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INTERSTATE WATER COMPACTS

THE US SUPREME COURT'S TARRANT DECISION AND THE RISK OF SILENCE

by Steven Richardson, Wiley Rein LLP (Washington, DC)

INTRODUCTION

On June 13, 2013, the Supreme Court of the United States announced its unanimous decision in *Tarrant Regional Water District v. Herrmann et al.*, 133 S. Ct. 2120 (2013)("*Tarrant*"). The Court held that the congressionally-sanctioned Red River Compact, which allocates water rights within the Red River Basin, does not allow Tarrant Regional Water District (Tarrant) to enter Oklahoma to divert water for its 1.7 million customers in the North Central Texas area.

A Supreme Court construction of an interstate water Compact under dispute is always of great interest to all professionals in the water field. Such cases usually occur in response to a petition to apportion interstate waters pursuant to the Court's grant of original jurisdiction over interstate water conflicts (as included the US Constitution). These rulings are typically based on review of a report and recommendations from a special master appointed by the Court to initially hear the case.

Of particular interest in *Tarrant* is the fact that it arose from a petition for a writ of certiorari (request for hearing) to the Supreme Court. Where a writ of certiorari is the vehicle of appeal, the Court has much more under review, including here: the Tenth Circuit Court of Appeals decision; the original federal district court's decision that was appealed; and the complete record from both those courts.

Absent an agreement among States via a Compact, disputes over the interstate allocation of water are subject to "equitable apportionment" by the Court. *Arizona v. California*, 460 U. S. 605, 609 (1983). In *Tarrant,* by contrast, there was a Compact agreed to by the States, but disagreement over the meaning of some of the Compact's provisions.

BACKGROUND

The Red River's watershed covers approximately 65,000 square miles. It is one of the southernmost major tributaries of the Mississippi River. The Red River's drainage basin is mostly in the States of Texas and Oklahoma, but also covers parts of Arkansas and Louisiana. Most of the basin is relatively flat, fertile agricultural land with few major urban areas. The basin is arid and receives low levels of annual precipitation. As a result, the flow above the Texas-Oklahoma border is intermittent, and flow varies widely in lower reaches.

Congress authorized the Red River Compact (Compact) in 1955 — in part to avoid water disputes between the States of Arkansas, Louisiana, Oklahoma, and Texas. The four States signed the Compact in 1978; it was approved by the US Congress in 1980; and the parties have since relied on the Red River Compact Commission (Commission)

Tarrant Decision

Compact Purposes

to work through issues and problems and to reduce litigation. The Commission is composed of nine commissioners: two from each member state and one federal representative appointed by the US President. Over the years, the Commission has successfully addressed problems of water quality and pollution in addition to questions of water quantity.

According to article 1 of the compact, its principal purposes are:

- To promote interstate comity and remove causes of controversy between each of the affected States by governing the use, control, and distribution of the interstate water of the Red River and its tributaries;
- To provide an equitable apportionment among the Signatory States of the water of the Red River and its tributaries;
- To promote an active program for the control and alleviation of natural deterioration and pollution of the water of the Red River Basin, and to provide for enforcement of the laws related thereto;
- To provide the means for an active program for the conservation of water, protection of lives and property from floods, improvement of water quality, development of navigation and regulation of flows in the Red River Basin; and
- To provide a basis for state or joint state planning and action by ascertaining and identifying each state's share in the interstate water of the Red River Basin, and the apportionment thereof.

Preventing Litigation

The Commission asserts "that while provisions of the Red River Compact specifically state how much water each signatory state is allowed to develop or store on an interstate stream, the Compact generally provides a means of working out problems between member states in an orderly manner, thus preventing the likelihood of litigation in most cases." (*See* Red River Compact Commission's home page at: www.owrb.ok.gov/rrccommission/rrccommission.html). Clearly, the dispute between Texas and Oklahoma in *Tarrant* was not worked out and litigation could not be avoided.

Litigation Focus

The Compact divided its geographic area into five separate subdivisions called "Reaches" (*see* Figure 1). Each of the five Reaches were further divided into smaller subbasins. The disputed water rights in *Tarrant* were rights under the Compact to water located in Oklahoma's portion of Reach II, subbasin 5 (*see* Figure 2). The focus of the litigation was Section 5.05(b)(1) of the Compact — this section gives the four States "equal rights" to the use of subbasin 5's waters when the flow is 3,000 cubic feet per second or more "provided no state is entitled to more than twenty-five percent (25%) of the water in excess of 3,000 cubic feet per second."

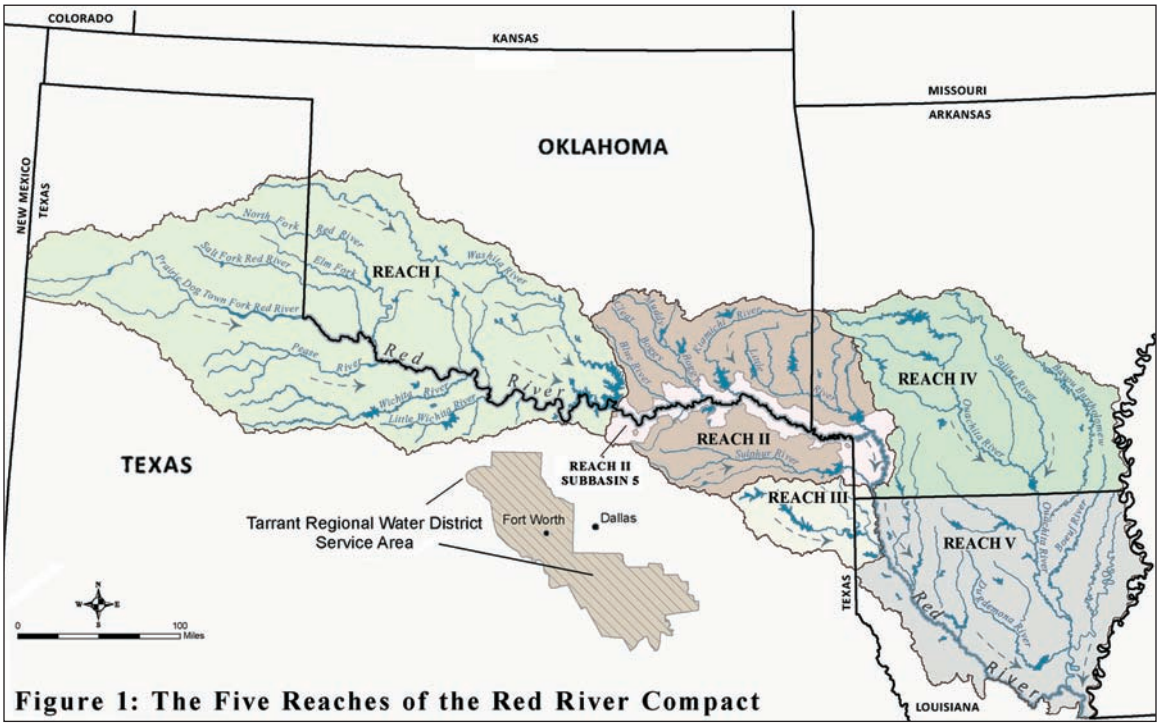

Figure 1: The Five Reaches of the Red River Compact

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Tarrant Decision

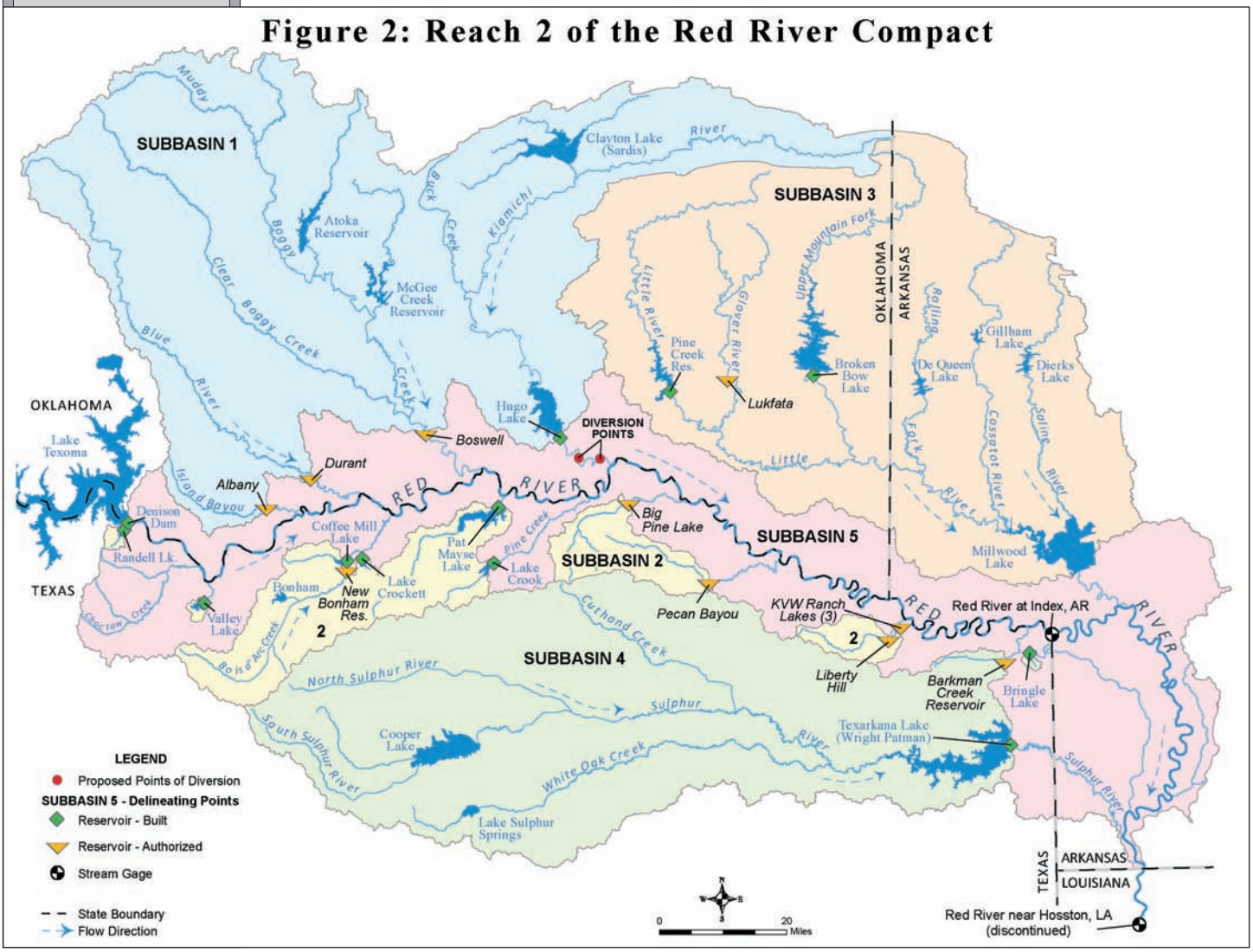
Past Conflicts

Underlying Facts

As the Court noted, the Red River has been the subject of many historical conflicts between Texas and Oklahoma. At one time, things got so heated that the States mobilized their militias. Later — in the "Red River Bridge War" — Oklahoma Governor "Alfalfa Bill" Murray declared "martial law" along a stretch of the River. The Court described such disputes over the river and its waters as "a natural result of the river's distribution of water flows." Given the meander of the River's course, the Court noted that "upstream States like Oklahoma and Texas may appropriate substantial amounts of water from both the River and its tributaries to the disadvantage of downstream States like Arkansas and especially Louisiana, which lacks sufficiently large reservoirs to store water." *Tarrant* at 2126.

In the years since the Compact was ratified by Congress, competition for the River's water has increased dramatically as the region's population increased. While growth has strained regional water supplies, years of a long and costly drought have hit north Texas hard and exacerbated its need for water and new water supplies. Tarrant is the Texas state agency responsible for providing water to North Central Texas (including the cities of Fort Worth, Arlington, and Mansfield). Tarrant has made numerous attempts to secure new sources of water for its service area. Beginning in 2000, Tarrant, along with several other Texas water districts, offered to purchase water from Oklahoma and the Choctaw and Chickasaw Nations. When the negotiations failed, however, Tarrant abandoned the effort. With its water needs unmet and growing, Tarrant "settled on a new course of action." *Id.* at 2129. In 2007, Tarrant filed an application for a water resource permit from the Oklahoma Water Resources Board (OWRB) to take 310,000 acre-feet per year of surface water from the Kiamichi River, a tributary of the Red River located in Oklahoma. Tarrant proposed to divert from the Kiamichi River, at a point located in subbasin 5 of Reach II, before it discharges into the Red River and, according to Tarrant, becomes too saline for potable use.

Figure 2: Reach 2 of the Red River Compact



Tarrant Decision

From the outset, Tarrant understood that OWRD would likely deny its permits because several provisions of the Oklahoma water statutes effectively prevent out-of-state applicants from taking or diverting water from within Oklahoma's borders.

Out-of-State Diversion Requirements

Among other things, Oklahoma law requires that:

- OWRB consider, when evaluating an application to take water out of state, whether that water "could feasibly be transported to alleviate water shortages in the State of Oklahoma." Okla. Stat. tit. 82, §105.12(A)(5).
- No permit issued by the OWRB to use water outside of the State shall "[i]mpair the ability of the State of Oklahoma to meet its obligations under any interstate stream compact." §105.12A(B)(1).
- A permitting review process applies only to out-of-state water users. §105.12(F).
- Legislative approval for out-of-state water-use permits be obtained, §105.12A(D), and further provides that "[w]ater use within Oklahoma...be developed to the maximum extent feasible for the benefit of Oklahoma so that out-of-state downstream users will not acquire vested rights therein to the detriment of the citizens of this state," §1086.1(A)(3).

Assessing Oklahoma's water law, as applied to this dispute, the Oklahoma attorney general concluded that "we consider the proposition unrealistic that an out-of-state user is a proper permit applicant before the [OWRB]" because "[w]e can find no intention to create the possibility that such a valuable resource as water may become bound, without compensation, to use by an out-of-state user." *Id*. at 2130; Court citing to 1 *App*. 118.

Tarrant's Lawsuit

After unsuccessfully attempting to purchase water from Oklahoma and other sources — and knowing that OWRB would likely deny its permit application because of Oklahoma's water laws that effectively prevent out-of-state applicants from taking or diverting water from within Oklahoma's borders — Tarrant filed suit in federal court simultaneously with its permit application. The lawsuit sought to enjoin OWRB's enforcement of the state statutes on grounds that they were pre-empted by federal law in the form of the Compact and violated the dormant Commerce Clause by discriminating against interstate commerce in water. The federal district court granted summary judgment for OWRB, and the Tenth Circuit affirmed. *Tarrant Regional Water District v. Herrmann et al*., 656 F.3d 1222 (10th Cir. 2011).

THE DECISION

Compact "Silence" on Border Crossing

Writing for the Supreme Court (Court), Justice Sonya Sotomayor's opinion focuses on the meaning of a provision of the Compact that gives each of the signatory States (i.e., Arkansas and Louisiana, as well as Oklahoma and Texas) "equal rights" to certain excess water in one subbasin of the river (subbasin 5), provided no state was entitled to more than 25%. Tarrant argued that the Compact's "equal rights" provisions entitled it to access and divert the water even outside of Texas. Further, Tarrant argued that the "silence" of the Compact about crossing borders indicates that the Compact's drafters did not intend to allocate water according to state borders. OWRB, on the other hand, argued that "equal rights" afford each State an equal opportunity to use subbasin 5's excess water within each State's own borders, but that the Compact's silence on cross-border rights indicates that the Compact's drafters had no intention to create cross-border rights for the signatory States. The Court held that the Compact does not pre-empt the Oklahoma water statutes and Tarrant could not enter Oklahoma without Oklahoma's consent to divert water in Oklahoma.

Contract Law Principles

The Court explained that since interstate compacts are construed under contract law principles, it viewed the Compact's express terms as the best indication of the parties' intent. The Court, though, found that the "silence" in the critical Compact section regarding cross-border rights was ambiguous (*see* Compact §5.05(b)(1)). Due to this ambiguity, the Court turned to other interpretive tools to shed light on the drafters' intent. In the end, the Court concluded that the Compact did not grant cross-border rights because, among other things, it found: States do not easily cede their sovereign powers; other interstate water compacts have treated cross-border rights explicitly; and the parties' course of dealing indicated otherwise.

Sovereign Powers, Compacts and Course of Dealing

States' Powers

Tarrant made a complex set of arguments about sovereign powers. First, it argued that §5.05(b)(1)'s silence on State boundaries in the allocation of water under the Compact suggested that borders were irrelevant for that allocation. But Tarrant also contended that its "interpretation would not intrude on any sovereign prerogative of Oklahoma, which would retain its authority to regulate the water within its borders." *Id.* at 2124. The Court disagreed. With regard to the silence argument, the Court found, "But since States rarely relinquish their sovereign powers, the better understanding is that there would be a clear indication of such devolution, not inscrutable silence." *Id.* The Court rejected Tarrant's argument to have it both ways on sovereignty, holding that adopting Tarrant's argument "would necessarily entail assuming that Oklahoma and three other States silently surrendered substantial control over their waters when they agreed to the Compact." *Id.*

Intent

Rejecting Tarrant's reading of the Compact's silence, the Court examined the "customary practices employed in other interstate compacts" to help determine "the parties' intent." *Id.* at 2134. In sharp

Tarrant Decision

Compact Comparisons

contrast to the Red River Compact, the Court found that "[m]any compacts feature unambiguous language permitting signatory States to cross each other's borders to fulfill obligations under the compacts." *Id.* The Court pointed out that many compacts provide for the terms and mechanics of how such cross-border relationships will operate, including who can assert such cross-border rights. It cited the Kansas-Nebraska Big Blue River Compact, the Belle Fourche River Compact, and the Arkansas River Basin Compact between Kansas and Oklahoma as examples that do so. Noting that the "absence of comparable provisions in the Red River Compact strongly suggests that cross-border rights were never intended to be part of the agreement," the Court noted that while Tarrant claimed that not all interstate compacts contain explicit language, it cited "only one such compact, and even it sets out a detailed scheme that would apply to any contemplated diversions." *Id.* at 2124-2125.

Parties' Past Conduct

In its last reference to resolve the ambiguity of the Compact's silence, the Court looked at the "parties' conduct under the Compact" and found that it undermined Tarrant's legal arguments. For example, the Court noted that "no signatory State pressed for a cross-border diversion until Tarrant filed suit in 2007." *Id.* at 2125. Moreover, the Court found that Tarrant's offer to purchase water from Oklahoma was a "strange decision if Tarrant believed the Compact entitled it to demand water without payment." *Id.* Indeed, if Tarrant really believed its arguments that it had a right to water located in Oklahoma, there would have been "compelling business reasons" to discuss the right "given that billions of dollars were at stake." *Id.* at 2136.

Dormant Commerce Clause

Unallocated Water

Finally, the Court quickly disposed of Tarrant's constitutional challenge to Oklahoma water statutes under a dormant Commerce Clause theory. Tarrant claimed that the Oklahoma statutes discriminate against interstate commerce by preventing water left unallocated under the Compact from being distributed out of state. The Court found, however, that: "Tarrant's assumption that the Compact leaves some water 'unallocated' is incorrect." *Id.* at 2137. The Court found that the Oklahoma water statutes cannot discriminate against interstate commerce with respect to unallocated waters, because the Compact itself left no waters unallocated.

Call for Accounting

In support of its conclusion, the Court noted that Tarrant's argument "is premised on the position that if we 'adopt the Tenth Circuit's or respondent's interpretation [of the Compact]...a substantial amount of Reach II, Subbasin 5 water located in Oklahoma is not apportioned to *any* State and therefore is available to permit applicants like Tarrant.'" *Id.* (emphasis added). Rejecting Tarrant's argument, the Court provided its view of the "allocation" question. "If more than 25 percent of subbasin 5's water is located in Oklahoma, that water is not 'unallocated'; rather, it is allocated to Oklahoma unless and until another State calls for an accounting [under the Red River Compact] and Oklahoma is asked to refrain from utilizing more than its entitled share." *Id.* at 2138.

For additional information on the Court's dormant Commerce Clause discussion, *see* Moon, *TWR* #113 (July 15, 2013).

TARRANT DECISION IMPLICATIONS

Limited Issue

Despite its subject matter and interest to the natural resources and water bars, some critics have questioned whether the decision affirming the judgments reached below by the federal district court and the Tenth Circuit — on a matter that concerns only one clause of an interstate compact allocating water in the river dividing Texas and Oklahoma — was worthy of the Supreme Court's time and attention. For example, despite broad agreement that Justice Sotomayor's opinion is better organized and more persuasive than that of the Tenth Circuit, the opinion contains only a few minor points about interpretation, making no change in the law as it existed when the Court agreed to grant review. However, a strong argument can be made that the dispute was worthy of being one of the 79 cases before the Court in it's October 2012 term. Water disputes are on the rise, as are settlements and compacts to allocate water. This unanimous opinion helps to instruct those efforts.

State Control

To many in the arid West, including readers of *The Water Report*, the case may offer broader meaning. For example, many State and local officials would be alarmed that any State could argue that it was entitled to enter another State to take water without that State's consent. Similarly, arguments concerning the Commerce Clause and constitutionality of State water laws bear attention. Justice Sotomayor was not distracted by the "silence" about whether cross-border diversions were permitted by the Compact.

Contract Law

Moreover, her able sorting of arguments as to the correct interpretation of that silence makes sense and adds to the view and standing of existing compacts. For example, it is helpful to remember the Court's admonition that such agreements will be construed under contract law principles. In all, the opinion is an important message to those parties considering or negotiating new agreements or managing existing compacts.

Statutory Construction

One object lesson for future negotiations is to assess Tarrant's reliance on a standard rule of statutory construction: the expressio unius canon — i.e., when one or more things of a class are expressly mentioned others of the same class are excluded. Under this legal canon, Tarrant suggested because one section of the Compact provided that "Texas and Louisiana within their respective boundaries shall each have

Tarrant Decision

Consistency

Commerce Clause

Steven Richardson's practice reflects 20 years' experience in key staff roles on Capitol Hill and at the US Department of Interior and over a decade in private law practice. He focuses on regulation, public policy, and litigation in complex, high-profile matters involving water, wetlands, hydroelectric, land, energy, and environmental law. Mr. Richardson has extraordinary experience in successfully resolving complex water quality and allocation disputes and is a leader in helping companies site electric generation facilities and transmission lines. He has unique expertise in promoting and defending projects in environmentally-sensitive locations and fast-growing urban areas. Mr. Richardson also represents clients in "green building" and related energy efficiency issues and in defending against challenges under the National Environmental Policy Act (NEPA). He regularly writes and speaks on the legal, environmental, and social barriers to obtaining authority for new generation and transmission facilities.

the unrestricted use of the water of this subbasin..." the provision should be effectively read into other sections that were silent in this regard. *Id.* at 2132. But the Court disagreed — it limited the impact of the "within their respective boundaries" language by illustrating how expansive use of the term could frustrate the purposes of several other sections of the Compact. The Court held that Tarrant's argument was not persuasive when it "fails to account for other sections of the Compact that cut against its reading." *Id.* The demand for consistency in drafting complex agreements in water management situations is a fact of life. It is not unusual for deliberations on a single section of a compact or complex water agreement to take months or years to resolve. Moreover, any dispute over the language will occur months or years after the deal is closed and often is handled by principals who were not present at the negotiating table. As new agreements and settlements develop in many Western basins and as shortages intensify in the Eastern States, the urgency to develop new compacts to allocate water, prepare for shortages, and limit the reach and cost of litigation will only grow. As those new agreements and settlements develop, Justice Sotomayor's careful scholarship should be recalled, and those around the table should be cautioned to be careful what you ask for and carefully review what you get.

While the Court firmly rejected Tarrant's dormant Commerce Clause claim, it did so by finding that there was no unallocated water in Oklahoma. This resolution dodged a more difficult dormant Commerce Clause claim that Oklahoma was discriminating against interstate sources through differential treatment of in-state and out-of-state economic interests in a way that benefited Oklahomans and burdened Texans. In footnote 11, the Court points out that the power of States to control water within their borders may be subject to limits in certain circumstances, including those imposed by the Commerce Clause (citing *Sporhase v. Nebraska ex rel. Douglas*, 458 U. S. 941, 954-958 (1982); Id. at 2134). The Court then highlighted precisely how limited their review was: "Here we deal only with whether the parties' silence on state boundaries in the allocation of water under a compact suggests that borders are irrelevant for that allocation." *Id*. at 2134-2135. Footnote 11 also pointed out that Tarrant did not raise any Commerce Clause challenge to Oklahoma's control of the water allocated to it by the Compact. *Id*. at 2135.

Two other footnotes in the case merit study. First, in footnote 8, the Court opines that once a compact is approved by Congress, it is "transform[ed] ...into a law of the United States" and becomes federal law preempting any state law that conflicts with the Compact. *Id.* at 2131. This view of the Supremacy Clause ensures that compacts will be enforceable as federal law and the federal law will control over State law in any conflicts of laws. This is significant for future compact negotiators to consider. To be enforceable, the parties will want to develop and obtain a congressionally approved compact, but once that new federal law preempts existing state laws that conflict with the compact under the Supremacy Clause, the parties may be forced to deal with unintended consequences. Second, the Court states in footnote 10, that despite the Tenth Circuit's contention to the contrary, the presumption against preemption of State laws does not apply to interstate compacts, because "the States themselves have drafted and agreed to the terms" of the compact. *Id* at 2133. This is also an important note for the State parties in future negotiations when they draft or agree to terms in a new compact.

SUMMARY

Water disputes between States and users groups have long been common in the arid West. The landmark 1922 Colorado River Compact divided the water of our most disputed river among seven States in the most arid region of the country. The wrangling continues between basins even as *Arizona v. California*, 373 U.S. 546 (1963) continues to be updated and governs the "law" of that river. As in the Texas and Oklahoma dispute, increased population and more competition for scarce water resources have fueled conflicts and contests between Eastern States, including: Maryland and Virginia, fighting over access to the Potomac under a treaty between the States that was ratified under the Articles of Confederation; South Carolina fighting with North Carolina over the Pee Dee River, and with Georgia over the Savannah River; and the intense clash between Alabama, Florida, and Georgia over the waters of the Apalachicola-Chattahoochee-Flint river basin.

As the climate changes, water disputes and calls for changes to or solutions from water law may become even more frequent. In *Tarrant*, the Supreme Court found that a Texas water district was free to take up to 25% of the excess water in a Compact subbasin from inside Texas — if it could find that much — and it could demand an accounting if it thought Oklahoma was diverting more than 25%. But Texas could not enter Oklahoma without Oklahoma's consent to divert water in Oklahoma. Hopefully the practical lessons of this dispute will prepare us more fully to meet those challenges.

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Tarrant decision available at: www.supremecourt.gov/opinions/slipopinions.aspx

INSTREAM FLOWS DECISION IN WASHINGTON

PROTECTION FROM IMPAIRMENT — RESERVED USE RULE INVALID

by David Moon, Editor

Instream Decision

Reallocating Water

Adequate Instream Flow

Priority System

Rule Challenge & Settlement

Water Reservation

"OCPI"

Amendment Effects

INTRODUCTION

On October 3, 2013, the Supreme Court of the State of Washington (Court) issued an important 6-3 decision in *Swinomish Indian Tribal Community v. Washington State Department of Ecology*, No. 87672-0 (October 3, 2013), holding that a Washington State Department of Ecology (Ecology) rule amendment reserving water in the Skagit River Basin for future out-of-stream uses is invalid due to its adverse impact on existing minimum instream flows. The Court decided that the amended rule exceeded Ecology's authority to reallocate water for new beneficial uses because Washington State's statutory exception for overriding considerations of public interest "is very narrow…and requires extraordinary circumstances before the minimum flow water right can be impaired." *Slip Op*. at 2. The Court overturned the superior court's decision, which had upheld the amended rule.

BACKGROUND

Ecology is required by State law to retain adequate amounts of water in streams to protect and preserve instream resources and uses (such as fish, wildlife, recreation, aesthetics, water quality and navigation). To that end, Ecology is setting specific stream flow amounts — called "instream flows" — on a basin-by-basin basis throughout the State.

Minimum instream flows for the Skagit River Basin were established in the Skagit River Basin Instream Flow Rule in March of 2001 (2001 Instream Flow Rule — *see* chapter 173-503 WAC). As noted by the Court, under this rule "water for new uses is subject to being shut off when stream flows fall to or below the minimums established by rule, in accord with general water law." *Id*. at 2. Skagit County and others opposed that rule, arguing that "it would effectively prevent new development that requires noninterruptible water the entire year… ." *Id*. at 3.

Under Western water law's Doctrine of Prior Appropriation, water is allocated in accordance with a priority system based on the date a right to use the water was officially claimed or first put to beneficial use, with earlier, more "senior" water rights having priority and later, more "junior" rights at more risk of being curtailed or cut-off when water is scarce. In Washington, however, the holder of a "noninterruptible" water right is allowed to continue use of water even where a senior right exists that would normally have to be satisfied. Without a reservation of a noninterruptible water right, however, junior water users (with later priority dates) are subject to the usual water law provisions and can be interrupted when dry spells impact the protected stream flows.

Skagit County sued Ecology and challenged the 2001 Instream Flow Rule under Washington State's Administrative Procedure Act. Ecology commenced rulemaking to try to find a compromise on the matter. Eventually, Skagit County and Ecology entered into a settlement agreement and, on the same day settlement was reached (May 15, 2006), Ecology issued its rule amending the 2001 Instream Flow Rule — which included reserving water for future uses.

Water reservations provide a way for Ecology to appropriate (grant) water rights for future beneficial uses. The Court found that Ecology's amended rule reserved water "from the Skagit River system for future year-round out-of-stream uses, despite the fact that in times of low stream flows those uses would impair established minimum instream flows necessary for fish, wildlife, recreation, navigation, scenic and aesthetic values." *Id*. at 1. Ecology relied on a statute (RCW 90.54.020(3)(a)) for the authority to allocate water for future uses, even though established minimum flows would be impacted. As the Court noted, "This statutory provision allows impairment of stream base flows when overriding considerations of public interest are served." *Id*.

The machinations described above may be confusing to readers who are unfamiliar withWashington State's statute (RCW 90.54.020(3)(a)) regarding the fundamentals for utilization and management of waters of the state, which contains the exception for "**o**verriding **c**onsiderations of **p**ublic **i**nterest" (OCPI). An explanation of what Ecology's reservation of water meant as a practical matter was provided by the Court. "Nevertheless, Ecology's 'test' [under OCPI] results in water being set aside for specified beneficial uses in the future, when those seeking to use water that has been reserved can apply for a permit to beneficially use the public waters embodied in the reservation. RCW 90.03.345. Because the water is already reserved, the applicant will not be barred from using the water on the ground that water is unavailable. In addition, impairment of existing rights will not be a bar under Ecology's test because the determination was already made that impairment of existing minimum flow water rights is justified under the overriding-considerations exception." *Id*. at 16.

Instream Decision

The Swinomish Indian Tribal Community (Swinomish Tribe) challenged the establishment of the reservations in 2008 and appealed a Thurston County Superior Court finding in Ecology's favor in 2010.

SUPREME COURT'S DECISION

The Court first described the affect of the reservation under the amended rule and then Ecology's justification for allowing the exception. "The water for the new uses would not be subject to shut off during periods when the minimum flows set in the 2001 Instream Flow Rule are not met, usually in late summer and early fall. Ecology says that the amount of water reserved is a very low percentage of the total flow during low flow periods and biologists from Ecology and the Department of Fish and Wildlife found that the amount of water reserved is less than an amount that would have significant impacts on fish populations in the river system." *Id.* at 3-4.

Ecology's Justification

Status of Instream Flows

The underlying rationale of the Court's decision is based on the status of minimum instream flows as a right equal with all other water rights in Washington. "Under the state water code, minimum flows and levels established by administrative rules, including the 2001 Instream Flow Rule, are appropriations of water with priority dates of the rules' adoption, and therefore water necessary to meet established minimum flows and levels is unavailable for appropriation to other uses. Further, withdrawal of water necessary to maintain minimum flows impairs an existing water right, contrary to law." *Id.* at 4.

Equal Rights

"Public Interest" - Overriding Considerations Exception

The Court set forth the basic issue of the case and Ecology's position concerning the withdrawal of base flows: "The water code also directs that base flows be retained in rivers and streams sufficient for preservation of fish, wildlife, scenic, aesthetic and other environmental values, and navigation. However, withdrawal of water that conflicts with base flows may occur under an exception that applies 'where it is clear that overriding considerations of the public interest will be served.' RCW 90.54.020(3)(a). Ecology relied on this exception for its authority to promulgate the Amended Rule." *Id.*

OCPI Application

Near the beginning of the opinion, the Court clarified potential confusion between "base flows" and "mininum flows" noting that "the exception at issue is found in a provision calling for retention of 'base flows,' and the issue here is whether this exception applies to 'minimum flows' established for streams in the Skagit River basin. Although the term 'minimum flow' does not appear in RCW 90.54.020(3)(a), we have already determined that the overriding-considerations exception is applicable to minimum flows. *Postema v. Pollution Control Hr 'gs Bd.*, 142 Wn.2d 68, 81, 11 P .3d 726 (2000)." *Id.* at 6.

Minimum Flows

The crux of the decision is the interpretation of this "public interest" exception (OCPI), which allows for the withdrawal of base flows when the future use occurs. Ecology engaged in a balancing test of the "overriding considerations" — that it devised without citing any guiding rule or policy — to arrive at its decision creating the reservations of water. "Ecology found that important public interests would be significantly advanced by the reservations because without them new withdrawals for domestic, municipal, industrial, agricultural, and stock watering uses would be interrupted when stream flows fall to the minimums established under the 2001 Instream Flow Rule; new sources of water were otherwise unavailable through most of the basin as a practical matter; and economic productivity would be gained. [Footnote 3: Ecology's economists estimated gained economic productivity of $32.9 million to $55.9 million over 20 years.] Ecology then found that the impact on aquatic resources and recreational uses would be small, without significant harm to fish and wildlife, and would result in what Ecology calls a small monetary loss to fisheries. Ecology concluded that the former benefits clearly override the latter potential harms. [Footnote 4: Ecology estimated a monetary value of this loss at $5.3 million over 20 years.]" *Id.* at 4-5.

Balancing Test

Minimum Flow Water Rights and the Exception

The Court cited a previous decision to confirm that the minimum flows set by the 2001 Instream Flow Rule were existing water rights under Washington law, with the protection against subsequent diversions. "Here, as discussed in *Postema*, a minimum flow set by rule is an existing water right that may not be impaired by subsequent withdrawal or diversion of water from a river or stream. The exception in RCW 90.54.020(3)(a) is a narrow exception, not a device for wide-ranging reweighing or reallocation of water through water reservations for numerous future beneficial uses." *Id.* at 12.

Narrow Exception

Plain Language of the Exception: Public v. Private Interests

The Court flatly rejected Ecology's interpretation of the "overriding consideration" statute based on the legal principle that a statute's meaning should be based on its plain language. "Ecology's interpretation of the statute is not consistent with the statute and must be rejected. First, as the Tribe maintains, Ecology's balancing test treats beneficial uses of water as serving an overriding consideration of the public interest so long as total benefits from all beneficial uses outweigh the harm resulting from impairing the instream flows. But the statute does not use the term 'beneficial uses' and it does not treat every potential beneficial use as serving the public, as opposed to a private, interest." *Id.* at 13.

Public Interests & Private Interests

Instream Decision

Exempt Wells

Exempt Wells: Population Growth v. Value of Instream Resources

The case also involved questions surrounding the use of "exempt wells" — new wells that are exempt from permitting requirements — since Ecology had included future use of such wells as part of its balancing test. "Moreover, Ecology's use of its balancing test to determine when the overriding considerations exception will justify reservations of water for exempt domestic wells is not consistent with the statutory requirement of an 'overriding' consideration. There is no question that continuing population growth is a certainty and limited water availability is a certainty. Under the balancing test, the need for potable water for rural homes is virtually assured of prevailing over environmental values. But the Water Resources Act of 1971, discussed below, explicitly contemplates the value of instream resources for future populations… ." *Id.* at 14.

Exception v. Reallocation

The Court also believed that Ecology's test was inherently biased and not narrowly construed. "Ecology's test is insufficient to identify 'overriding' considerations of public interest while giving effect to legislative intent that water for population growth would not trump domestic water needs in every instance and every area in the state where rural development is thought to be desirable. In addition, Ecology's interpretation does not accord with the principle that as an exception, RCW 90.54.020(3)(a) must be narrowly construed. Rather, Ecology appears to use it as a way to reallocate water supply and priority of rights. Nothing in the limited number of words in the exception can be said to grant such expansive power." *Id.* at 14-15. This finding lays out the distinction between *reallocation* of water — essentially taking away existing water rights in favor of future uses — and highlights the fact that the Court clearly views reallocation as an expansive power as opposed to a limited one.

Broad Authority Rejected

The Court held that "Ecology has erroneously interpreted the statutory exception as broad authority to reallocate water for new beneficial uses when the requirements for appropriating water for these uses otherwise cannot be met." *Id.* at 1-2. As noted above, the Court decided that the OCPI exception was very narrow, requiring extraordinary circumstances and therefore, the amended rule reserving the water was invalid under the State's Administrative Procedure Act (chapter 34.05 RCW).

Prior Appropriation Doctrine and the Aggregation of Uses

Benefits Analysis

Granting broad authority to Ecology under the OCPI exception also ran afoul of the fundamental principles of the Prior Appropriation Doctrine, according to the Court: "But Ecology not only uses the overriding-considerations exception as a broad grant of authority to reallocate water committed to existing minimum flow water rights when an appropriation could not be granted under RCW 90.03.290(3), Ecology goes much further. Ecology reasons that (1) allowing new uses that otherwise would not be allowed because of lack of available water and (2) impairing existing rights so that year-round water may be obtained are 'benefits' to be weighed in favor of the reservations of water that impair the existing minimum flow rights. In other words, Ecology uses the *very same reasons* why an application to appropriate water would have to be denied under RCW 90.03.290, lack of available water and impairment of existing rights, as reasons why the overriding-consideration exception of RCW 90.54.020(3)(a) applies. Needless to say, this is a strained, unlikely interpretation of the overriding considerations exception. *Densley* 162 Wn.2d at 23 3 (court avoids a strained, unlikely interpretation of a statutory provision)." *Id.* at 17 (emphasis in the original).

"End Run" Rejected

The Court reiterated its rationale that the exception statute cannot be used to obtain water while ignoring the Prior Appropriation Doctrine. "Nothing in the language used in RCW 90.54.020(3)(a) says that the overriding-considerations exception is intended as an alternative method for appropriating water when the requirements of RCW 90.03.290(3) cannot be satisfied for the proposed appropriation. This end-run around the normal appropriation process does not accord with the prior appropriation doctrine and the detailed statutes implementing the doctrine." *Id.* at 17. The Court's reference is to the fact that the reservations granted by Ecology for year-round rights would unquestionably impair the existing minimum flow rights, typically resulting in denial of those rights for at least part of the year.

Aggregation of Benefits

Another problem the Court had with the balancing test was that Ecology aggregated the potential future rights and arrived at an accumulation of benefits on that basis. "In addition, Ecology's aggregation of uses is also inconsistent with the prior appropriation scheme. Ecology aggregates the proposed uses to which the reserved water will be put and then concludes the overriding-considerations exception applies to permit impairment of the minimum flow rights by all of the future uses. When an application to appropriate water is made and impairment to existing rights is considered, 'RCW 90.03.290 does not…differentiate between impairment of existing rights based on whether the impairment is de minimis or significant. If withdrawal would impair existing rights, the statute provides the application must be denied.'" *Id.* at 17-18 (citing *Postema* at 90).

Prior Appropriation's Paramount Rule

"First in time, first in right" is the simple bedrock principle of the Prior Appropriation Doctrine. The Court laid to rest any doubt about its view of the importance of this feature. "Further, Ecology's view that future uses may be aggregated for purpose of the overriding-considerations exception is contrary to the basic principle of the prior appropriation doctrine that the first in time is the first in right. This 'paramount

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Doctrine for Shortages

Legislative Intent

Protection From Impairment

Reallocation Rejected

Economic Gain v. Instream Values

Rejected Test

rule' of the doctrine means that " '[t]he first appropriator is entitled to the quantity of water appropriated by him, to the *exclusion of subsequent claimants*.' " The prior appropriation doctrine and the first in time first in right priority principle are founded on the idea that at some point the water in a stream or lake will be insufficient to satisfy all potential users, and that the rights of those who have already appropriated water to a beneficial use will be superior to any later appropriators." *Id.* at 18-19 (citations omitted).

Minimum Flow Water Rights: Core Value

Legislative intent also came into play in the Court's deliberations on the importance overall of instream flow protection. "In 1971, the legislature enacted the Water Resources Act, which includes the overriding-considerations exception at issue in the present case. The Water Resources Act of 1971 was intended 'to set forth fundamentals of water resource policy for the state to insure that waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington and, in relation thereto, to provide direction to the department of ecology and other state agencies and officials, in carrying out water and related resources programs.' Laws OF 1971, 1st Ex. Sess., ch. 225, § 1. The statement of purpose recognizes utilization of state water resources for 'promotion of public health and the economic well-being of the state and the preservation of its natural resources and aesthetic values.' RCW 90.54.010(1)(a). This broad statement of overall goals—the public health, the state's economic well-being, and preservation of natural resources and aesthetic values—shows the legislature continued to recognize that retention of waters instream is as much a core principle of state water use as the other goals, including economic well-being." *Id.* at 21.

Equal Rights for Minimum Flows: Protection From Subsequent Rights

The status of minimum flow rights as being equal to all other rights, with all the equivalent protections afforded to water rights, was highlighted by the Court's opinion. "Also in 1979, the legislature enacted RCW 90.03.247, which requires that a permit to appropriate water from a stream or other water body for which minimum flows or levels have been established must be conditioned to protect the levels or flows. Thus, this statute, like others, recognizes established minimum flows as water rights equivalent to other existing water rights that cannot be impaired by a subsequent appropriation." *Id.* at 24.

The Court found that Washington's statutes provided adequate support protecting minimum flow water rights from impairment by the exercise of other water rights. In addition, the Court stated plainly that this protection is also afforded to such rights as part of Ecology's permitting process to grant new water right. "In contrast to the statutory scheme as a whole, and several specific statutes, Ecology's interpretation of RCW 90.54.020(3)(a) would relegate minimum flow water rights to a lesser class of water right than others, with the water subject to reallocation if Ecology decides that reservations for other beneficial uses would make better use of the state's water. If the minimum flows are to be subject to reallocation by way of reservations of water rights under RCW 90.54.050 whenever other beneficial uses are thought to be better, however, more specific direction from the legislature is required. At present, under the water code minimum flows set by rule are appropriations with a priority date as of the date adopted by rule, minimum flows set by rule cannot impair existing rights and subsequent rights cannot impair existing flow right, and permits to appropriate water from streams with minimum flows set by rule must be conditioned to protect the minimum flows. Ecology's interpretation and application of the overriding-considerations fails to give minimum flow water rights the protection the legislature has determined is appropriate, and is thus inconsistent with the statutory scheme." *Id.* at 24-25. These statements by the Court makes it abundantly clear that there are not separate levels of water rights in Washington with minimum flows being relegated to a "lesser class."

Economic Benefits: Ecology's "Test"

The Court's discussion of Ecology's OCPI "test" is also important to note. The Swinomish Tribe argued that Ecology's "test" gave "controlling weight to projected economic gains from the beneficial uses for which the water reservations are made." The Court pointed out that "[A]lthough Ecology recognizes that the legislature sought to preserve the state's natural resources and aesthetic values, in this case its 'test' nonetheless seems principally focused on economic impact from the development that the water reservations are intended to encourage, as the Tribe says. Economic benefits are undoubtedly of importance in allocating available waters for beneficial uses and the Water Resources Act of 1971 expressly states that economic well-being is a broad goal of the act. RCW 90.54.010. Here, though, the specific issue is whether potential economic gains can justify impairment of existing rights resulting from reallocation of water to other beneficial use. The overall statutory scheme does not support the proposition that the economic value of a new use justifies encroachment on existing uses, including minimum flows set by rule. The high value placed on minimum flows is not overcome just because economically advantageous uses could be made of the water necessary to satisfy the minimum flow rights." *Id.* at 27-28.

With this finding, the Court essentially discards Ecology's current "test" and puts into question the entire notion of a simple economic balancing analysis. The Court also provides significant support for instream minimum flows, particularly with its string of protective phrases in the above-cited quote. This

Instream Decision

protectiveness is based on first, "the overall statutory scheme" and secondly, the Court's finding of equal status for minimum flow rights.

As part of its "Economic Gains" section of the opinion, the Court also contrasted economic benefits with the "best use of water." Many States struggle with similar policy statements in legislation regarding how water use purposes should be ranked.

"Maximum Net Benefits"

"The meaning of 'benefits' is clarified by RCW 90.03.005, enacted in 1979, which states in part that

> [i]t is the policy of the state to promote the use of public waters *in a fashion which provides for obtaining maximum net benefits* arising *from both diversionary uses* of the state's public waters and *retention of waters* within streams and lakes in sufficient quantity *to protect instream and natural values and rights*.

(Emphasis added.) 'Maximum net benefits' here refers to both diversionary uses, many of which can be quantified in dollars, and also to instream uses, many of which cannot be economically quantified. It follows that the term 'maximum net benefits' in RCW 90.03.005 and RCW 90.54.020(2) does not mean economic benefits alone." *Id.* at 28 (emphasis of court).

Finally, the Court sums up its discussion of the "test" and returns to the issue of "reallocating" water. "Thus, economic gains alone do not justify using RCW 90.54.020(3)(a) to reallocate water that is already subject to a minimum flow water right." *Id.* at 29.

Reservations Process and the Legislature

The Supreme Court concluded its decision by affirming that the OCPI exception cannot be used to justify appropriations of water via the reservation process that result in granting water rights that would otherwise *not* be granted under water law and policy in Washington. The Court, however, does have a suggestion — if reallocation of instream flow is to be allowed to encourage development as a matter of State policy, it is for the Legislature to decide that.

Reallocation Policy

"The overriding-considerations exception and Ecology's use of it to justify appropriations of water that otherwise could not be approved presents complex issues of water law and policy. We have considered the questions posed in the context of the many relevant provisions of the state water code. Insofar as this case implicates policy determinations about reallocating the water that is presently needed to satisfy minimum flow water rights to other uses to encourage development in rural areas of the Skagit River basin, the policy determinations are for the legislature. If reallocation of instream flow necessary to meet minimum flow water rights is to be a part of state water policy, it should come by way of legislative action." *Id.* at 29-30.

CONCLUSION

The Court's Conclusion is worth quoting in full as it succinctly lays out the decision's main findings:

Narrow Exception

"RCW 90.54.020(3)(a) provides that perennial streams and rivers must be retained with base flows sufficient to preserve fish and wildlife, scenic, aesthetic and other environmental values, and navigation. A narrow exception is found in the statute that permits impairment of minimum flows set by rule in situations where it is clear that overriding considerations of the public will be served. This exception does not permit the Department of Ecology to reassess the relative merits of uses and reallocate water that is needed to maintain the instream flows through reservations of water for future beneficial uses. Accordingly, Ecology's Amended Rule, which made 27 reservations of water for out-of-stream year-round noninterruptible beneficial uses in the Skagit River basin and which would impair minimum flows set by administrative rule, exceeded Ecology's authority because it is inconsistent with the plain language of the statute and is inconsistent with the entire statutory scheme." *Id.* at 31.

As is obvious from the extensive use of quotes, the Court's opinion provides an extremely well-written guide to much of Washington's water law and policy issues. As such, the opinion is highly recommended reading for additional information not covered in this article.

According to Ecology, a total of 475 homes and eight businesses have relied on Skagit reservations for their water supplies since 2001. Ecology stated that it will be looking for water supply solutions for those homes and businesses who are affected by the ruling. Ecology is also assessing the decision as to how it may affect water management in other areas of the State.

For Additional Information:

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Decision available at: www.courts.wa.gov/opinions/pdf/876720.pdf

Skagit River Basin Instrteam Rule at: www.ecy.wa.gov/programs/wr/instream-flows/skagitbasin.html

Larry Wasserman, Swinomish Indian Tribal Community, 360/ 466-7250 or lwasserman@skagitcoop.org

Nutrient Reduction

Excess Nutrients

Survey Results

Economic Value

Recreation Expenditures

Clean Water Costs

ECONOMIC BENEFITS OF NUTRIENT REDUCTIONS

AN ANALYSIS OF BENEFITS TO UTAH WATERS

Edited/condensed from Utah Division of Water Quality documents

OVERVIEW

Protecting water quality is important to Utah's economy and the quality of life of Utahns. Excess nutrients (nitrogen and phosphorus) from treated wastewater, stormwater, and agricultural runoff can result in nuisance algae growth which degrades aesthetics, recreation, and aquatic life in waterbodies. A recent study prepared for the Utah Division of Water Quality posed the question: What are the economic benefits to Utahns maintaining and improving the quality of the State's lakes, rivers, and streams? (*See*: "*Economic Benefits of Nutrient Reductions in Utah's Waters*" (April, 2013) — available at: www.waterquality.utah.gov/nutrient/economic.htm).

Through surveys administered to Utah households, the study found that residents place importance on protecting waters from excess nutrients for quality of life and recreation. For instance, 97 percent of Utah households surveyed indicated that it was important to maintain water quality for future generations. Utah households report that they are willing to pay from $70 million to $271 million a year to protect and improve waters that are threatened by increasing levels of nutrients. Households who visit lakes, rivers and streams in Utah stated, and showed through their trip choices, a clear preference for recreating at cleaner waterbodies. The study found that annual economic benefits derived from enhancing recreational trips by improving water quality in Utah's waters accounted for about $48 million of the total economic value. The remainder is due to other quality of life factors including sustaining water quality for future generations. Finally, this study estimated that residents of Utah spend about $1.4 to $2.4 billion a year on trips to the State's waters for water-based recreation activities. In this way, they not only derive a great deal of enjoyment from the State's water resources, but at the same time they make an important contribution to the state's economy.

VALUING CLEAN WATER — BENEFITS AND COSTS

Utah's lakes, reservoirs, rivers and streams play a significant role in the State's economy. As already noted, annual expenditures for recreation trips to Utah waters by State residents total between $1.4 billion and $2.4 billion. These expenditures to gasoline service stations and convenience stores, restaurants and fast food establishments, hotels and campgrounds, sporting good stores, and other suppliers are to support outdoor recreation activities on or near the water. These direct expenditures represent about 1 to 2 percent of the total State economy. Any spending by visitors from other states is in addition to these figures. For perspective, as described in the State of Utah Outdoor Recreation Vision, in 2011, 22 million domestic and international visitors traveled to Utah, spending an estimated $6.87 billion. Many of these visitors are attracted to Utah for its beautiful natural amenities.

Anyone who swims or boats in rivers or lakes, or takes walks along a waterside in Utah, can appreciate the value of clean water. If clear, clean water was free, it is easy to imagine that most Utahns would prefer not to see algal blooms or experience unpleasant odors. This study found that Utahns clearly rated streams as undesirable for recreation and aesthetics based upon high levels of algal growth in the river bottom.

Unfortunately, for as long as rivers and lakes must serve multiple uses, clean water will not be free. As populations increase, so do the pressures on lakes and rivers to accommodate increasing levels of nitrogen and phosphorous in the wastewater streams that result from people going about their daily lives. It is costly to treat wastewater to remove these nutrients from homes and businesses before it is discharged to surface waters. In addition, managing stormwater from city streets and suburban yards, as well as runoff from agricultural fields, all come with a price tag.

FIGURE 1

Public Opinion on the Importance Of Water Quality-Related Issues In Utah

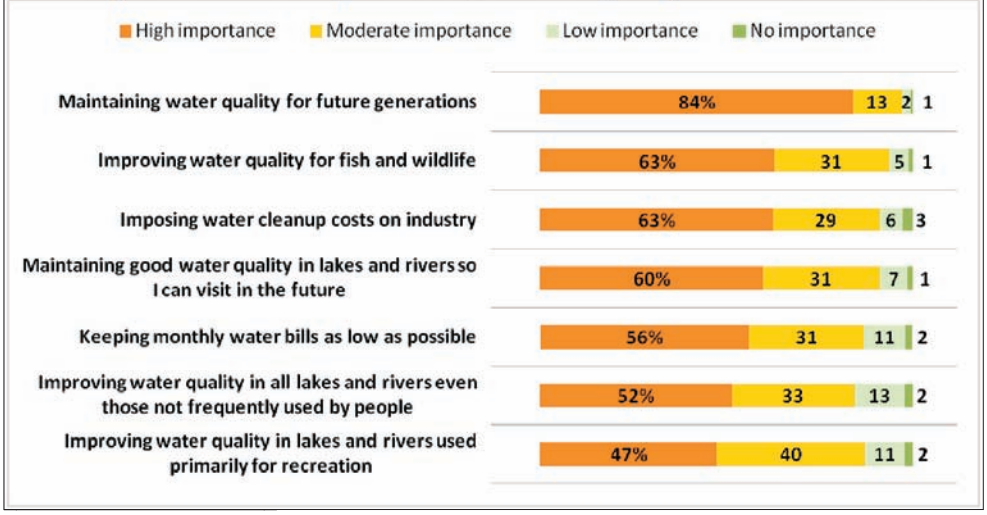

TABLE 1
Distribution of Utah Households by Water-based Recreation

Total Households 893,717	
Nonuser	239,516 (26.8%)
User	654,201 (73.2%)
Both River and Lake	475,457 (53.2%)
River only	67,029 (7.5%)
Lake Only	111.715 (12.5%)

TABLE 2
Top Five Lakes and Rivers, by Total Trips (Weighted)

LAKE	NUMBER OF TRIPS
Day Trips	
Utah Lake	492,000
Strawberry Reservoir	271,000
Deer Creek Reservoir	240,000
Pineview Reservoir	206,000
Bear Lake	199,000
Overnight Trips	
Flaming Gorge Reservoir	274,000
Strawberry Reservoir	263,000
Bear Lake	222,000
Jordanelle Reservoir	52,000
Rockport Reservoir	47,000

TABLE 3
Household Activities While Visiting Lakes and Rivers (All Activities)

ACTIVITY	LAKES	RIVERS
Boating	64.0%	13.7%
Fishing—warm-water fishery	35.3%	18.4%
Fishing—cold-water fishery	57.1%	47.8%
Swimming	64.6%	31.5%
Near-shore activities	59.6%	73.8%
Hunting—waterfowl	8.9%	7.5%
Hunting/Trapping—other	4.5%	6.4%

While a certain amount of nitrogen and phosphorous is necessary for the health of aquatic ecosystems, excess quantities from human activities can be harmful to fish and biodiversity and cause nuisance algal blooms, changes in water clarity, and undesirable odors. These detriments to people and aquatic life detract from the value of the State's waters and thus the quality of life of Utahns.

Water quality questions confronting Utah include:

- What is the cost of failing to address current and future degradation from excess nutrients?
- What are the benefits to Utahns maintaining and improving the quality of the State's lakes, rivers, and streams?

The primary objective of this investigation was to answer these questions by providing information on the value of clean water to the citizens of Utah. This objective was accomplished by surveying a random sample of Utah households. Surveys were conducted and interpreted by a research team that included academic and consultant experts in survey research and economic analysis in coordination with State water quality professionals. The State determined current water quality conditions and developed predictions for future scenarios for water quality with and without additional interventions to limit nutrients. This information was mailed to a representative sample of Utah households as paper surveys.

PUBLIC BENEFITS

The survey results indicated that regardless of whether or not households recreated at rivers and lakes, they at least wanted to prevent the State's waters from getting any worse. Indeed, as shown in Figure 1, for the citizens of Utah as represented by the survey, the most important reason for protecting lakes and rivers from excess nutrients is to maintain water quality for future generations. Specifically, 84 percent of all respondents placed a high importance on the stewardship of the State's waters and a full 97 percent rated this objective as of moderate importance or higher.

In addition, 63 percent also highly rated the importance of improving water quality for fish and wildlife. Most households indicated that it was also important to maintain water quality for recreational purposes.

Undeniably, water-based recreation is popular among Utah's 893,717 households. Based on survey results, it is estimated that three-fourths (73.2 percent) of Utah households indicated that they visited a lake and/or river to swim, fish, boat, hunt or engage in near-shore activities at least once in the previous 12 months (see Table 1). These households are defined as "users" of Utah's waters. This means that only about 27 percent are "nonusers" because they did not take a trip to a waterbody in the last 12 months.

The households who visited rivers or lakes averaged more than 20 trips in the last year whether these trips were just day outings or longer. That translates to more than 13 million waterbody visits by Utah households. Table 2 shows the estimated number of day and overnight trips to the most popular lake and river destinations as reported in the survey.

Households may engage in more than one activity on their outing to a river or lake. As shown in Table 3, respondents were asked to report on their households' activities on their water-based recreation trips. Near shore activities, such as taking a walk along a riverside (73.8 percent) or enjoying a picnic by the lake (59.6 percent), were taken by most households. Boating proved a more popular activity on lakes (64 percent) than rivers (13.7 percent). Swimming was also a more frequent activity at lakes (64.6 percent) than rivers (31.5 percent). Cold-water fishing was more popular than warm-water fishing whether in lakes or in rivers. Finally, a relatively small number of households also include hunting activities on their trips to the waterside. Thus, most Utah households have direct and varied experience with the state's waters as a recreational resource.

Nutrient Reduction

FIGURE 2
Nutrient Reduction Program - Maintain Scenario

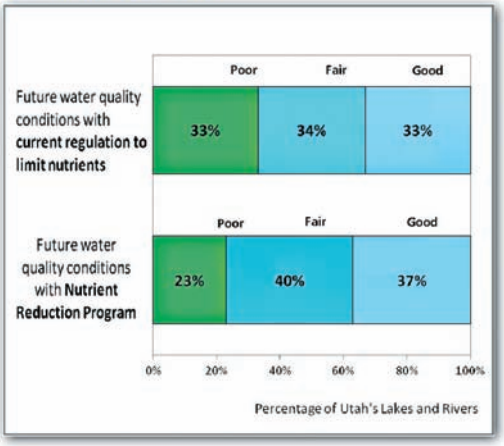

FIGURE 3
Nutrient Reduction Program - Improve Scenario

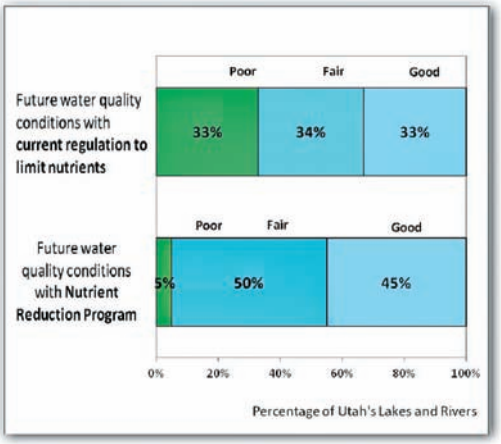

TABLE 4
Percent Responding "Yes" to Offered Bid by Survey Version

BID	MAINTAIN % 'YES'	IMPROVE % 'YES'
$2	76%	75%
$5	77%	68%
$7	42%	62%
$10	44%	54%
$12	63%	50%
$15	41%	47%
$20	40%	62%
$30	31%	51%
$40	29%	32%
$50	26%	31%

TOTAL ECONOMIC BENEFITS

The expressed opinions by the public provide valuable feedback about their attitudes toward managing water quality. However, these attitudes alone do not provide a direct measure of the economic value to the public. To this end, the surveys presented choice situations to respondents, similar to a vote in a referendum. Specifically, households could choose to pay nothing additional for their water and sewer services and allow some rivers and lakes to degrade or opt to pay higher monthly wastewater rates to prevent that degradation and in some cases, to improve waters that are already impaired by excess nutrients.

By making these choices, households indicated what economic value they place on protecting and improving the State's waters (shown in Figures 2 and 3). They chose what they would give up in terms of dollars that they could spend on other goods and services in the economy in return for cleaner water for their own use and enjoyment and for the quality of life of future generations living in Utah.

A look at the raw responses is instructive. The dollar amounts of the monthly payment or "bid" that was offered to respondents ranged from $2 to $50. About half the households were given the option to maintain water quality and the other half had the choice to go beyond simply preventing further degradation and to improve existing water quality. As shown in Table 4, the percentage of respondents who opted to make the extra monthly payments tended to be higher at the lower price levels, just as with other goods and services purchased in the market place. That is, the better the deal, the larger the number of buyers. More than 75 percent of households would pay $2 to $5 a month in return for maintaining water quality, but the percentage fell to about 40 percent at the $20 per month price level. Finally, when the monthly cost reached $50, about 25 percent of households indicated that maintaining water quality was worth that much to them.

Overall, more households were willing to pay the monthly increase in their utility bills when given the opportunity to improve rather than simply maintain water quality. This is reasonable because these households were getting more for their money. For example, at the $20 bid amount, the percentage who said "Yes" to the offer increased from 40 to more than 60 percent. In addition, half of the households were willing to pay as much as $30 more each month in order to improve and protect water quality from too many nutrients entering the waterways.

The analysis of these data revealed different results depending upon whether the household was a recreational user or nonuser of the State's waters. As shown in Table 5, on average, nonuser households stated that they would be willing to pay from $2 to $7 more each month to maintain current conditions. Households who actively recreate in or near waterways would pay $3 to $14 per month to prevent any further degradation in Utah's waters and from $ 8 to $32 month if the nutrient reductions also improved waters that have already been impaired by excess nutrients. As shown in Table 6, on an annual basis and adding up the payments across all Utah households, this gives a range of $31 million to $127 million to maintain water quality and between $70 million and $271 million per year to improve water quality. The upper bound of the range is based upon survey responses exactly as they were reported in the survey.

The lower bound of the range shows the results after conservatively adjusting the responses for how certain survey respondents felt about their answers. A respondent had to be at least 70 percent certain that they would be willing to pay the increase in their water bill for the response to count as a vote for the nutrient reduction program.

Even the lower bound estimates are significant and suggest that Utah households value clean water. According to the survey, Utah households would be willing to continue these payments for at least 20 years. Using the lower bound estimates, and the 20-year time frame, means that maintaining water quality is worth about $500 million, while improving water quality is worth more than $1 billion. Not accounting for population growth, the upper bound for maintaining water quality is about $2 billion and for improving water quality is more than $4 billion. This is also a measure of the cost of not taking further action to address water quality problems due to too many nutrients.

Nutrient Reduction

Willingness To Pay

TABLE 5
Monthly and Annual Benefits per Utah Household

GROUP	FUTURE WATER QUALITY SCENARIO	MONTHLY WTP* LOWER BOUND	MONTHLY WTP* UPPER BOUND	ANNUAL WTP LOWER BOUND	ANNUAL WTP UPPER BOUND
User	Improve	$8	$32	$97	$384
	Maintain	$3	$14	$38	$163
Nonuser	Improve/Maintain	$2	$7	$26	$85

* WTP = Willingness To Pay

Projected Water Quality Funding

TABLE 6
Total Utah Households Annual Benefits (2011 dollars)

SCENARIO		ANNUAL WTP USERS	ANNUAL WTP NONUSERS	NUMBER OF USERS	NUMBER OF NONUSERS	UTAH ANNUAL WTP
Maintain	Lower Bound	$37.56	$26.28	642,470	235,221	$31 million
	Upper Bound	$163.32	$84.60	642,470	235,221	$127 million
Improve	Lower Bound	$97.32	$26.28	642470	235,221	$70 million
	Upper Bound	$383.64	$84.60	642,470	235,221	$271 million

Survey Validity

Factors contributing to the validity of the results include:

- The results have internal validity based of the fact that responses showed an economically sensible inverse relationship between the amount households were asked to pay and their likelihood of paying the increase in their water bill.
- Given the information in the survey booklet, the familiarity Utah households have with paying a water bill, and the fact that nearly three-fourths of Utah households visit Utah lakes and/or rivers, the survey results should be considered well-informed economic values.
- The statistical tests found no evidence of sample selection bias, and weights were applied so that the values represent Utah households as a whole.
- A range of benefits have been provided with an upper bound based on responses by households to the survey and a conservative lower bound to bracket the value that the economic literature indicates will correspond to what households would pay when it comes time to part with real money.

Water Quality Effects

TABLE 7
Summary of the Effect of Future Water Quality Policies on 131 Lakes and 153 Rivers

	NUMBER THAT DEGRADE	NUMBER HELD CONSTANT	NUMBER THAT IMPROVE
Status Quo			
Lakes	46	62	23
Rivers	73	64	16
Maintain			
Lakes	0	108	23
Rivers	0	137	16
Improve			
Lakes	0	85	46
Rivers	0	80	73

Status Quo: Comparison of water quality in twenty years under Current Policy, relative to current 2011 conditions.

Maintain: Comparison of water quality in twenty years under a Maintain Water Quality Policy, relative to current 2011 conditions.

Improve: Comparison of water quality in twenty years under an Improve Water Quality Policy, relative to current 2011 conditions.

RECREATION BENEFITS

Another way to validate the results and to learn more about how water quality affects the value of the recreation experience is to observe and analyze the recreation decisions made by households. Specifically, if people show by their behavior that they tend to bypass eutrophic waters to visit cleaner water bodies to enjoy their favorite recreation activities, this further corroborates their statements about the importance of maintaining and improving water quality. Table 7 shows the changes in water quality relative to current conditions for the water bodies most utilized for water-based recreation in Utah. Under the status quo 46 lakes and 73 rivers would degrade. However, if the State adopts measures to maintain water quality, that degradation would not occur. Under the improve policy, the State would go beyond maintaining water quality and improve waters that have already degraded.

Nutrient Reduction

Sustaining Water Quality

The analysis of the survey data concerning outdoor recreation is reflected in Table 8. The annual value of maintaining water quality in terms of enhancing the recreation experience is more than $18 million; whereas improving water quality is valued at more than $48 million per year. This recreation value is not in addition to the amount that households are willing to pay each year to maintain and improve water quality. Rather it shows that the recreation value is just one component of total value. These results also show that a decision about which water body to visit is only partly based on water quality. Other important factors, such as distance from home, are described in greater detail in the study. Besides their own use and enjoyment, Utah households are willing to pay a sizable amount each year to sustain water quality and protect the quality of life of future generations of Utahns. Indeed, 97 percent of Utahns reported that protecting water quality for future generations was "somewhat" or "extremely" important.

Net Economic Benefits

TABLE 8
Annual Net Economic Benefits of Future Water Quality Policies ($ millions)

	STATUS QUO	MAINTAIN	IMPROVE
Specification 2			
Day trips	-$3.91	$6.01	$10.96
Overnight trips	-$2.02	$12.34	$37.49
Total	-$5.93	$18.35	$48.45

CONCLUSION

OTHER BENEFITS

Lakefronts, Drinking Water, & Water Clarity

As a final note, there are other ways that clean water can benefit Utahns. One is through higher values of lakefront properties that are affected by the aesthetics of clean water views and a second is lower drinking water treatment costs due to higher quality water at the drinking water intake. The State is currently investigating the relationship between excess nutrients and drinking water treatment costs. However, the effects of water clarity on lakefront property values are described in the study. Compared to other states, Utah has very little private lakefront property. Most of the State's waterfront is owned by the public. Of Utah's 130+ priority lakes, only a fraction have shorelines in private ownership subject to property tax payments, and only 17 of those waterbodies showed changing water clarity conditions from the nutrient control scenarios. The water clarity in these lakes could improve by almost 1 meter by reducing excess nutrients; whereas, continuation of the status quo could cause water clarity to decline by about 0.27 meter (about 1 foot). In property value terms, reducing nutrients would produce a gain in property values of $20.2 million. No new action would lead to a loss of around $7.4 million. These benefits to lakefront property owners are small in relation to the total benefits to the Utah residents as a whole.

For Additional Information:
Nicholas von Stackelberg, Utah Division of Water Quality, 801/ 536-4374
or nvonstackelberg@utah.gov

The full 269-page Study: *Economic Benefits of Nutrient Reductions in Utah's Waters* (April, 2013) is available at: www.waterquality.utah.gov/nutrient/economic.htm

Nicholas von Stackelberg of the Utah Division of Water Quality, one of the authors of the Study: *Economic Benefits of Nutrient Reduction in Utah's Waters*, will be moderating a session on water resources issues at the upcoming American Water Resources Association annual conference which will include a comprehensive presentation of the Study's findings and uses. This 48th annual AWRA national event will feature 89 sessions comprised of 320 oral presentations in addition to 74 poster presentations.

American Water Resources Association
2013 ANNUAL WATER RESOURCES CONFERENCE
November 4-7, 2013 — Portland, Oregon

For info: www.awra.org/meetings/Portland2013/

Columbia River Treaty

Recommendation Draft

Public Meetings

December Delivery

Original Treaty

Treaty Studies

Benefits Evaluation

Areas of Agreement

COLUMBIA RIVER TREATY UPDATE

DRAFT REGIONAL RECOMMENDATION RELEASED

Adapted from Columbia River Treaty 2014/2024 Review documents

INTRODUCTION

On September 20, 2013, the United States (US) Entity for implementing the Columbia River Treaty (Treaty) released a Draft Regional Recommendation concerning the Treaty's future. The Draft is available for review and comment through October 25, 2013 (available from the Columbia River Treaty 2014/2024 Review website: www.crt2014-2024review.gov). Five public meetings regarding the Draft were scheduled for locations throughout the Northwest — Spokane, WA, October 2; Boise, ID, October 3; Helena, MT, October 9; Olympia, WA, October 15; and Portland, OR, October 16. However, as of press time for this edition of *The Water Report* the Treaty Review website indicated the first two meetings were proceeding as planned, but the effects the federal government shutdown might have on subsequent meetings is unclear. Interested parties are advised to refer to the website for information updates and meeting particulars.

Following the assessment of comments, the US Entity is scheduled to forward its final recommendation to the US State Department before the end of this year.

Signed in 1964, the Treaty has governed the coordinated operation of the many dams and reservoirs in the Columbia River Basin and has provided significant flood risk management and hydropower benefits for both the US and Canada. The Treaty calls for two "entities" to implement the Treaty, one for the US and one for Canada. The "US Entity" consists of the administrator for the Bonneville Power Administration and the Northwestern Division engineer of the US Army Corps of Engineers. The Canadian Entity is the British Columbia Hydro and Power Authority. While the Treaty has no specified end date, it contains provisions that will change its implementation in 2024. Additionally, either Canada or the US may unilaterally terminate most provisions of the Treaty in 2024, with a minimum of 10 years' advance notice — hence there is a focus on 2014 and 2024. (*See* Miller, *TWR* #101 and Bankes & Cosens, *TWR* #105.)

The US Entity, utilizing a Sovereign Review Team (SRT), has undertaken a series of studies regarding current and potential future operations under the Treaty. The goal is a recommendation from the US Entity to the US Department of State by the end of 2013 concerning which elements the Pacific Northwest would like the State Department to pursue in negotiations with Canada.

Collectively known as the "Columbia River Treaty 2014/2024 Review" this multi-year effort has provided information critical to a US Entity recommendation through evaluation of the value of Treaty benefits to the region and consideration of contemporary concerns — including environmental concerns — that reach beyond flood risk management and power generation issues that dominated Treaty concerns in 1964.

SALIENT ISSUES

A letter released by the US Entity last summer described progress in the review process up to that point:

There is tentative alignment among the US Entity and Sovereigns on a number of key issues:

- The Treaty has substantial benefits for both the US and Canada, but it should be modernized to reflect the current values and priorities of the Pacific Northwest region.
- A modernized Treaty will be flexible and resilient enough to adapt to the impacts of climate change and other factors.
- Ecosystem-based functions will be integrated into the Columbia River Treaty as a third primary purpose, or benefit, in the same way that hydropower and flood risk management benefits were developed in the original Treaty.
- A number of Treaty modifications are needed to improve ecosystem function, including: augmentation of stream flows in spring and summer; a dry-year strategy; and discussions with Canada on the feasibility of restoring fish passage on the mainstem Columbia.
- The coordinated power benefits should be reasonably and fairly balanced between the US and Canada and this should be reflected in the calculation of the Canadian Entitlement return.
- Continued flood risk management is an important component to protect public safety and the region's economy.
- Important river uses such as navigation and recreation should not be negatively impacted by Treaty operations.

Columbia River Treaty

Remaining Issues

There are also key areas where agreement is yet to be achieved, which include, but are not limited to:

- The correct balance for the use of any additional water supplies for both ecosystem flows and consumptive use through a modernized treaty remains a significant issue. Some Sovereigns, including the four Pacific Northwest states and several federal agencies, propose that a process be established whereby the states, tribes, and stakeholders will determine how the allocation of any additional spring/summer water from Canada will occur, while the Tribal perspective is that ecosystem needs and tribal reserved water rights must be fully met before any consideration is given to any additional out-of-stream uses.

Flood Risk Modifications

- Columbia Basin Tribes and others have stated that achieving ecosystem-based functions, such as stable reservoirs and additional downstream flows, requires a modification to current flood risk management practices. Other Sovereigns have proposed that the current level of flood risk must be sustained unless modified by a formal public process. Therefore, the US Entity has identified a post-2013 process to examine the level of flood risk management throughout the Basin. The US Entity's position is that such an analysis cannot take place without more comprehensive involvement from a wider array of stakeholders, and that additional funding would be required to implement this process.

Reliability Issues

- Columbia Basin Tribes and others continue discussing the degree and extent to which both Canadian and US hydropower production should be reduced or traded-off in order to provide increased ecosystem-based function. The US Entity maintains that reductions in hydropower production would also result in reductions in system reliability. Columbia Basin Tribes think that reliability issues can be addressed through the integration of energy renewables and increased conservation measures.
- How future treaty operations will balance ecosystem-based function, flood risk management, and hydropower with other authorized purposes.
- How regional sovereigns will continue to participate in the treaty modernization process after the recommendation is delivered to the State Department, as well as post-2024 treaty governance structures.

DRAFT REGIONAL RECOMMENDATION HIGHLIGHTS

"Modernized" Treaty

"MODERNIZED" TREATY: ECOSYSTEM SERVICES & CLIMATE CHANGE ADDRESSED

The Draft Regional Recommendation proposes to modernize the Treaty post-2024 in such a way as to bring about better and more balanced benefits to the region. This process includes making "ecosystem-based function" a third primary purpose of the Treaty.

THE LETTER ACCOMPANYING THE RELEASE OF THE DRAFT REGIONAL RECOMMENDATION STATES:

In developing the Draft Regional Recommendation, the US Entity listened closely to all voices in the region about how to reflect their interests in the recommendation, while respecting that a certain amount of compromise was necessary in order to garner as much region-wide support as possible. Through this careful and extensive deliberation and review, we have heard many ideas. While the region acknowledges substantial benefits have flowed from the Treaty, there is also a strong desire to incorporate ecosystem-based functions into the Treaty and to recognize evolving interests in other water management issues in the Columbia River basin. There is growing interest in a Treaty that is more adaptive, flexible, and resilient in order to successfully meet the challenges presented by increased demand for water and the uncertainty of climate change impacts on Columbia River flow volume, timing, and variability in the next several decades. There is widespread concern that the method included in the Treaty for calculating Canada's share of its power benefits is outdated and no longer equitable, resulting in excessive costs to regional ratepayers. Finally, there is broad interest in reaching agreement with Canada on how we will conduct coordinated flood risk management operations post-2024 under the terms of the Treaty. The Draft Regional Recommendation attempts to recognize and balance all of these viewpoints and interests.

Climate Change Adaptability

Modernized Purposes

THE MODERNIZED TREATY ENVISIONED IN THE DRAFT REGIONAL RECOMMENDATION WILL:

- better address the region's need for a reliable and economically sustainable hydropower system;
- continue to provide a similar level of flood risk management to protect public safety and the region's economy;
- include ecosystem-based function as a third primary purpose of the Treaty, to ensure a more comprehensive approach throughout the Columbia Basin watershed; and
- create the flexibility within the Treaty that is necessary to respond to climate change, changing water supply needs, and other future potential changes in system operations while continuing to meet authorized purposes such as navigation.

Goals & Principles

THE DRAFT REGIONAL RECOMMENDATION STATES:

This draft recommendation identifies potential modifications to the Treaty post- 2024. It begins by identifying regional goals for the future of the Treaty post-2024. It includes a set of general principles underlying this recommendation, followed by more specific recommendations related to a number of Treaty elements. Finally, it identifies a number of matters related to possible post-2024 Treaty implementation for consideration by domestic interests.

Columbia River Treaty

Negitiations With Canada

CONCLUSION

In essence, the Draft Regional Recommendation seeks to further improve on a Treaty that has already provided immense benefits, while also making it more adapted — and adaptable — to current and future needs of the region. The US Entity believes that we, as a region, now have a valuable opportunity to coalesce around this recommendation to modernize the Treaty.

The US Entity is seeking broad regional support — from sovereigns, regional stakeholders, and the general public — before the recommendation is finalized and presented to the US State Department in December 2013. The State Department will use the document to begin the federal government review process to decide whether to proceed with a treaty modernization effort with Canada. If a decision is made to enter into negotiations, they will be led by the State Department, not the US Entity.

The US Entity welcomes your comments and suggestions on the Draft Regional Recommendation by October 25. These comments and suggestions will be considered for incorporation into the final recommendation.

For a copy of the Draft Regional Recommendation and details on regional meetings and other opportunities to comment, please visit the Columbia River Treaty 2014/2024 Review website: www.crt2014-2024review.gov.

For Additional Information:

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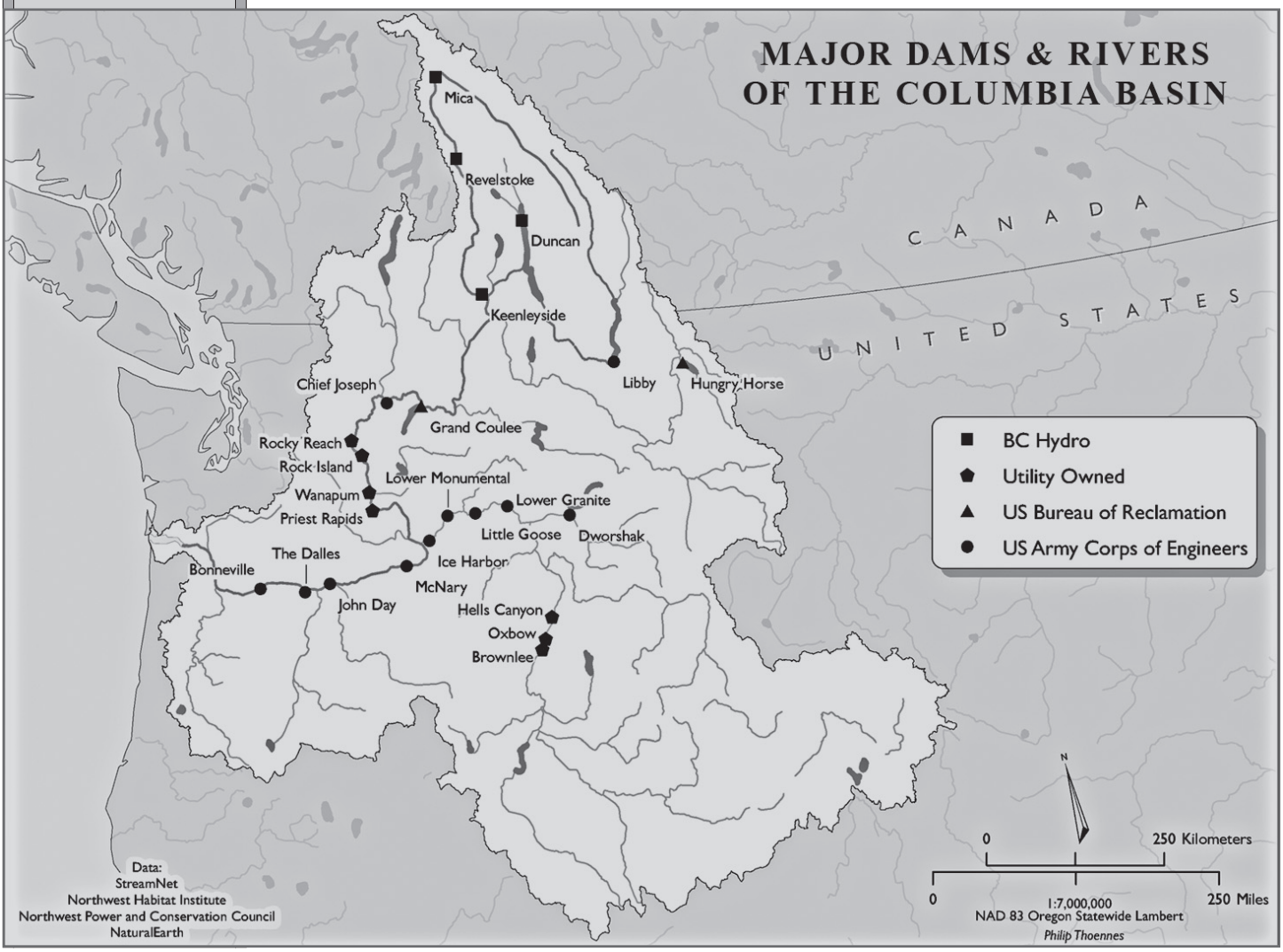
Mike Hansen, Bonneville Power Administration, 503/ 230-4328 or mshansen@bpa.gov

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



WATER BRIEFS

ENERGY-WATER NEXUS: THE WATER SECTOR'S ENERGY USE & THE ENERGY SECTOR'S WATER USE

The Congressional Research Service (CRS) on August 28th released two related papers of interest to the water community: *The Water Sector's Energy Use* by Claudia Copeland; and *The Energy Sector's Water Use* by Nicole T. Carter. The interrelationship of water and energy has been increasingly recognized in the water field. These two papers provide a valuable compilation of the current state of knowledge concerning this important area of research. The information below is edited and condensed from CRS. The full reports are available for download at the internet addresses provided below.

The Water Sector's Energy Use (CRS Report R43200)

Water and energy are resources that are reciprocally and mutually linked, because meeting energy needs requires water, often in large quantities, for mining, fuel production, hydropower, and power plant cooling, and energy is needed for pumping, treatment, and distribution of water and for collection, treatment, and discharge of wastewater. This interrelationship is often referred to as the energy-water nexus, or the water-energy nexus. There is growing recognition that "saving water saves energy." Energy efficiency initiatives offer opportunities for delivering significant water savings, and likewise, water efficiency initiatives offer opportunities for delivering significant energy savings. In addition, saving water also reduces carbon emissions by saving energy otherwise generated to move and treat water.

This report provides background on energy for facilities that treat and deliver water to end users and also dispose of and discharge wastewater. Energy use for water is a function of many variables, including water source (surface water pumping typically requires less energy than groundwater pumping), treatment (high ambient quality raw water requires less treatment than brackish or seawater), intended end-use, distribution (water pumped long distances requires more energy), amount of water loss in the system through leakage and evaporation, and level of wastewater treatment (stringency of water quality regulations to meet discharge standards). Likewise, the intensity of energy use of water, which is the relative amount of energy needed for a task, varies depending on characteristics such as topography (affecting groundwater recharge), climate, seasonal temperature, and rainfall. Most of the energy used for water-related purposes is in the form of electricity. Estimates of water-related energy use range from 4% to perhaps 13% of the nation's electricity generation, but regional differences can be significant. In California, for example, as much as 19% of the state's electricity consumption is for pumping, treating, collecting and discharging water and wastewater.

Energy consumption by public drinking water and wastewater utilities can represent 30-40% of a municipality's energy bill. At drinking water plants, the largest energy use (about 80%) is to operate motors for pumping. At wastewater treatment plants, aeration, pumping, and solids processing account for most of the electricity that is used. Opportunities for efficiency exist in several categories, such as upgrading to more efficient equipment, improving energy management, and generating energy on-site to offset purchased electricity. However, barriers to improved energy efficiency by water and wastewater utilities exist, including capital costs and reluctance by utility officials to change practices or implement new technologies.

For info: Claudia Copeland, ccopeland@crs.loc.gov

Report available at: http://aquadoc.typepad.com/files/crs_energy_water_nexus_water_sectors_energy_use.pdf

The Energy Sector's Water Use (CRS Report R43199)

Meeting energy-sector water needs, which are often large, depends upon the local availability of water for fuel production, hydropower generation, and thermoelectric power plant cooling. The US energy sector's use of water is significant in terms of water withdrawals and water consumption. In 2005, thermoelectric cooling represented 41% of water withdrawn nationally, and 6% of water consumed nationally. Policy makers at the federal, state, and local levels are faced with deciding whether to respond to the growing water needs of the energy sector, and if so, which policy levers to use (e.g., tax incentives, loan guarantees, permits, regulations, planning, or education).

For fuel production, water is either an essential input or is difficult and costly to substitute, and degraded water is often a waste byproduct that creates management and disposal challenges. US unconventional oil and gas production has expanded quickly since 2008, and natural gas and coal exports may rise. This has sparked interest in the quantities of water and other inputs "embedded" in these resources, as well as the wastes produced (e.g., wastewaters from extraction). Much of the growth in water demand for unconventional fuel production is concentrated in regions with already intense competition over water (e.g., tight gas and other unconventional production in Colorado, Eagle Ford shale gas and oil in Texas), preexisting water concerns (e.g., groundwater decline in North Dakota before Bakken oil development), or regions with abundant, but ecologically sensitive surface water resources (e.g., Marcellus shale region in Pennsylvania and New York).

Conventional hydropower accounts for approximately 8% of total US net electricity generation, and more than 80% of US electricity is generated at thermoelectric facilities that depend on cooling water. Water availability issues, such as regional drought, low flow, or intense competition for water can curtail hydroelectric and thermoelectric generation. An assessment of the drought vulnerability of electricity in the western US found broad resiliency, while also identifying the Pacific Northwest and the Texas grid at higher risk. Future withdrawals associated with electric generation may grow slightly, remain steady, or decline depending on a number of factors. These include reduced generation from facilities using once-through cooling because of compliance with proposed federal cooling water intake regulations or shifts in how electricity is generated (e.g., less from coal and more from wind and natural gas).

For Info: Nicole T. Carter, ncarter@crs.loc.gov

Report available at: http://aquadoc.typepad.com/files/crs_energy_water_nexus_energy_sectors_water_use.pdf

WATER BRIEFS

AGENCY ENFORCEMENT CA WATER RIGHTS' VALIDITY

California's Third Appellate District Court (Court), on September 4th held that the State Water Resources Control Board (Water Board)) has the jurisdiction and authority to make a preliminary determination of the validity of water rights for purposes of enforcement against illegal diversions of water. *Young, et al. v. SWRCB*, No. C068559, Cal. 3d App. Dist. (Sept. 4, 2013). The appellate court reversed the decision of the trial court, which had limited the Water Board's jurisdiction and awarded attorney fees to the objectors of the enforcement proceeding under the private attorney general doctrine.

As noted by the Court, the case raised an "important issue of first impression" in California concerning enforcement proceedings in situations where water rights have not been adjudicated by a court: does the Water Board have "jurisdiction to issue a cease-and-desist order (CDO) for an illegal diversion of water if the diverter claims riparian or pre-1914 appropriative rights." *Id*. at 1. The enforcement action was brought by the Water Board against the Woods Irrigation Company (Woods). Woods objected and argued that the Water Board lacked the jurisdiction to bring the action, alleging that the Water Board "must first file a civil lawsuit to adjudicate the diverter's water rights before it can execute its statutory mandate to 'take vigorous action…to prevent the unlawful diversion of water.' (Wat. Code, § 1825.)" *Id*. The customers of Woods contended that "the Water Code does not provide the authority to the Water Board to adjudicate the validity, the extent, or the forfeiture of riparian or pre-1914 appropriate rights." *Id*. at 6-7.

The Court concluded that "pursuant to Water Code section 1831, the Water Board can make a preliminary determination for purposes of enforcement whether the diverter has either the riparian or pre-1914 appropriative rights it claims without filing a lawsuit. The diverter or interested parties can thereafter seek judicial review if warranted." *Id*. at 3.

The Court discussed the various statutes under which the Water Board exercises its permitting authority; makes determinations of water availability; decides on forfeiture of rights for non-use; and the power to investigate water use, among others. The Court found that "the Supreme Court has consistently held that the Water Board has the power or authority to make the threshold determinations necessary to execute its responsibility to regulate water in the state of California." *Id*. at 9.

Referring specifically to Water Code section 1831, which is at issue in the case, the Court rejected Woods position. "The Legislature expressly vests authority in the Water Board to determine if any person is unlawfully diverting water; to determine whether the diversion and use of water is unauthorized, it is necessary to determine whether the diversion and use that the diverter claims is authorized by riparian or pre-1914 appropriative rights. The Customers' argument that the Water Board lacks jurisdiction to adjudicate claims of riparian or pre-1914 appropriative rights is flawed because it begs the question central to the appeal, namely, whether a given diversion claimed to be authorized is in fact authorized by a valid riparian or pre-1914 appropriative right. If it is not, the diversion is unauthorized and subject to enforcement pursuant to Water Code sections 1052 and 1831, subdivision (d)(1)." *Id*. at 9-10.

For info: Decision available at: www.courts.ca.gov/opinions/documents/C068559.PDF

"WATERS OF THE US" US CWA JURISDICTION RULE

In late August, EPA's Science Advisory Board (SAB) released for public comment a draft scientific report, "*Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*." This draft report synthesizes more than 1,000 peer-reviewed pieces of scientific literature about how smaller, isolated water bodies are connected to larger ones and represents the state-of-the-science on the connectivity and isolation of waters in the United States. The final version of this report will serve as a basis for a joint EPA and Army Corps of Engineers rulemaking aimed at clarifying the jurisdiction of the Clean Water Act.

Recent decisions of the Supreme Court have removed some waters from federal protection, and caused confusion about which waters and wetlands remain protected. *See* Glick & Gelardi, *TWR* #87. This underscores the need for EPA and the public to better understand the connectivity or isolation of streams and wetlands relative to larger water bodies such as rivers, lakes, estuaries, and oceans, and to use that understanding to underpin regulatory actions and increase certainty among various CWA stakeholders. The report, when finalized, will provide the scientific basis needed to clarify CWA jurisdiction, including a description of the factors that influence connectivity and the mechanisms by which connected waters affect downstream waters. These improvements are necessary to reduce costs and minimize delays in the permit process and protect waters that are vital to public health, the environment and economy. Comments must be received by November 6 to be considered by the SAB Panel. Prior to the government shutdown, a public meeting was scheduled for the SAB Panel on December 16-18 (*see TWR* Calendar).

EPA and the U.S. Army Corps of Engineers have sent a draft rule to clarify the jurisdiction of the Clean Water Act to the Office of Management and Budget for interagency review. Any final regulatory action related to the jurisdiction of the Clean Water Act in a rulemaking will be based on the final version of this scientific assessment, which will reflect EPA's consideration of comments received from the public and the independent peer review.

The proposed rule is limited to clarifying current uncertainty concerning the jurisdiction of the Clean Water Act that has arisen as an outgrowth of recent Supreme Court decisions. EPA and the Corps are focusing on clarifying protection of the

WATER BRIEFS

network of smaller waters that feed into larger ones, to keep downstream water safe from upstream pollutants. The agencies are also clarifying protection for wetlands that filter and trap pollution, store water, and help keep communities safe from floods. The proposed rule does not propose changes to existing regulatory exemptions and exclusions, including those that apply to the agricultural sector.

For info: SAB Report available at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Watershed%20Connectivity%20Report?OpenDocument; CWA definition, see EPA website: http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm

SMALL DAM REMOVAL ID

PROGRAMMATIC CONSULTATION

Dutch Flat Dam, a ten-foot barrier built nearly a century ago to provide drinking water to Troy, Idaho, spanned the West Fork of Little Bear Creek. Local leaders and the Idaho Department of Fish and Game worked with federal agencies to take out the dam last summer so steelhead can again swim freely up the West Fork of Little Bear Creek. Crews finished removing the dam's concrete in early September and are now widening a new course for the creek. Crews from the city of Troy are completing the work.

It's far from the largest dam removal in the West: Elwha and Condit top the charts in that regard. But it's every bit as important to the steelhead that migrate 500 miles up the Columbia, Snake, and Clearwater rivers to the West Fork of Little Bear Creek. The dam has gone unused since it filled with silt in 1926, but has continued to block the migration of wild steelhead.

An inventory by Idaho Fish and Game about 10 years ago surprised many locals by finding steelhead throughout the Potlatch River drainage in small streams such as Little Bear Creek that mostly dried up in summer. It turned out that the fish survive the summer in remnant pools cooled by subterranean water. Biologists salvaged almost 180 fish from pools below the dam before the removal began and about three-quarters were steelhead.

Snake River steelhead were listed as threatened under the Endangered Species Act in 1997. Removing migration barriers and restoring access to high quality spawning and rearing habitat is considered critical for their recovery. NOAA Fisheries and the Bonneville Power Administration provided $500,000 for the project. NOAA's funding came from the Pacific Coastal Salmon Recovery Fund, a competitive grant program dedicated to restoring Pacific salmon and their habitat. BPA funding supports habitat improvement projects as mitigation for the impacts of federal dams on the Columbia and Snake rivers.

NOAA Fisheries also used a process called "programmatic consultation" to review the dam removal and associated restoration work. The approach streamlines the review and encourages the use of practices already proven effective, biologist Bob Ries of NOAA Fisheries said. He said plans call for leaving the newly freed stream to find its own new path through the channel.

For info: NOAA Fisheries website: www.nwr.noaa.gov/stories/2013/dutch_flat_dam_removal.html

DRINKING WATER FINE AZ

BIA VIOLATIONS & SETTLEMENT

The US Environmental Protection Agency (EPA) announced their settlement with Department of Interior's Bureau of Indian Affairs (BIA), including civil penalties of $136,000 for violations of the Safe Drinking Water Act at the Keams Canyon Public Water Supply system. The system is located on the Hopi Reservation in northeastern Arizona.

"Access to clean, potable drinking water is still a critical issue for many tribal communities," said Jared Blumenfeld, EPA's Regional Administrator for the Pacific Southwest. "Our citizens must have confidence that their water supply is monitored and safe, and their providers, whether a private company, local government, or federal entity, are complying with drinking water standards."

The Keams Canyon public water supply system is owned and operated by BIA and serves a population of approximately 2,000 people. EPA found the BIA exceeded drinking water standards for arsenic and failed to monitor for arsenic and disinfection compounds. The system is now fully compliant with these requirements.

The September 24th action follows a previous EPA order in 2011, which resulted in BIA spending nearly $1 million dollars to install and operate an arsenic treatment system. The action is part of a larger national effort to ensure environmental compliance in Indian Country. As part of EPA's commitment to Indian Country, the agency continues to focus attention on drinking water and on solid waste issues on tribal lands.

For info: Margot Perez-Sullivan, EPA, perezsullivan.margot@epa.gov or www.epa.gov/compliance/data/planning/priorities/tribal.html#transition

CALIFORNIA WATER PLAN CA

FIRST DRAFT VOLUME RELEASED

On October 2, the California Department of Water Resources (DWR) released the first volume of the public review draft for the California Water Plan Update 2013. The Strategic Plan (Volume 1) provides an overview of the current water issues and obstacles in California. Regional Reports (Volume 2), to be released October 16, is composed of twelve regional reports that include California's 10 hydrologic regions. Current issues and challenges, as well as water management opportunities, are discussed for each region. Resource Management Strategies (Volume 3), to be released October 23, contains 30 types of strategies for improving water quality, water supply reliability, flood management, and ecosystem assets. A navigation guide for the Water Plan is available online. Volumes 4 and 5, the Reference Guide and Technical Guide respectively, will be released with the final report. All of the volumes will be discussed at the Water Plan plenary meeting on October 29 and 30 in Sacramento (see *TWR* Calendar).

The release of each volume will be followed by a 45-day comment period. Details on the various methods for

WATER BRIEFS

submitting comments are available in a reviewer's guide developed specifically for the Water Plan.

The release of Volume 1 includes an executive summary. It details the purpose of the Water Plan as a roadmap that informs legislative action, as well as planning and decision-making. While the Water Plan doesn't create mandates, it does provide a roadmap for action toward sustainable water management in California.

For info: www.waterplan.water.ca.gov/docs/enews/2013/cwp_e-news100213.pdf

TRIBAL WATER STUDY SW

RECLAMATION WORK

On September 18, US Department of the Interior Assistant Secretary for Water and Science Anne Castle announced a collaborative agreement for the Bureau of Reclamation to work with the Colorado River Basin Tribes Partnership (Ten Tribes Partnership) in a tribally-focused effort to address projected water supply and demand imbalances in the Colorado River Basin. This effort, implementing commitments identified in the Colorado River Basin Water Supply and Demand Study published last December by Reclamation, will focus specifically on issues facing the tribal communities in the basin and their water resources.

"The Colorado River is the essential foundation for the physical, economic and cultural sustenance of the tribes in the Ten Tribes Partnership, and it is critical that we work together to address existing and future threats to the adequacy of supplies and the River itself," said Castle. "The Colorado River Basin Tribes Partnership is an important stakeholder in water use for multiple purposes including irrigation, recreation, wildlife and habitat restoration, municipal, industrial, mining, power generation, as well as cultural and religious activities," said T. Darryl Vigil, chairman of the Ten Tribes Partnership.

Castle announced the agreement at a joint event with key representatives of the Ten Tribes Partnership in Albuquerque. Reclamation and the Ten Tribes Partnership will collaborate on the study on the role of tribal water rights, which is expected to be completed by December 2015. Castle says Interior and the Partnership will allocate financial resources and technical expertise for the effort — including the commitment by Reclamation to provide $100,000 to jumpstart the study effort. Reclamation Commissioner Michael Connor says ensuring meaningful tribal participation with financial assistance from the agency's Basin Study Program will only help to improve the effort.

The 2012 Colorado River Basin Water Supply and Demand Study, the most comprehensive study of future supplies and demands on the Colorado River ever developed, was produced collaboratively with a wide array of stakeholders including the Ten Tribes Partnership. The study's findings projected significant shortfalls between expected water supplies and demands in the Colorado River Basin in coming decades. The study is widely acknowledged as a call to action for all who rely on the Colorado River. Building upon recent successful efforts to improve water management in the Basin, recent efforts have focused on enhancing the resiliency and sustainability of the Basin's limited resources. *See* Jerla, *TWR* #100 and Water Briefs, *TWR* #107.

The Colorado River Basin Tribes Partnership began in 1992 and is made up of ten tribes: the Chemehuevi Indian Tribe, Cocopah Indian Community, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Jicarilla Apache Nation, Navajo Nation, Quechan Indian Tribe, Southern Ute Indian Tribe, Ute Mountain Ute Indian Tribe and Ute Tribe of the Uintah and Ouray Reservation. According to their website, there are 29 Tribes with reservations within the Seven Colorado River Basin States with vested water rights in excess of 2,900,000 acre-feet to the Colorado River; typically, those tribes have senior water rights on the river.

For info: Nell Zeitzmann, Reclamation, 202/ 513-0568; Ten Tribe Partnership: www.crwua.org/colorado-river/ten-tribes; Water Supply & Demand Study at: www.usbr.gov/lc/region/programs/crbstudy.html

GROUNDWATER EXCHANGE ID

RECLAMATION PROJECT

The Bureau of Reclamation (Reclamation) signed a Memorandum of Agreement (MOA) with the Lewiston Orchards Irrigation District (LOID) to jointly fund the design and construction of the Lewiston Orchards Pilot Water Exchange Project. The project involves the construction of a groundwater well to provide LOID with an alternative water supply, other than surface water withdrawals on land adjacent to the Nez Perce Reservation which has an adverse impact to threatened Snake River steelhead. Protection of the species will also protect one of many important cultural resources for the Nez Perce Tribe.

The expected flow from the well is 2 to 4 cubic feet per second (cfs), which is roughly equal to 1,000-2,000 gallons per minute. Reclamation and LOID will operate the water exchange project in accordance with the National Marine Fisheries Service (NMFS) Lewiston Orchards Project 2010 Biological Opinion. The well may be as much as 1,800 feet deep and located near the Lewiston-Nez Perce County Regional Airport. Facilities will be constructed in phases starting around November 2013 and completed around summer of 2016.

"As groundwater is pumped into the district's irrigation distribution system, it will be exchanged almost bucket for bucket for Craig Mountain surface water, leaving equal amounts of water in the streams for threatened steelhead," said Jerrold Gregg, Reclamation's Snake River Area Office Manager. "This project is possible because of our partnership with LOID's board of directors and the Lower Clearwater Exchange Project stakeholders group." Total estimated cost for the project is just over $5 million. LOID's cost-share contribution will be 47 percent, and Reclamation will cover 53 percent of the cost.

For info: John Redding, Reclamation, 208/ 383-2207 or www.usbr.gov/pn/snakeriver/index.html

WATER BRIEFS

NUMERIC NUTRIENTS US

EPA TOOLKIT FOR CRITERIA

EPA has assembled resources to assist states in developing, adopting, and implementing numeric nutrient criteria for water bodies. The new "toolkit" provides Agency information related to numeric nutrient criteria development; water quality monitoring, assessment, reporting, and planning; permitting; water quality-based effluent limitations guidelines and trading; economics and financing; and communications. The toolkit includes EPA's guiding principles for bioconfirmation, which offer new thinking on incorporating biological components when adopting and implementing numeric nutrient criteria. The toolkit does not introduce any new EPA policies or regulations.
For info: EPA Toolkit at**:** www.epa.gov/ and search for Numeric Nutrient

AG ECONOMIC IMPACT WEST

WHITE PAPER RELEASED

The Family Farm Alliance (FFA) and the Irrigation Association (IA) have jointly released a white paper titled, "The Economic Impacts of Western Irrigated Agriculture." The white paper summarizes basic economic information current to irrigated agriculture and quantifies the impact of irrigated agriculture on annual household income in the western United States. The study found that the total production (farm gate) value for the 17 states comprising this western US region was about $171 billion in 2011, with an estimated $117 billion tied to irrigated agriculture.

According to the study, the annual direct household income derived from the irrigated agriculture industry is estimated at $64 billion in the western US region. After further analysis of the total direct, indirect, and deduced impacts, researchers determined the total household income impact to be an estimated $156 billion annually.

The paper was developed by the Pacific Northwest Project, working with FFA and IA, to address policy questions raised by senior staff from the EPA's Office of Water about water resources economics.
For info: Dan Keppen, FFA, 541/ 892-6244 or dankeppen@charter.net; White Paper at: www.familyfarmalliance.org/sites/www.familyfarmalliance.org/assets/files/PNP-WesternIrrigationImpact_8-2013.pdf

"CONSERVED WATER" OR

CANAL LINING / INSTREAM FLOW

On September 24, the State of Oregon approved the permanent change in water rights from irrigation to instream flow based on a "conserved water" project by the North Unit Irrigation District (NUID). The first phase of the North Unit Water Supply Program, which lined 4.9 miles of NUID's main canal, conserving Deschutes River water that would otherwise be lost through seepage, was completed in the spring of 2012. This conserved water will now be used on lands that had been irrigated with water pumped from the Crooked River. As a result, up to 80 cubic feet per second (cfs) will remain in stream in the Crooked River past Smith Rock State Park during the summer.

NUID has been working with the Deschutes River Conservancy (DRC) to find a solution to address both the irrigation needs of the farmers and conservation needs of the river. NUID, located near Madras and Culver, serves Central Oregon's farming community. Farmers in this district are the most junior water right holders in the Deschutes basin, meaning they are last in line for water. To ensure that farmers in NUID have sufficient water to grow their crops, the district proactively pursues innovative conservation practices. Though NUID's primary water source comes from the Deschutes River, they also rely heavily on costly water pumped from the Crooked River.

When completed, the multi-phased North Unit Water Supply Program will allow NUID farmers to reduce their reliance on pumped water from the Crooked River and will restore up to 198 cfs of streamflow in the section of the Crooked River running through Smith Rock State Park. With flows as low as 10 cfs, historically this section has suffered from poor water quality and a degraded ecosystem. A win-win opportunity for farmers and fish, the North Unit Water Supply Program supports a strong agricultural economy while permanently improving conditions for fish, wildlife, and recreation.

DRC worked with NUID, The Confederated Tribes of Warm Springs, Portland General Electric, the Bureau of Reclamation and the Oregon Watershed Enhancement Board to produce this innovative solution to a complicated water management problem.
For info: Tod Heisler, DRC, 541/ 382-4077 x19 or tod@deschutesriver.org

INDUSTRIAL STORMWATER US

EPA PROPOSED PERMIT COMMENT PERIOD OPEN

A September 27 announcement by EPA in the Federal Register (Vol. 78, No. 188, pp 59672-50977) opened a 60-day comment period for the agency's proposed reissuance of a National Pollutant Discharge Elimination System (NPDES) general permit for stormwater discharges from industrial activities. The proposed permit will only apply in areas of the country where EPA remains the NPDES permitting authority and has made the permit available for coverage, which includes four states (Idaho, Massachusetts, New Hampshire, and New Mexico), the District of Columbia, Puerto Rico, all other U.S. territories with the exception of the Virgin Islands, facilities operated by federal operators in four states (Colorado, Delaware, Vermont, and Washington), most Indian Country lands, and a couple of other specifically designated activities in specific states (e.g., oil and gas activities in Texas and Oklahoma). However, under the federal Clean Water Act, State-issued NPDES permits for the same categories of industrial activities must be made at least as stringent as EPA requirements.

The stormwater regulations at 40 CFR 122.26(b)(14)(i)-(ix) identify the categories of industrial activities subject to the NDPES stormwater regulations by Standard Industrial Classification, or SIC, code or by a general description of the industrial activities, which are:

- Facilities subject to New Source Performance Standards
- Heavy manufacturing (ii)
- Mining, oil & gas (iii)
- Hazardous waste facilities (iv)
- Landfills (v)
- Recycling facilities (vi)

- Steam electric power plants (vii)
- Transportation industries (vii)
- Sewage treatment facilities (ix)
- Light industry (xi)

These industrial activities were categorized into 29 industrial sectors covered under a single Multi-Sector General Permit (MSGP) permit, with each sector having tailored requirements.

Significant proposed changes include:

- Additional specificity for several of the technology-based effluent limits (i.e., the control measures) for clarity
- A requirement that facilities discharging to a small number of federal Superfund sites notify their Regional EPA office prior to filing their Notice of Intent (NOI)
- Streamlining of Stormwater Pollution Prevention Plan (SWPPP) documentation (i.e., facilities do not have to expound on their compliance with certain effluent limits)
- Public accessibility to SWPPP information, either by posting on the Internet or by incorporating salient information into the NOI
- Electronic submission for the NOI, Notice of Termination (NOT), annual report, and monitoring (waivers may be granted)
- Requirement for pavement wash water discharges to be treated by control measures
- Reduced requirements for inspections (i.e., facilities no longer have to conduct a separate comprehensive site inspection)
- Specific deadlines for taking corrective actions
- Inclusion of saltwater benchmark values for metals
- Inclusion of the Airport Deicing Effluent Limitation Guideline

For Info: For additional information on the MSGP, instructions for submitting comments, or to view or download the complete text of the Federal Register notice, visit EPA's website: www.epa.gov/npdes/stormwater/msgp

NATIONAL WATER CENSUS US CONGRESSIONAL BRIEFING

On September 13, the US Geological Survey (USGS) led a congressional briefing featuring State and regional water stakeholders who spoke about vital uses of comprehensive water information that would be met by the National Water Census called for by the SECURE Water Act of 2009.

Growing populations, increased energy development, and the uncertain effects of a changing climate magnify the need for an improved understanding of water use and water availability. However, no comprehensive and current national assessment of water resources exists.

A report released in April, *Progress Toward Establishing a National Assessment of Water Availability and Use*, fulfilled a requirement under the 2009 law for the Secretary of the Interior to report to Congress on progress made in implementing the national water availability and use assessment program, also referred to as a National Water Census.

"It's true in other fields and no less so for water: you can't manage what you don't measure," said Anne Castle, Department of the Interior Assistant Secretary for Water and Science. "The Water Census will quantify water supply and demand consistently across the entire country, fill in gaps in existing data, and make that information available to anyone who needs it — and that represents a huge step forward on the path toward water sustainability."

The National Academy of Sciences applauded the concept of a Water Census in 2009, suggesting that it would be "an ongoing, effective tool, on a par with the social and economic censuses, that supports national decision making."

"As competition for water grows — for irrigation of crops, for the production of energy, for use by cities and communities, and for the environment — the need for information and tools to aid water-resource managers also grows," said Tony Willardson, Executive Director, Western States Water Council.

"The more accurately we can assess the quantity and quality of our water resources, the better we can know whether our strategies for conserving and improving those resources are actually having the desired beneficial effect," observed Bob Tudor, Deputy Director, Delaware River Basin Commission. Willardson and Tudor were speakers at the briefing.

A Water Census is a complex undertaking, which points to why national water availability and use have not been comprehensively assessed in more than 35 years. Since then, competition for water resources has increased greatly and, in addition to human use, considerably more importance is now attached to the availability of water for environmental and ecosystem needs.

The USGS envisions the Water Census to be a key ongoing activity that, like the population census mandated by the Constitution, supports national decision-making in many different ways.

The resources currently available for this census are finite, however. USGS foresees that estimates of flow at ungaged locations and estimates of evapotranspiration will be among the earliest products of the National Water Census. Providing complete water-use information and adequately assessing the Nation's groundwater resources with respect to water availability will require additional time.

Although the existing data are limited and much work remains to be done, funding over the past two years has allowed important progress. The USGS will continue to work with partner agencies and organizations to maximize the utility of the information for a broad range of uses.

The Water Census is part of an overarching Department of the Interior (DOI) initiative known as WaterSMART (Sustain and Manage America's Resources for Tomorrow). Through WaterSMART, DOI is working to achieve a sustainable water strategy to help meet the Nation's water needs. The Water Census will help inform that strategy.

The USGS is developing plans for the Water Census in coordination with other Federal and non-Federal agencies, universities, and other organizations. Collaboration across agency boundaries ensures that information produced by the USGS can be aggregated with data on other types of physical, social, economic, and environmental factors that affect water availability.

For info: Eric Evenson, Coordinator, USGS National Water Census, 609/

CALENDAR

October 12-19 CO
Interdisciplinary Climate Change Research Symposium, Colorado Springs. La Foret Conference & Retreat Ctr. For info: http://disccrs.org/disccrsposter.pdf

October 14-17 Kenya
International Water Ass'n Development Congress & Exhibition, Nairobi. For info: www.iwahq.org/

October 14-18 NC
2013 Water & Health Conference: Where Science Meets Policy, Chapel Hill. William & Ida Friday Ctr. Sponsored by The Water Institute (UNC). For info: http://whconference.unc.edu/program/

October 15 NE
Changes: Climate, Water & Life on the Great Plains Conference, Lincoln. Cornhusker Hotel. For info: Lorrie Benson, NE Water Center, 402/ 472-7372, lbenson2@unl.edu or http://watercenter.unl.edu/WaterLawConf2013/index.asp

October 15-17 CO
Interstate Council on Water Policy Annual Meeting, Denver. Renaissance Hotel. For info: Peter Evans, Executive Director, phe@riverswork.com or icwp.org

October 15-17 MT
2013 Watershed Symposium, Missoula. Sponsored by Montana Watershed Coordination Council. For info: Kathryn Watson, 406/570-4261 or www.mtwatersheds.org/

October 15-17 CA
Ass'n of Clean Water Administrators CAFO Roundtable 2013, Sacramento. Cal/EPA Headquarters, 1001 I Street. For info: www.acwa-us.org/#!meetings

October 16 OR
Environmental Insurance - Anderson Brothers v. St. Paul Fire & Marine Ins. Co. (Brownbag), Portland. Miller Nash LLP, 3400 U.S. Bancorp Tower, 111 S.W. Fifth Ave., 12-1pm. Presented by Environmental & Natural Resources Section of the Oregon BAR. For info: RSVP: Anzie Nelson, Anzie.Nelson@portofportland.com

October 16 NE
Nebraska Water Law Conference 2013, Lincoln. Cornhusker Hotel. For info: Lorrie Benson, NE Water Center, 402/ 472-7372, lbenson2@unl.edu or http://watercenter.unl.edu/WaterLawConf2013/index.asp

October 16-18 CA
Northern California Tour (Field Trip), Sacramento Valley. Presented by Water Education Foundation. For info: www.watereducation.org

October 17 CA
Integrated Regional Water Management Strategic Plan Workshops, Clovis. Veterans Memorial District. 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

October 18 AZ
Colorado River Conference, Phoenix. Arizona Biltmore. For info: CLE Int'l, 800/ 873-7130 or www.cle.com/LowerBasin

October 20 CO
IMPACT: A Summit on Climate Change, Boulder. University of Colorado, UMC Rm. 235. For info: platform@bouldercountydems.org

October 21 CO
Colorado River Conference, Denver. Grand Hyatt. For info: CLE Int'l, 800/ 873-7130 or www.cle.com/UpperBasin

October 22 CA
Integrated Regional Water Management Strategic Plan Workshops, Temecula. City Hall, Conference 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

October 22-23 OK
Oklahoma Governor's Water Conference, Midwest City. Sheraton Midwest City Hotel & Reed Conference Center. For info: www.owrb.ok.gov/news/waterconference.php

October 23 CA
Integrated Regional Water Management Strategic Plan Workshops, Burbank. Buena Vista Branch Library. 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

October 24 OR
OWRC 2013 Water Law Seminar, Redmond. Eagle Crest Resort. Presented by Oregon Water Resources Congress. For info: April Snell, OWRC, 503/363-0121, aprils@owrc.org or www.owrc.org/calendaritem.php?i=50

October 24 CA
Southern California Water Committee Annual Meeting & Dinner, City of Industry. Pacific Palms Hotel. For info: Kym Belzer, 818/ 760-2121, kbelzer@socalwater.org or www.as-dzine.com/client_proofs/fha/SCWC/SCWC_Annual_Meeting-13.pdf

October 24-25 KS
Kansas Governor's Conference on the Future of Water in Kansas, Manhattan. Hilton Garden Inn. For info: www.kwo.org/Ogallala/Governors_Conference/Governors_Conference.htm

October 28 CO
"Weathering Change" Forum, Denver. Hosted by Denver Water, The National Ski Areas Ass'n, Family Farm Alliance, Colorado Municipal League, Environmental Defense Fund & Climate Central. For info: Alison Omens, 202/ 507-4843 or aomens@outreachstrategies.com; RSVP by Oct. 18

October 28-29 CA
California Water Law Conference, San Francisco. Hotel Nikko. For info: CLE Int'l, 800/ 873-7130 or www.cle.comSanFranciscoCA

October 28-30 OH
Nonpoint Source Monitoring Conference & Workshop: Working Together to Protect & Restore Our Water Resources, Cleveland. Wyndham Cleveland. For info: npsmonitoring.tetratech-ffx.com/?

October 29-30 CA
California Water Plan - Plenary Meeting, Sacramento. Red Lion Hotel Woodlake, 500 Leisure Lane. Presented by California Dept. of Water Resources. For info: www.waterplan.water.ca.gov/materials/index.cfm?subject=oct2913

October 31 CA
Groundwater Law & Hydrology (CA) Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

October 31 OR
Oregon Toxics & Risk Assessment Conference, Portland. World Trade Ctr. Two, 25 S.W. Salmon. For info: Holly Duncan, 503/ 282-5220 or www.elecenter.com

November 1 CA
Stormwater Seminar, Santa Monica. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

November 2-10 Cuba
International Wetlands Research Program & Symposium, Cienaga de Zapata, Matanzas & Havana. Presented by Eco Cuba Network. For info: www.ecocubanetwork.net/wetlands/

November 4 CO
Energy & Environment Conference, Denver. Ritz-Carlton. For info: CLE Int'l, 800/873-7130 or www.cle.com

CALENDAR

November 4-7 OR
AWRA Annual Conference, Portland. Red Lion Jantzen Beach. Sponsored by the American Water Resources Ass'n. For info: www.awra.org

November 4-8 TX
2013 Irrigation Education Conference, Austin. Austin Convention Ctr. Presented by The Irrigation Ass'n. For info: www.irrigationshow.org

November 4-8 Netherlands
International Water Week 2013, Amsterdam. For info: www.internationalwaterweek.com/

November 5-6 DC
2013 American Water Summit, Washington. Presented by Global Water Intelligence. For info: www.globalwaterintel.com

November 6 AZ
Downspot Politics, Upstream Conflict: Contested Legal Geographies of Rainwater Harvesting - Brown Bag Seminar, Tucson. Sol Resnick Conf. Rm., 350 N. Campbell Ave. Presented by Water Resources Research Center. For info: WRRC, https://wrrc.arizo+J137na.edu/

November 6 CA
Mitigation & Conservation Banking Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

November 6-7 TX
2013 Irrigation Show, Austin. Austin Convention Ctr. Presented by The Irrigation Ass'n. For info: www.irrigationshow.org

November 7-8 OR
22nd Annual Oregon Water Law Seminar, Portland. World Forestry Ctr., 4033 SW Canyon Road. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

November 7-8 CA
San Joaquin River Restoration Tour (Field Trip), Fresno. Presented by Water Education Foundation. For info: www.watereducation.org

November 7-8 CA
Direct Potable Reuse Specialty Conference, Newport Beach. Marriott Hotel & Spa. For info: www.watereuse.org/conferences/direct-potable

November 7-8 NV
Renewable Electric Energy Development Institute, Las Vegas. JW Marriott Hotel. Presented by Rocky Mt. Mineral Law Foundation. For info: www.rmmlf.org

November 7-8 CA
Climate Action Planning & Implementation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

November 7-8 AZ
NGWA Pillars of Groundwater Innovation Conference, Phoenix. Presented by National Ground Water Ass'n. For info: www.ngwa.org/Events-Education/conferences/Pages/5082nov13.aspx

November 8-10 AZ
Theis Conference: "Accelerating the Use of New & Developing Tools & Technologies for Groundwater Monitoring, Modeling & Management, Phoenix. Presented by National Ground Water Ass'n. For info: www.ngwa.org/Events-Education/conferences/Pages/5100nov13.aspx

November 9 OR
Celebration of Oregon Rivers - 11th Annual, Portland. Ambridge Event Ctr., 5-9:30pm. Presented by WaterWatch of Oregon. For info: John DeVoe, 503/ 295-4039 x1, john@waterwatch.org or www.waterwatch.org

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 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 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/

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

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

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 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/

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