek? The USGS determined that surface and groundwater uses in the middle Chamokane area do impact flows in Chamokane Creek, over time, in direct proportion to the withdrawal. Results are influenced by an overwhelming effect of hatchery operations; the second-largest category of water use was public water supply. The lower basin area was outside the model and was not simulated.

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Notice

b) What are the cumulative impacts of: i) Claims Registry use; and ii) permit-exempt wells on the flow in the Chamokane Creek? For 0.03 cfs of groundwater and surface water withdrawals, the model predicted cumulative impacts of 0.02 cfs to the stream (which has a minimum flow of 24/27 cfs). Uses included self-supplied domestic withdrawals with some stock-watering and small-scale irrigation. The USGS did not differentiate between Claims Registry and permit-exempt uses in this model.

c) If there are any impacts identified in questions a) and b) that are sufficiently large to affect the flows, how do those impacts affect the frequency and severity of regulation by the federal water master? Regulation by the federal water master occurs when the 7-day low flow is less than 24 cfs. The study compared historical stream flow data to the historical frequency of simulated stream flows (described above). There have been six periods between 1999-2010 with mean daily 7-day low flow under 24 cfs, spanning a total of 290 days. The relatively small rates of modeled withdrawals (other than hatchery use) were difficult to measure, but were modeled at: (1) no groundwater or surface water withdrawals; and (2) double withdrawals. Method (1) determined that, with no withdrawals, 52 fewer days below 24 cfs would have occurred out of the 290 historical low-flow days. Doubling the modeled withdrawals predicted that 63 more historical days would have occurred over the 290 historical low-flow days.

d) Is there a level of domestic or stock-water use that is too small or difficult to regulate? If so, what is that level? The USGS study did not address what "should be regulated" but looked specifically at the impact of domestic or stock-water use on stream flow. The mean annual domestic groundwater pumping was 0.02 cfs; the mean annual stock-water use (groundwater and surface water) was 0.01 cfs. The mean annual difference on stream flow, for each, was 0.02 cfs for a total of 0.04 cfs for both. With a 24 cfs low-flow rate, this measurement was termed "calculable but not measurable" by USGS.

Ely, D. and Kahle, S., *Simulation of Groundwater and Surface-Water Resources and Evaluation of Water Management Alternatives for the Chamokane Creek Basin, Stevens County, Washington*. 2012-5224 and *Scientific Investigations Report* 2010-5165, filed in the United States District Court for the Eastern District of Washington at ECF 755-1, 755-2.

GOVERNMENT PARTIES' POSITIONS

Subsequent to the factual and technical information provided by the USGS, earlier this year the government parties proceeded to provide briefing on the legal issues. The parties' positions are summarized as follows:

Issue 1. Should the finding at page 3 of the July 23, 1979 Opinion and page 4 of the August 23, 1982 Orders, that groundwater in the upper Chamokane Creek basin is "unconnected to the Chamokane drainage system," be modified?

State of Washington (Ecology): Yes. Ecology agrees that the Orders should be modified to reflect the findings of the USGS Report that the groundwater in the upper Chamokane Creek Basin is connected to the Chamokane drainage system, and to include such uses in the federal water master's administration of the basin.

United States: Yes. The United States agrees that the upper basin is connected to the middle basin. The United States agrees that the Orders should be modified, but disagrees that they should be brought into the *Anderson* adjudication. The United States argues that only the State holds the regulatory jurisdiction over upper basin water use not currently covered by the Orders.

Spokane Tribe: The Tribe agrees that the upper basin is connected to the middle basin and should be included in the *United States v. Anderson* adjudication.

Issue 2. Are all surface and stock-water uses in the middle and lower Chamokane Creek areas subject to the *United States v. Anderson* orders?

Ecology: No. Ecology's position is that certain uses and classes of users in the middle and lower Chamokane Creek have not been adjudicated and are not subject to the Orders. These include: (1) permit-exempt groundwater uses previously excluded from adjudication in this case as de minimis, including both domestic and stock-water uses; and (2) water users with water rights documented by statements of claims filed in the Claims Registry who were not made defendants to the *Anderson* action and who claim rights to water established prior to the enactment of the 1917 Water Code — i.e., rights which were not established through the State water right permit system. The Orders in this case do not indicate that notice was ever provided to holders of RCW 90.14 claims to pre-code water rights (pre-1917), nor to landowners who use water under the exemptions from permitting for certain groundwater uses. Ecology points out that the Orders do not indicate that any such water rights were the subject of the adjudication of water rights conducted by the Federal District Court.

United States: No. The United States agrees with Ecology that Claims Registry uses were not included in the *Anderson* adjudication and are not subject to the Orders. They state that uses "made under

Tribal Water

State Jurisdiction

De Minimis Use & *Postema* Test

Showing of Impairment

Senoir Rights Impacted

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claim of State authority, and not previously made subject to the Court's authority," are not subject to orders. This includes upper basin, domestic exempts, stock-water exempts, and Claims Registry. The United States argues that these uses are solely under State jurisdiction under the 1984 Ninth Circuit ruling, and should not be brought into the *Anderson* adjudication and are not under the authority of the federal water master.

Spokane Tribe: The Tribe's position is that the 1979 Order was a complete adjudication with full jurisdiction over all waters and uses with the specific exceptions of domestic and stock-water. They state that the only exceptions are those listed in the original Orders. They describe the briefing history to reach the conclusion that the Claims Registry was "specifically denied" and that pre-code claims users "were briefed on and denied." The Tribe agrees that, regardless of semantic differences (as to the original scope of the Orders), the question is what scope the Orders should have. The Tribe agrees that newly-regulated parties should be given notice and should participate in the *Anderson* adjudication.

Issue 3. Given current conditions, what level if any of uses such as "domestic" and "stock-watering" should be excepted from regulation by the *United States v. Anderson* water master due to their de minimis effects on Chamokane Creek?

Ecology: Ecology's position is that stock-water as described in the Orders (limited to the carrying capacity of the land) should continue to be permit-exempt, and that any regulation of domestic use should provide for due process and protection of human health and safety. However, Ecology does not believe that these uses are "too small or difficult to regulate" as per the legal test set forth in *Postema v. Pollution Control Hearings Bd.*, 142 Wn.2d 68. *Postema* provides for regulation of groundwater withdrawals where there is a showing of impairment of a senior surface water right. Ecology believes that the USGS study provides an adequate showing that the *Postema* standard for impairment is met, and that the federal water master has legal authority to curtail junior water uses to prevent impairment of senior water rights, particularly those of the Tribe — impairment which has been confirmed in this case.

United States: The United States agrees that the USGS report shows that uses currently termed de minimis have an impact on senior adjudicated water right, but argues that Ecology must regulate these uses, not the United States.

Spokane Tribe: The Tribe emphasizes that the USGS concludes that water uses previously categorized as de minimis are impairing senior rights, and proposes that the scope of "de minimis" should be applied in a way that reflects this. They point out that the Orders' definition of de minimis is not the same as the State's permit exemptions. They note that the Federal District Court has previously used, as a "rule of thumb," a 1/2 acre limit as a maximum use that would be defined as de minimis. They also note that the legal exemption for stock-watering has expanded under *Five Corners*. In this way, the Tribe argues for the Court to enforce its original de minimis Order — not to amend and narrow (or eliminate) the de minimis exception. They note that the upper basin uses would not impair their rights if it were indeed de minimis, but warn of "increasingly dense construction" in this area.

CONCLUSION

THE FUTURE OF THE CHAMOKANE

Depending on the direction taken by the Federal District Court in this matter, the future of the *United States v. Anderson* case might implicate further issues of federal action or State regulatory authority in the arena of Tribal water rights. Exercise of such authority may depend on: 1) whether the federal water master is given additional authority to curtail non-Tribal users; 2) whether the Court orders any party to take additional action to assess or adjudicate junior rights; or 3) what other remedies may be proposed and litigated by the parties — including future appeals of any such decisions.

It may be equally possible, however, that solutions for water availability for Chamokane Basin users may be attainable (on a mitigated basis or otherwise) — aside from litigation — in a manner that does not impair the adjudicated senior water right of the Spokane Tribe.

For Additional Information:
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In providing this article, Ms. McPherson is not representing or speaking on behalf of Washington State's Attorney General or the Department of Ecology.

Columbia River Treaty

US Entity

Public Comments

Regional Support

Issues Remain

Final Recommendation

Federal Review

COLUMBIA RIVER TREATY REVIEW

UPDATE & NEXT STEPS

From the US Entity — Special to The Water Report

Editors' Note: As our readers will be aware, the United States (US) Entity, comprised of the Administrator of the Bonneville Power Administration (BPA) and the Northwestern Division Engineer for the US Army Corps of Engineers, is tasked with implementing the Columbia River Treaty (*see* Miller, *TWR* #101; Bankes & Cosens, *TWR* #105). We would like to thank Amy Echols at the Army Corps Portland District Public Affairs Office for forwarding the following information from the US Entity after the close of the Entity's public review process for the Draft Regional Recommendation regarding the Treaty (*see* article, *TWR* #116).

RECOMMENDATION STATUS

Public review on a draft regional recommendation concerning the Treaty's post-2024 future concluded October 25, 2013, after five public discussions and written comments submitted to the US Entity.

"Public contributions to this discussion represent the important and diverse interests in the Columbia Basin and reflect a common reliance on the river," said Brigadier General John Kem, commander, Northwestern Division, US Army Corps of Engineers and US Entity member.

A summary of each meeting's prevailing discussion themes and comments submitted by interested stakeholders during the comment period are available at: www.crt2014-2024review.gov (select "Public Comment Opportunities"). Comments received during the latest comment period on the Draft Regional Recommendation are available for viewing at: www.bpa.gov/applications/publiccomments/CommentList.aspx?ID=207.

"The perspectives shared by the Sovereigns and stakeholders have helped move us closer to our goal of regional support for the recommendation we send to the US Department of State as they begin a review of the treaty at the national policy level," said Brigadier General Kem.

"While we have achieved substantial progress toward broad support on several key parts of the recommendation, there remain significant issues to be worked through by regional interests," said Elliot Mainzer, acting BPA administrator and chair of the US Entity. "As we continue to reach out to Northwest stakeholders, we believe it is important for the region to recognize that it has a valuable opportunity to work through these issues and coalesce around a recommendation."

The US Entity is continuing these conversations with the Sovereign Review Team, regional stakeholders and sovereigns and is holding government-to-government meetings with the 15 Tribes represented on the Sovereign Review Team, as well as with the Grand Ronde Tribe.

NEXT STEPS

The US Entity will submit a final recommendation to the Department of State by December 2013 and release it to stakeholders and the public around that time.

"With the recommendation to modernize the Treaty, we seek to create a win-win opportunity for regional hydropower, flood risk management, ecosystem and water supply interests," said Mainzer.

According to the US Department of State, following receipt of the regional recommendation in December 2013, the US Government will formally take-up the question of the Columbia River Treaty. That process will be a Federal, interagency review under the general direction of the National Security Council on behalf of the President. The State Department has been designated as the agency to coordinate and oversee this process on behalf of the National Security Council.

How or if operations under the Treaty, or the Treaty itself, may change — and whether or not the US will decide to discuss any matters with Canada — is not yet determined and is ultimately a matter for the President. The Federal interagency process, through the State Department, may reach back to the region and elsewhere for advice on specific issues or technical matters following the December 2013 submission of the final regional recommendation. The US Entity is committed to supporting this effort.

At the start of 2014, it is possible that while the Federal Government is reviewing the regional recommendation and working with other stakeholders who also hold national and/or regional interests in the Treaty, there may be a period of time in which there are little or no public updates on the process. This is considered a normal part of the US foreign policy process with respect to our country's interest in a treaty with another country. It should also be expected that the relevant committees of the Congress may request information on this process, both from elements of the Federal Government and other stakeholders.

Columbia River Treaty

Coequal Purpose

Ecosystem Valued

Ongoing Programs

Variable Discharge Management

Flow Augmentation

Dry Year Strategy

Migration Blockages

Storage & Flow Enhancement

Adaptation

Columbia River Treaty & Ecosystem-Based Functions

Editors' Note: We would like to thank Matt Rea, Program Manager and Columbia River Treaty Sovereign Technical Team Designate, US Army Corps Portland District Office, for helping to put together the following information.

As we noted last month in the "*Columbia River Treaty Update*" article (*see TWR* #116), the Draft Regional Recommendation released by the US Entity includes "Ecosystem-Based Functions" as a third purpose for the Treaty, coequal with hydropower production and flood risk management.

The Draft Regional Recommendation states:

> Since the original Treaty was negotiated in the 1960s, the region has come to increasingly recognize and value the importance of the Basin's ecosystem. Significant efforts to address ecosystem concerns began in the 1980s, and the region, principally through its electric utility ratepayers, has invested hundreds of millions of dollars annually to achieve ecosystem improvements throughout the Basin over the intervening decades. In addition, in 1993 the United States and Canadian entities began using the flexibilities in the Treaty to assist in meeting Endangered Species Act (ESA) requirements and to address ecosystem considerations on an annual basis through actions such as flow augmentation agreements. While it is recognized that significant ecological improvements are being implemented and realized in a number of critical areas and are anticipated to continue over time, there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty. *Draft Regional Recommendation*, pp.1-2

While a comprehensive definition of exactly what "Ecosystem-Based Functions" might encompass has yet to be agreed upon, certain areas of focus have arisen.

Addressing Ecosystem-Based Function in a "modernized" Treaty may include:

- A recognition by the two nations in the Treaty that ecosystem health is now an important societal value, as evidenced in the US by "a number of domestic actions that have contributed, and will contribute, to ecological improvements in the Basin. These include the Federal Columbia River Power System Biological Opinion requirements under the Endangered Species Act, the Nez Perce Water Rights Agreements of 2004, actions under the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program, actions under the Clean Water Act to improve water quality, and implementation of the Columbia Basin Fish Accords. In addition, there are numerous habitat and conservation programs and FERC license requirements associated with non-federal dams on the Columbia." *Id.* Footnote 1 (*See also*, Bodi, *TWR*s #47 & #104). One example of how the hydro-system itself can be adjusted to address ecosystem functioning is "VarQ" flood control — for over a decade, the variable discharge (VarQ) flood control plans at Hungry Horse and Libby dams have improved river and reservoir conditions for several ESA-listed species in the Columbia River Basin including: bull trout; Kootenai River sturgeon; and anadromous steelhead and salmon. The VarQ plans reduce the amount of space required for flood control at Hungry Horse and Libby dams. The net result is a more normal spring flow regime that benefits listed species and increased likelihood of full reservoirs and water supplies for summer flow needs. These practices are envisioned as continuing under the modernized Treaty.
- A codification of fish-friendly flow augmentation practices over the long-term, as opposed to the current practice of annual negotiations. The best example of this type of operation is the one million acre-feet of fish flow augmentation that has been provided over the last decade or so via annual supplemental agreements between the US and Canadian Entities.
- Inclusion of a dry year strategy fashioned to further enhance and protect ecosystem functions and other operating purposes during dry years. This may incorporate operations for flow augmentation in dry years currently implemented under the existing Non-treaty Storage Agreement (scheduled to end in 2024) between Canada and the US, as well as other operations involving Treaty storage space.
- Reintroduction of fish to blocked areas: pursuing a "joint program with Canada, with shared costs, to investigate and, if warranted, implement restored fish passage and reintroduction of anadromous fish on the main stem Columbia to Canadian spawning grounds." *Id.* p.4
- Inclusion of additional water storage in Canadian reservoirs during the fall and winter with release in the spring and summer, thereby allowing for enhanced flows for both instream (ecological flows) and out-of-stream (irrigation and water supply) uses.
- Adaptability: including "both short- and long-term mechanisms that allow for adapting the Treaty to build in flexibility of operations as conditions change, e.g., climate change, ESA listings or de-listings, or as new information and technology become available." *Id.* p.2 To these ends, a mechanism for adaptive management may be included to incorporate new information and best available science.

Columbia River Treaty

Restored, Resilient & Healthy Watershed

Expectations

Ecosystem-Based Function: Tribes' Definition

The following definition of Ecosystem-based Function was adopted by the Coalition of Columbia Basin Tribes in June 2013

Since time immemorial, the rivers of the Columbia River Basin have been, and continue to be, the life blood of the Columbia Basin tribes. Columbia Basin Tribes view ecosystem-based function of the Columbia Basin watershed as its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its' length and breadth. Clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic ecosystem-based function and life itself.

A restored, resilient and healthy watershed will include ecosystem-based function such as:

- Increased spring and summer flows resulting in a more natural hydrograph;
- Higher and more stable headwater reservoir levels;
- Restoring and maintaining fish passage to historical habitats;
- Higher river flows during dry years;
- Lower late summer water temperature;
- Reconnected floodplains throughout the river including a reconnected lower river estuary ecosystem as well as reduced salt water intrusion during summer and fall;
- Columbia River plume and near shore ocean enhanced through higher spring and summer flows and lessened duration of hypoxia; and
- An adaptive and flexible suite of river operations responsive to a great variety of changing environmental conditions, such as climate change.

Improved ecosystem-based function in the Columbia Basin Watershed is expected to result in at least:

- Increased recognition, protection and preservation of tribal first foods and cultural/sacred sites and activities. First foods includes water, salmon, other fish, wildlife, berries, roots, and other native medicinal plants.
- An estuary with an enhanced food web and increased juvenile fish survival;
- Increases in juvenile and adult salmon survival;
- Decreased mainstem travel time for migrating juvenile salmon;
- Increased resident fish productivity that provides stable, resilient populations;
- Increased wildlife productivity that provides stable, resilient populations; and
- Salmon and other juvenile and adult fish passage to historical habitats in the Upper Columbia and Snake River basins, and into other currently blocked parts of the Columbia River Basin.

For Additional Information:

RE: Next Steps

Amy Echols, US Army Corps Public Affairs, 503/ 808-4512 or Amy.M.Echols@usace.army.mil

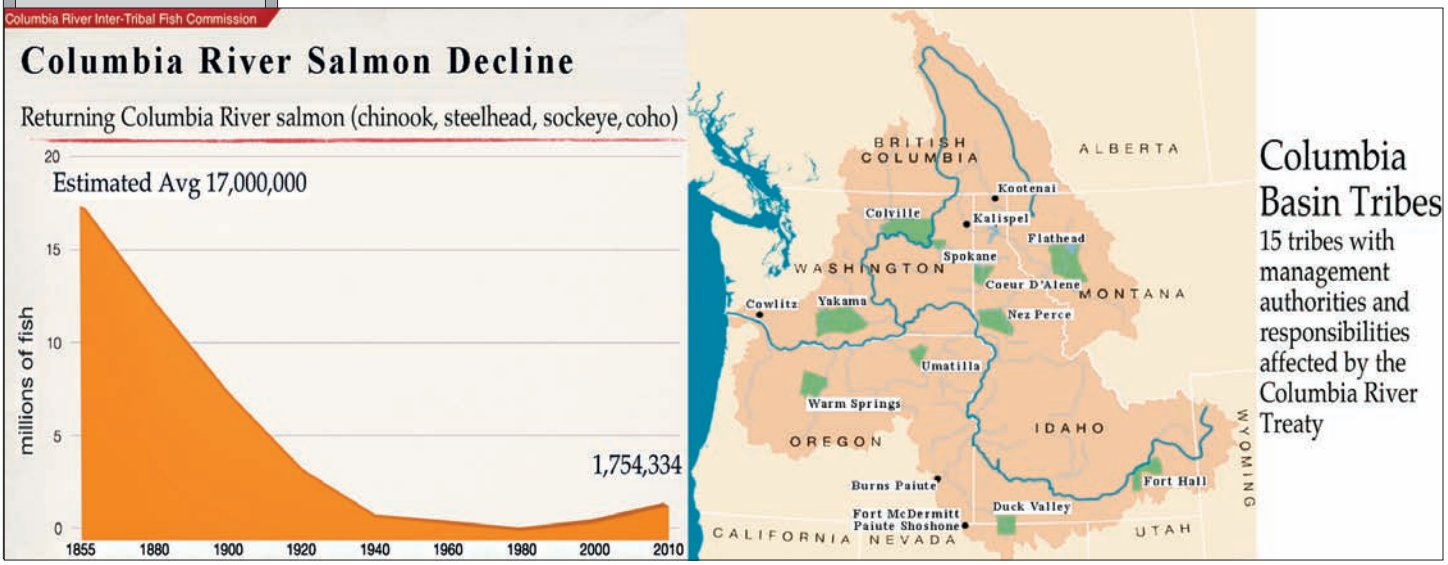
RE: Hydrosystem management & ecosystem-based functions

Matt Rea, Program Manager, US Army Corps, 503/ 808-4750 or Matt.T.Rea@usace.army.mil

RE: Coalition of columbia basin tribes & ecosystem-based functions

Jim Heffernan, Columbia River Inter-Tribal Fish Commission, 503/ 238-0667 or hefj@critfc.org

Columbia River Treaty 2014/2024 website: www.crt2014-2024review.gov



WATER BRIEFS

INSTREAM RIGHTS WA

SWINOMISH V. ECOLOGY

ENFORCEMENT DISCRETION AGREEMENT

On October 10, the Washington Department of Ecology (Ecology) and the Swinomish Indian Tribal Community issued a joint press release concerning the October 3rd Washington Supreme Court (Court) decision that overturned a 2006 water rule and how the parties are proceeding in light of that decision. *Swinomish Indian Tribal Community v. Department of Ecology* held that Ecology exceeded its authority in establishing State water rules in 2006 that established reservations of water for future use due to the impact of those reservations on existing instream flow rights. *See* Moon, *TWR* #116 for details regarding the Court decision.

In 2001, Ecology adopted an administrative rule establishing minimum instream flow rights for the Skagit River system. In 2006, Ecology amended the rule to establish 27 reservations of water that were not subject to the senior minimum instream flow rights. The Court's decision reinstated the 2001 Skagit Instream Flow Rule. Under this rule, water rights established on or after April 14, 2001, are subject to curtailment when the senior instream flow rights are unmet.

As announced October 10, Ecology will not require Skagit Basin well owners, who established groundwater rights between April 14, 2001, and Oct. 2, 2013, to curtail their water use despite the recent court decision. Ecology Director Maia Bellon has decided to exercise enforcement discretion and not curtail the water use of 475 homes and 8 businesses that have relied on the 2006 reservations for their water supplies since April 14, 2001. The Swinomish Indian Tribal Community, which successfully challenged Ecology's decision to establish the 2006 reservations, supports Ecology's decision if the impacts of the 483 water uses are fully mitigated.

"The Swinomish Tribe supports the 2001 Rule because it is a good rule based on sound science that was the result of a collaborative effort by the State of Washington, Skagit County, the public water purveyors, and the three Skagit Treaty tribes," said Swinomish Tribal Chairman Brian Cladoosby. "We recognize that nearly 500 landowners are in a difficult situation and support Ecology's decision not to take enforcement action while mitigation plans are developed and implemented to ensure that their water use and any future water use does not impair the senior instream flow rights and does not adversely affect salmon. The Swinomish Tribe is committed to collaborating with Ecology on this effort."

Maia Bellon, the Director of Ecology elaborated on the situation. "We are grateful to the Swinomish Tribe for their cooperation and understanding of our efforts to assure well owners that their water supplies are secure while we focus on finding sustainable water supply solutions for the Skagit Basin," Bellon said. "We welcome the Tribe's advice and consultation on the Skagit Basin's water supply problems as we work with local partners to ensure stream flows are protected and the needs of existing and future water users are met."

For info: Larry Wasserman, Swinomish Indian Tribal Community, 360/ 466-7250, lwasserman@skagitcoop.org or www.swinomish.org/news/skagit-river-water-allocation.aspx; Dan Partridge, Ecology, 360/ 407-7139, dan.partridge@ecy.wa.gov or Skagit River Water Rule at: www.ecy.wa.gov/programs/wr/instream-flows/skagitbasin.html

NATURAL INFRASTRUCTURE US

FOREST CONSERVATION & WATER

On October 15, a group of water experts released new guidance for US resource managers to expand the availability of clean water through the conservation and restoration of forests and other natural infrastructure. The publication, *Natural Infrastructure: Investing in Forested Landscapes for Source Water Protection in the United States*, builds on several innovative efforts across the US and provides examples where water managers are saving money by investing in natural infrastructure.

Cities and towns across the US face growing water challenges. Aging water infrastructure, increasing demand, continued land use change, and extreme weather events are driving up the costs of water management. Water challenges strain public budgets, limit productive economic development, and threaten public health. The publication outlines the economics and science of natural infrastructure investments and identifies opportunities across the country, with key lessons for program design and implementation. The publication is the most comprehensive of its kind to date, convening the expertise of 56 authors spanning stakeholder groups that need to be involved for natural infrastructure efforts to be successful.

In addition to detailed guidance, *Natural Infrastructure* provides a look at the current state of practice of natural infrastructure approaches, showing opportunities and an expanding toolkit for securing forests for water. In Colorado, after the devastating 2002 Hayman fire that cost $26 million to manage water quality impacts alone, Denver Water committed $16.5 million in matching funds, alongside the US Forest Service, to implement catastrophic wildfire risk mitigation measures, like prescribed burning and mechanical thinning. In Maine, the board of the Portland Water District recently voted unanimously to dramatically scale up investments in conservation easements (up to 25 percent of the conservation value) in its rapidly developing watershed. While Portland continues to enjoy high quality source water, the city can maintain its high standards and avoid treatment costs by securing its forested watershed. Another example is Raleigh, North Carolina, which has allocated $7.5 million since 2005 for strategic land conservation to help address declining water quality in its primary reservoir. Working together, land trusts, landowners, municipalities and other government agencies have used voluntary measures to protect over 6,000 priority acres along 63 miles of stream in Raleigh's watershed.

For info: World Resources Institute website: www.wri.org/publication/natural-infrastructure

COLORADO ARCHIVE WEST

***ARIZONA V. CALIFORNIA* COLLECTION**

The William A. Wise Law Library at the University of Colorado Law School debuted its newest digital archive, the *Arizona v. California*

WATER BRIEFS

Collection, at the Getches-Wilkinson Center's Clyde Martz Summer Conference held in August, 2013. The Conference, titled *Arizona v. California at 50: The Legacy and Future of Governance, Reserved Rights, and Water Transfers*, coincided with the 50th anniversary of the U.S. Supreme Court's landmark decision concerning rights to the use of Colorado River basin water.

The Wise Law Library's *Arizona v. California* Collection contains more than 160 full-text pleadings, briefs, orders, transcripts, and reports from the 12-year original proceeding (1952-1963) in the U.S. Supreme Court. Researchers can search documents by Year, Author (parties, attorneys, courts, special masters), Title Keywords, or Full Text Keywords. The Collection features many key filings by Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming, and the United States, as well as the 1960 draft and final reports of Special Master Simon H. Rifkind and copies of the U.S. Supreme Court's opinion and decree. It also includes Special Master Elbert P. Tuttle's 1982 report in the reopened *Arizona v. California* case decided by the U.S. Supreme Court in 1983. The Collection will be accessible soon through the Western Waters Digital Library, http://www.westernwater.org, which "provides free public access to a wide range of significant resources on water in the Western United States."

For info: The *Arizona v. California* Collection is accessible at: http://lawlibrary.colorado.edu/arizona-v-california-collection, or by clicking on the Digital Collections link from the Library's website: http://lawlibrary.colorado.edu.

SMALL-SCALE HYDRO OR IRRIGATION INFRASTRUCTURE

A recently published case study sponsored by the Bonneville Environmental Foundation and Energy Trust of Oregon takes a close look at hydropower generation occurring in pre-existing irrigation infrastructure. The study, *Cumulative Watershed Impacts of Small-Scale Hydroelectric Projects in Irrigation Delivery Systems: A Case Study*, authored by Les Perkins of the Hood River firm Farmers Conservation Alliance (FCA), examines the cumulative effects of small-scale hydropower generation by two irrigation districts in the Hood River watershed over the past 30 years.

The study notes that in Oregon there are currently only 20 hydropower systems installed within irrigation water delivery systems. Characterizing FCA's findings within the context of the broader public discourse on hydropower, Perkins states, "Within the category of small hydro, projects located within existing irrigation systems are of particular interest due to the opportunity to use an existing resource for an additional benefit." Energy Trust Program Manager Jed Jorgensen explains the impetus for the study: "Energy Trust is dedicated to helping utility customers benefit from saving energy and generating renewable energy. Hydropower projects utilizing irrigation district infrastructure have been a focus for Energy Trust because the projects can generate renewable energy while often creating other environmental benefits, such as putting water back in-stream for fish. Through this study, we are able to share the full range of benefits that can be experienced both by irrigation districts and the environment from irrigation hydro projects. This study will be a valuable resource for irrigation districts who are considering adding hydropower, as well as for natural resource agencies and other interested parties who need to evaluate the impacts of irrigation hydro."

The study reports a measured positive impact on fish from these projects in the Hood River watershed, "…realized through the generation of nearly $90 million in revenue that funded infrastructure improvements leading to increased summer stream flows, installation of fish screens, removal of passage barriers, and increased collaboration within the watershed community." The irrigation and hydropower generation systems of the Farmers Irrigation District and the Middle Fork Irrigation District are both examined, with outcomes and impacts related to energy, water, watershed restoration, and the local economy provided in detail.

For info: Les Perkins, FCA, les.perkins@fcasolutions.org. Study at: http://energytrust.org/library/case-studies/CS_Hydro_FCA_2013.pdf

GROUNDWATER PLAN CA DISCUSSION DRAFT

On October 4, the California State Water Resources Control Board (SWRCB) released a 10-page discussion draft of its Groundwater Workplan Concept Paper for public comment. SWRCB is developing a workplan that aligns its current groundwater protection efforts, the ongoing actions of other entities with groundwater management responsibilities, and potential actions that SWRCB and others could pursue. A goal of the workplan is to promote collaboration and cooperation among local, regional, and State agencies, and other stakeholders to help promote more effective groundwater management that supports beneficial uses over the long-term. Comments are due on December 6.

As noted by SWRCB, population growth and more intensive land use will place increased demands on California's water supply. At the same time, surface water runoff is projected to decline due to the effects of climate change. These and other factors point to an increased reliance on groundwater. However, many of California's aquifers are already experiencing contamination and/or overdraft. These challenges do not lend themselves to a "one size fits all" solution, given the varying physical and institutional characteristics of California's groundwater basins.

Whether implemented at the local, regional, or State level, SWRCB believes that an effective groundwater management program generally requires five key elements to be in place: thresholds, monitoring/assessment, governance/management, funding, and enforcement. The draft notes that the "objective is to ensure that the Water Boards address the groundwater challenges that have the greatest potential to impact beneficial uses, focus limited resources on the most important groundwater problems, and facilitate more efficient local and regional groundwater management and provide support and oversight, where needed."

For info: Eric Oppenheimer, SWRCB, 916/ 445-5960, eric.oppenheimer@waterboards.ca.gov or www.waterboards.ca.gov/water_issues/programs/groundwater/workplan.shtml

WATER BRIEFS

RECLAMATION FACILITIES US
NON-AGRICULTURAL DISCHARGES

The US Bureau of Reclamation (Reclamation) is developing a new Directive and Standard (D&S) for non-agricultural discharges into Reclamation facilities. Non-agricultural discharge is defined as any discharge that is not covered by the Clean Water Act exemption for return flows from irrigated agriculture and agricultural stormwater discharges. The public comment period on the draft D&S has been extended to November 26.

Urban development near Reclamation projects has increased requests from municipalities and other entities to discharge non-agricultural water, such as stormwater or treated municipal wastewater, into Reclamation facilities such as canals or ditches. When a determination is made by Reclamation that a proposed discharge into its facilities will not be detrimental to the best interests of the United States, Reclamation has discretion to accept that discharge.

The goal of preparing the D&S document and providing the public with the opportunity to comment is to help ensure that the quality of non-agricultural waters discharged into Reclamation facilities does not jeopardize exemptions from National Pollutant Discharge Elimination System (NPDES) permitting requirements associated with Reclamation water conveyances, and to help ensure adequate protection of Reclamation's facilities and projects. According to Reclamation, expected benefits include: helping protect the quality of water delivered to Reclamation's customers; helping ensure that the operation and integrity of the infrastructure serving Reclamation projects is not unduly jeopardized by non-project uses; and helping ensure continued compliance with the federal Clean Water Act (CWA).

This draft Reclamation Manual release requires that certain CWA permitting requirements be addressed, where applicable, before Reclamation issues a "use authorization" approving the discharge of non-agricultural waters into its facilities. Non-agricultural dischargers will not be allowed to discharge directly into Reclamation facilities until they demonstrate either that they've already secured the necessary NPDES permit, or that their discharge does not require such a permit. Under these conditions Reclamation *may*, but is not required to, accept the proposed discharge. The final determination will be based on an evaluation of the compatibility of the proposed use with authorized project purposes, the physical capacity of facilities, public safety, and other public interests associated with the Reclamation project.

For info: Reclamation website: www.usbr.gov/recman/drafts/env06-01webdraft.pdf; Submit comments to Donald Anderson, Reclamation, dmanderson@usbr.gov

COMMUNITY FOREST WA
YAKIMA BASIN LAND PURCHASE

On September 30, the Washington State Department of Natural Resources (DNR), the Department of Fish and Wildlife (WDFW), and Forterra announced the purchase of 50,272 acres in the headwaters of the Yakima Basin watershed that are being designated as the Teanaway Community Forest. The Teanaway acquisition is the largest single land transaction in Washington State in 45 years and reflects more than a decade of collaboration involving many organizations and individuals. The property will become Washington's first state-managed Community Forest under the terms of legislation enacted in 2011. That law established a model for managing state trust lands that empowers communities to partner with DNR to purchase forests that support local economies and public recreation. The forest will be managed through a partnership between DNR and WDFW, with input from the local community and interested stakeholders.

Acquisition of the property is a key step in implementing the Yakima Basin Integrated Plan, an initiative developed by a coalition of public and private organizations to safeguard the basin's water supply, restore fisheries, conserve habitat, preserve working lands, and enhance recreational opportunities. *See* Malloch & Garrity, *TWR* #106. For over a decade, Forterra, a statewide non-profit conservation and land stewardship organization, worked with the landowner, American Forest Holdings LLC (AFH), to negotiate a purchase and structure the sale. The Yakima Basin coalition advocated the importance of the acquisition to the state Legislature. Forterra and AFH signed a sale agreement in April, which Forterra assigned to DNR after state lawmakers appropriated $87 million for the purchase in the 2013-15 State Capital Budget. DNR supplemented that amount with a $10 million loan from its Real Property Replacement Account.

The Teanaway property has been a working forest operated by AFH. The state's purchase will ensure the land remains a working forest, available to the public for multiple uses. DNR and WDFW leaders approved management agreements that provide for an extensive public engagement process to help guide the agencies' management of the Community Forest. DNR and WDFW are establishing a community advisory committee to help guide their development of a management plan for the forest.

For info: http://bit.ly/teanaway; Peter Lavallee, DNR, 360/ 902-1023 or peter.lavallee@dnr.wa.gov; Mike Livingston, WDFW, 509/ 457-9325 or michael.livingston@dfw.wa.gov; Leda Chahim, Forterra, 206/ 905-6922 or lchahim@forterra.org

GROUNDWATER SUPPLY AZ
AQUIFER STORAGE & RECOVERY

On October 24, the National Ground Water Association (NGWA) announced that it had awarded the City of Phoenix, Arizona (Phoenix) an Outstanding Groundwater Project Award for innovation and excellence in bolstering the city's groundwater supply. Based on Phoenix's 2010 groundwater management plan, the project was developed to install three aquifer storage and recovery (ASR) wells to stabilize the local aquifer levels, which had been dropping 3 feet to 4.5 feet a year. Phoenix services about 1.5 million people and although most of the city's water supply comes from surface water sources, groundwater is critical to meet drought shortages and system outages, as well as to provide reliability to the supply system.

WATER BRIEFS

Using the three large ASR wells, excess potable water is pumped into the aquifer for recharge during periods of low water demand (winter months) and pumped back out as needed during periods of high water demand (summer months). The city now has a total aquifer recharge capacity of 4.5 million gallons a day.

It is estimated that these ASR wells will reduce the city's water well rehabilitation costs by $110,000 to $115,000 a year and reduce well rehabilitation work time from 30 to 40 days a year to 3 to 4 days a year.
For info: Ken Kroki, Phoenix, 602/ 920-0942 or http://phoenix.gov/waterservices/wrc/yourwater/newsupplies.html

KLAMATH BASIN INFO OR/CA

THIRD ANNUAL COUNCIL REPORT

Amidst the damage caused by another dry water year in the Klamath Basin, the Klamath Basin Coordinating Council (KBCC) released its third annual report (Report) on October 14th describing accomplishments since the Klamath Agreements were signed in 2010. The Klamath Basin is experiencing a severe drought and communities throughout the basin are experiencing serious impacts. Surface water withdrawals above and around Upper Klamath Lake have been regulated off, water supplies to the Klamath Reclamation Project (Project) have been reduced, and the Lower Klamath National Wildlife Refuge does not have an allocation of Project water.

The Klamath Agreements were forged by Klamath Basin stakeholder groups including Basin irrigators, fishermen, tribes and conservation groups, the dam owner PacifiCorp, counties and agencies within the states of California and Oregon, and Federal agencies. There are 45 Parties to the KHSA and 43 Parties to the KBRA. The Klamath Agreements are designed to create economic stability, provide reliable water supplies and energy, and restore important fisheries for all the Basin's diverse communities.

Parties to the Agreements report good progress on implementing parts of the Agreements. The Report provides a summary of activities under the Klamath Basin Restoration Agreement (KBRA) and the Klamath Hydroelectric Settlement Agreement (KHSA), collectively "Klamath Agreements." Implementation of a number of the Klamath Basin Agreement programs has been delayed because certain proposed activities are not currently authorized under existing law and funding has not been available. KBCC noted that when these agreements are implemented, local irrigators, refuges, and fish and wildlife would have greater certainty for obtaining the water needed, particularly in dry years.

Some highlights from the Report include: cost estimates to implement the KBRA have been revised since 2011, reducing the seven-year cost estimates by 38 percent and the 15-year cost estimates by 18 percent; the Bureau of Reclamation has completed studies of the potential for additional water storage in the Klamath Basin; the Interior Department has issued the Klamath Dam Removal Overview Report; and the collection of funds to pay for decommissioning of the four hydroelectric dams that could be removed under the KHSA has been approved by the public utility commissions in California and Oregon. As of June 30, 2013, the combined balance of the Oregon and California dam removal trust accounts was $54.4 million.
For info: Third Annual Report and the Klamath Settlement Agreements (along with summaries, reports, and meeting notices) are available at: www.klamathcouncil.org. Info on studies related to the four Klamath River dams at: www.klamathrestoration.gov

WATERSHED MODELING US

CLIMATE CHANGE & URBAN DEVELOPMENT

In September, the EPA released "Watershed Modeling to Assess the Sensitivity of Streamflow, Nutrient, & Sediment Loads to Potential Climate Change & Urban Development in 20 U.S. Watersheds." Watershed modeling was conducted in 20 large, U.S. watersheds to assess the sensitivity of streamflow, nutrient (nitrogen and phosphorus), and sediment loading to a range of plausible mid-21st Century climate change and urban development scenarios in different regions of the nation. This final report describes the structure, including methods, models, scenarios, and results, of this effort.

There is growing concern about the potential effects of climate change on water resources. The study also provides an improved understanding of methodological challenges associated with integrating existing tools (e.g., climate models, downscaling approaches, and watershed models) and data sets to address the scientific questions addressed in the study.

Watershed simulations were conducted using the Soil Water Assessment Tool (SWAT) and Hydrologic Simulation Program—FORTRAN (HSPF) models. Scenarios of future climate change were developed based on statistically and dynamically downscaled climate model simulations representative of the period 2041-2070. Scenarios of urban and residential development for this same period were developed from the EPA's Integrated Climate and Land Use Scenarios (ICLUS) project.

Results provide an improved understanding of the complex and context-dependent relationships between climate change, land-use change, and water resources in different regions of the nation. As a first-order conclusion, results indicate that in many locations future conditions are likely to be different from past experience. Results also provide a plausible envelope on the range of streamflow and water quality responses to mid-21st century climate change and urban development in different regions of the nation. In addition, in many study areas the simulations suggest a likely direction of change of streamflow and water quality endpoints. Sensitivity studies evaluating the implications of different methodological choices help to improve the scientific foundation for conducting climate change impacts assessments, thus building the capacity of the water management community to understand and respond to climate change. This information is useful to inform and guide the development of response strategies for managing risk.
For info: EPA website at: http://cfpub.epa.gov/ncea/global/recordisplay.cfm?deid=256912

WATER BRIEFS

DAMAGES PREEMPTED US
FED POWER ACT

In *Simmons v. Sabine River Authority Louisiana*, Case No. 12-30494 (October 9, 2013), the U.S. Court of Appeals for the Fifth Circuit has ruled that the Federal Power Act preempts property damage claims under state tort law, where the claim alleges negligence for failing to act in a manner that the Federal Energy Regulatory Commission (FERC) expressly declined to mandate while operating a FERC-licensed hydropower project.

The Fifth Circuit granted the Defendants' motion to dismiss. "Because the state law property damage claims at issue here infringe on FERC's operational control, we hold that they are conflict preempted. Essentially, Plaintiffs allege that Defendants were negligent because they failed to act in a manner FERC had expressly declined to require. But FERC, not state tort law, must set the appropriate duty of care for dam operators. *See* 16 U.S.C. § 803(c)… ." *Slip Op*. at 10-11.

The Fifth Circuit did point out a limit on its ruling. "We do not hold that all state property claims are preempted by the FPA. For example, a claim alleging negligence for failure to conform to FERC's guidelines would not conflict with FERC's operational control." *Id*. at 11, footnote 9. The Fifth Circuit also explained how its ruling does not affect state-based water rights. *See Id*. at 7-10.

For info: Case available at: http://600camp.com/wp-content/uploads/2013/10/Simmons-v.-Sabine-River-Authority.pdf

CLIMATE CHANGE PLANS US
EPA ADAPTATION IMPLEMENTATION

On November 1, EPA released its draft Climate Change Adaptation Implementation Plans for public review and comment. The Implementation Plans provide detailed information about the actions EPA plans to take across the country to help communities adapt to a changing climate. The comment period on EPA's draft Climate Change Adaptation Implementation Plans closes on January 3, 2014.

The impacts of a changing climate – including increased extreme weather, floods, and droughts – affect EPA's work to protect clean air and water. The draft Climate Change Adaptation Implementation Plans recognize that EPA must integrate climate adaptation planning into its programs, policies, rules, and operations to ensure that the agency's work continues to be effective even as the climate changes.

EPA released its draft agency Climate Change Adaptation Plan on February 9, 2013 for public review and comment, and expects to issue the final version this Fall. In 2009, all federal agencies were required to develop Climate Change Adaptation Plans by the federal Interagency Climate Change Adaptation Task Force. Under Executive Order 13514, the Task Force was charged with developing recommendations for the President on how to increase the nation's resilience to climate change. The new Implementation Plans provide information about how EPA will meet the agency-wide priorities identified in the draft Climate Adaptation Plan released earlier this year.

For info: EPA's Climate Change Adaptation Implementation Plans at: http://epa.gov/climatechange/impacts-adaptation/fed-programs/EPA-impl-plans.html; info on EPA's draft Climate Change Adaptation Plan at: http://epa.gov/climatechange/impacts-adaptation/fed-programs.html; EPA's climate adaptation activities website at: www.epa.gov/climatechange/effects/adaptation.html

FRACKING BOOK US
ABA FRACKING ISSUES REFERENCE

In October, the American Bar Association (ABA) released a new book, *Beyond the Fracking Wars: A Guide for Lawyers, Public Officials, Planners and Citizens*. The book focuses on environmental, water, governmental, and labor issues presented by the shale industry across the country. According to ABA, *Beyond the Fracking Wars* provides an accessible and credible reference for lawyers, public officials, planners, and citizens. It avoids a "pro" or "anti" position and serves as a balanced resource on common issues associated with unconventional oil and gas exploration and development.

This timely reference book covers the technologies and regulatory framework governing oil and gas development via hydraulic fracturing; case studies exploring the hurdles, pitfalls, and opportunities for creative solutions; and innovative approaches to managing the impacts of the "shale gale," on both the regional and international level. A chapter on "Western Water Law" was contributed by Kevin Patrick of Patrick Miller Kropf & Noto and Laurie Stem.

For info: http://apps.americanbar.org/abastore/index.cfm?section=main&fm=Product.AddToCart&pid=5330228

HABITAT RESTORATION US
NOAA FUNDING

NOAA is awarding $36 million for more than 40 coastal habitat restoration projects across the US. These projects will restore up to 16,000 acres of habitat, and open nearly 400 stream miles for fish passage. They will benefit fish species like threatened populations of steelhead trout and salmon. Fish populations, especially migratory fish like salmon and steelhead, are limited by a lack of habitat. NOAA is working with partners to restore habitat for these fish by removing barriers to fish passage, reconnecting tidal flow, and improving in-stream conditions. These projects will also remove marine debris from fish habitat, and restore coral and oyster reefs.

In the Northwest Region, NOAA will help restore salmon habitat by reconnecting wetlands and stream channels to tidal flow. It will also address the impacts of marine debris on coastal habitat and wildlife. In the Southwest Region, NOAA plans to restore habitat for salmon and steelhead by removing barriers to fish passage and improving in-stream conditions. These projects address actions recommended in the recovery plans for Endangered Species Act-listed species. Projects in Hawai'i will also remove marine debris.

For info: NOAA website: www.habitat.noaa.gov/index.html

CALENDAR

November 13-14 CA
Negotiating Effective Environmental Agreements Workshop, Berkeley. UC Berkeley. Presented by CONCUR. For info: Megan Vinett, 510/ 649-8008, megan@concurinc.net or www.concurinc.com

November 13-14 WA
Salmon Recovery Science in Practice: Upper Columbia Science Conference, Wenatchee. Convention Ctr. Presented by the Upper Columbia Salmon Recovery Board. For info: www.ucscience.org/index.php?conference=2013conf&schedConf=2013conf

November 14 CA
Streambank Assessment & Restoration Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

November 14 WA
Green Meets Blue: Growth Management & Water Conference, Seattle. Seattle Central Library. Presented by Center for Environmental Law & Policy and Futurewise. For info: www.celp.org

November 14 CA
Integrated Regional Water Management Strategic Plan Workshops, Stockton. SJC Robert J. Cabral Agricultural Ctr. Presented by California Dept. of Water Resources. For info: CDWR, 855/ 397-4796, IRWM_StrategicPlan@water.ca.gov or www.water.ca.gov/irwm/stratplan/workshops.cfm

November 14-15 NV
Western Water Law Conference, Las Vegas. Bellagio Resort. For info: CLE Int'l, 800/ 873-7130 or www.cle.com/WesternWaterLaw

November 18 CA
San Joaquin Valley Groundwater Overdraft Conference, Tulare. World Ag Expo Ctr. Presented by American Grounwater Trust. For info: www.agwt.org/civicrm/event/info?id=156&reset=1#!

November 18 WA
Source Control: Environmental Cleanup & Water Quality Conference, Seattle. Washington State Convention Ctr. For info: Holly Duncan, 503/ 282-5220 or www.elecenter.com

November 18-19 AZ
Tribal Water in the Southwest Seminar, Scottsdale. Courtyard Scottsdale Salt River. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

November 19 AZ
Let's Talk Water: Focus on the Future Forum, Phoenix. Airport Marriott. Sponsored by Arizona Community Foundation. For info: http://morrisoninstitute.asu.edu/events/lets-talk-water-focus-on-the-future

November 19 CA
Legislating Environmental Law in California: A Behind the Scenes View (Speech), Davis. UC Davis, King Hall Rm. 2304. Presentation by Kip Lipper. For info: http://www.law.ucdavis.edu/centers/environmental/events.html

November 19-22 TX
Desert Technology 11 International Conference, San Antonio. Hilton Palacio Del Rio. For info: Valerie Weber, Texas A&M, VLWeber@ag.tamu.edu or https://agriliferegister.tamu.edu/dropinn/materials/material_399.pdf

November 20 CA
Integrated Regional Water Management Strategic Plan Workshops, Redding. Redding Veterans Hall. Presented by California Dept. of Water Resources. For info: CDWR, 855/ 397-4796, IRWM_StrategicPlan@water.ca.gov or www.water.ca.gov/irwm/stratplan/workshops.cfm

November 21-22 NM
58th Annual New Mexico Water Conference, Albuquerque. Embassy Suites. Presented by New Mexico Water Resources Research Institute. For info: http://2013.wrri.nmsu.edu/

November 21-22 ID
30th Annual Water Law & Resource Issues Seminar, Boise. The Riverside Hotel. Presented by Idaho Water Users Ass'n. For info: www.iwua.org

December 3-6 OR
OWRC 2013 Annual Conference, Hood River. Best Western Hood River Inn. Presented by Oregon Water Resources Congress. For info: April Snell, OWRC, 503/ 363-0121, aprils@owrc.org or www.owrc.org/calendaritem.php?i=51

December 3-6 TN
National Ground Water Ass'n Expo '13, Nashville. Music City Ctr. For info: http://groundwaterexpo.com/registration/

December 3-6 CA
Ass'n of California Water Agencies 2013 Fall Conference & Exhibition, Los Angeles. JW Marriott LA Live. For info: https://acwa.eventready.com/index.cfm?fuseaction=reg.info&event_id=1448

December 4 OR
Willamette River: Remediation & Restoration Conference, Portland. World Trade Ctr. Two, 25 S.W. Salmon. For info: Holly Duncan, 503/ 282-5220 or www.elecenter.com

December 4-6 TX
SPCC & Stormwater Conference, Austin. Embassy Suites - Austin Arboretum. For info: EPA Alliance Training Group, www.epaalliance.com/spcc&stormwaterdec13.html

December 4-6 TX
Texas Water Law Institute, Austin. Sheraton Hotel at the Capitol. Presented by UT Law CLE. For info: https://utcle.org/conferences/WL13

December 5 CA
Habitat Conservation Plan Implementation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/areas_of_study/

December 6 TN
Groundwater Sampling & Environmental Monitoring Conference, Nashville. Presented by National Ground Water Ass'n. For info: www.ngwa.org/Events-Education/shortcourses/Pages/297dec13.aspx

December 9-10 OR
Northwest Environmental Conference & Tradeshow, Portland. Red Lion Jantzen Beach. Presented by Northwest Environmental Business Council. For info: NEBC, 800/ 985-6322 or www.nebc.org

December 9-10 CA
Industrial Reuse Specialty Conference, Long Beach. Westin Hotel. Presented by WateReuse Ass'n. For info: www.watereuse.org/conferences/industrial-reuse

December 11-13 NV
Colorado River Water Users Ass'n 2013 Annual Conference, Las Vegas. Caesars Palace. For info: www.crwua.org/conferences/2013-conference

December 12-13 CA
CEQA Conference, San Francisco. Hotel Nikko. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

December 16-18 DC
Panel for the Review of the EPA Water Body Connectivity Report Meeting, Washington. Washington Plaza Hotel, 10 Thomas Circle, NW. For info: www.gpo.gov/fdsys/pkg/FR-2013-09-24/pdf/2013-23198.pdf

December 17 CA
Agricultural Drought Workshop, Fresno. Presented by California Dept. of Water Resources & the Center for Irrigation Technology. For info: Ted Thomas, DWR, 916/ 653-9712 or www.fresnostate.edu/jcast/cit/

December 17-18 CA
GIS for Watershed Analysis: Intermediate (Course), Davis. 1137 Lab, Plant & Environmental Sciences, UC Davis. For info: UC Davis Extension, http://extension.ucdavis.edu/

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

CALENDAR

(continued from previous page)

December 19-20 CA
GIS for Watershed Analysis: Advanced (Course), Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

January 8 OR
Air Quality & Climate Change Conference, Portland. World Trade Ctr. Two, 25 S.W. Salmon. For info: Holly Duncan, 503/ 282-5220 or www.elecenter.com

January 8-9 HI
Hawaii Agriculture Seminar, Honolulu. YMCA, 1040 Richards Street. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

January 8-10 Ecuador
International Perspective on Water Resources & the Environment Conference, Quito. Hilton Colon. Presented by Environmental & Water Resources Institute of the American Society of Civil Engineers. For info: http://content.asce.org/conferences/ipwe2014/index.html

January 9-10 TX
Texas Wetlands Conference, Austin. Omni Hotel at Southpart. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

January 10 WA
SEPA & NEPA Seminar, Seattle. Washington State Convention Ctr. For info: Law Seminars Int'l, 800/ 854-8009, registrar@lawseminars.com or www.lawseminars.com

January 18-19 CO
12th Annual Research & Management Conference: Riparian Restoration in the Western US, Grand Junction. Colorado Mesa University. Presented by Tamarisk Coalition. For info: www.tamariskcoalition.org/programs/conferences/2014

January 21-23 LA
2014 UIC Annual Conference, New Orleans. Hotel Monteleone. Presented by Ground Water Protection Council. For info: http://gwpc.site-ym.com/events/event_details.asp?id=361226

January 23-24 CA
Building a Water & Energy Efficient California - 2014 California Irrigation Institute Conference, Sacramento. Arden West Hilton. For info: www.caii.org/

January 25 CA
California Water Law Symposium, San Francisco. For info: Vincent Lu, waterlawteam@gmail.com or www.waterlawsymposium.com/

January 28-31 GA
The Environmental Bootcamp, Atlanta. DoubleTree Atlanta Buckhead. For info: www.epaalliance.com/environmentalbootcamp-jan14.html

January 29-31 CO
Colorado Water Congress Annual Convention, Denver. Hyatt DTC. For info: www.cowatercongress.org/cwc_events/Annual_Convention.aspx

January 30 CA
Water Technology Conference: Water & Energy, La Verne. University of La Verne. For info: http://laverne.edu/waterconference2014/

January 31 CA
Environmental Law Update Conference, San Francisco. Hotel Nikko. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

February 3-7 WA
13th Annual Stream Restoration Symposium, Stevenson. Skamania Lodge. Presented by River Restoration Northwest. For info: www.rrnw.org/Home