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INDIAN WATER RIGHT NEGOTIATIONS

INTERIOR'S CONSIDERATIONS WHEN APPOINTING FEDERAL NEGOTIATION TEAMS

by Duane Mecham, Office of the Regional Solicitor
US Department of the Interior (Portland, OR)

INTRODUCTION

West of the 100th Meridian, a water resource issue or dispute rarely arises that does not implicate Indian rights or interests in water. From claims for instream flow protections for tribal fisheries in the Northwest, to securing irrigation water supplies for new agricultural development in the Southwest, or to providing adequate municipal water supplies for all tribal members, the docket of pending tribal water issues remains large. The vast majority of these tribal water issues arise because — even as the full scope of most tribes' rights to water remains unresolved — existing water supplies to which tribes arguably have a right have been and continue to be allocated to non-tribal water uses.

Since at least the 1908 decision in *Winters v. United States*, 207 U.S. 564 (1908), tribes, states and the federal government have been working in various forums to resolve outstanding tribal reserved water right claims. In more recent times, this effort has shifted from adversarial litigation to multi-party negotiations that seek to bring the relevant governments and other stakeholders to the table.

Over the past three decades, the United States, primarily through the Departments of the Interior and Justice, has been an active participant in numerous Indian water right negotiations. The federal government is, however, uniquely positioned with respect to Indian water negotiations. Whereas an individual tribe will be focused on its own water claims, and a state will be focused primarily on the claims of those tribes and tribal reservations located within its boundaries, the federal government, as trustee for Indian tribes, is presumably a necessary participant in all Indian water negotiations. With several hundred federally recognized tribes and reservations, ensuring effective federal participation in all negotiations that may be initiated would be a daunting task.

With ever limited federal resources available for potential tribal water negotiations, the Department of the Interior (Interior) recently took an important step to ensure that federal resources are properly marshaled and prioritized. On February 3, 2010, Interior published a memorandum ("February 2010 Memorandum") identifying and explaining ten key factors that it would consider when determining whether to appoint a new federal negotiation team for a particular Indian water right negotiation. These "New Team Factors" — compiled in a single source for the first time — establish a rational framework for addressing requests from tribes and states for new federal negotiation teams. Accordingly, it is important that states, tribes, and other stakeholders contemplating requesting a federal team have a working knowledge of the New Team Factors.

This article, after a brief background on tribal water right negotiations and federal involvement in these negotiations, provides a detailed review of the New Team Factors.

Tribal Negotiation Teams

State Adjudication

Trustee's Role

Litigation v. Negotiation

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

Editors: David Light
David Moon

Phone: 541/ 343-8504
Cellular: 541/ 517-5608
Fax: 541/ 683-8279
email:
thewaterreport@yahoo.com
website:
www.TheWaterReport.com

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

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

INDIAN WATER RIGHTS: THE TREND TOWARD NEGOTIATIONS

Since at least the time of the *Winters* decision, and gaining ever greater momentum during the 20th Century, virtually every Western state, numerous different Indian tribes and the United States have been meeting in federal and state courts to resolve outstanding Indian reserved water right claims. While a number of the earlier tribal water right cases were heard in federal court, the effort to resolve these claims gained further impetus as a result of states initiating comprehensive general stream adjudications in state courts. In compliance with the federal McCarran Amendment, 43 U.S.C. sec. 666, states have jurisdiction to determine all federal and tribal reserved water right claims within their borders. *See, e.g*., *Arizona v. San Carlos Apache Tribe*, 463 U.S 545 (1983); *State ex rel. Greely v. Confederated Salish & Kootenai Tribes of the Flathead Reservation*, 712 P.2d 754 (Mont. 1985).

The role of the United States with respect to adjudicating Indian reserved water rights is relatively straightforward: as trustee, the federal government has an obligation to appear in cases where jurisdiction to adjudicate tribal reserved water rights has been established, and must assert and defend all credible claims for tribal water rights within the river basin being adjudicated. Further, this assertion and defense of tribal water claims is not an abstract legal exercise; through the Departments of Justice and the Interior, the United States must retain a wide range of experts to provide technical foundation for claims for water for instream flows, future irrigation of tribal lands, or domestic and various municipal water rights. Studies can take years to complete and experts are subject to the close scrutiny of non-federal parties. As explained below when discussing the New Team Factors, this federal litigation role is also central to the federal role in tribal water negotiations.

In cases involving multiple parties and difficult legal issues, both state and federal courts have made a valiant run at resolving tribal water claims through litigation. *See, e.g., Arizona v. California*, 373 U.S. 546, 600 (1963); *Washington Dep't of Ecology v. Yakima Reservation Irrigation District*, 850 P.2d 1306 (Wash. 1993). By the end of the 1970s, however, the inherent limitations of proceeding exclusively to a litigated result became more apparent to the participants in these cases. Beginning in earnest in the 1980s, states became proactive in seeking to incorporate alternative dispute resolution pathways in state court adjudications by providing measures such as automatic stays of litigation for negotiations to proceed. *See*, Colby et al., *Negotiating Tribal Water Rights – Fulfilling Promises in the Arid West*, 2005, University of Arizona Press.

INDIAN WATER RIGHT NEGOTIATIONS: FEDERAL PARTICIPATION

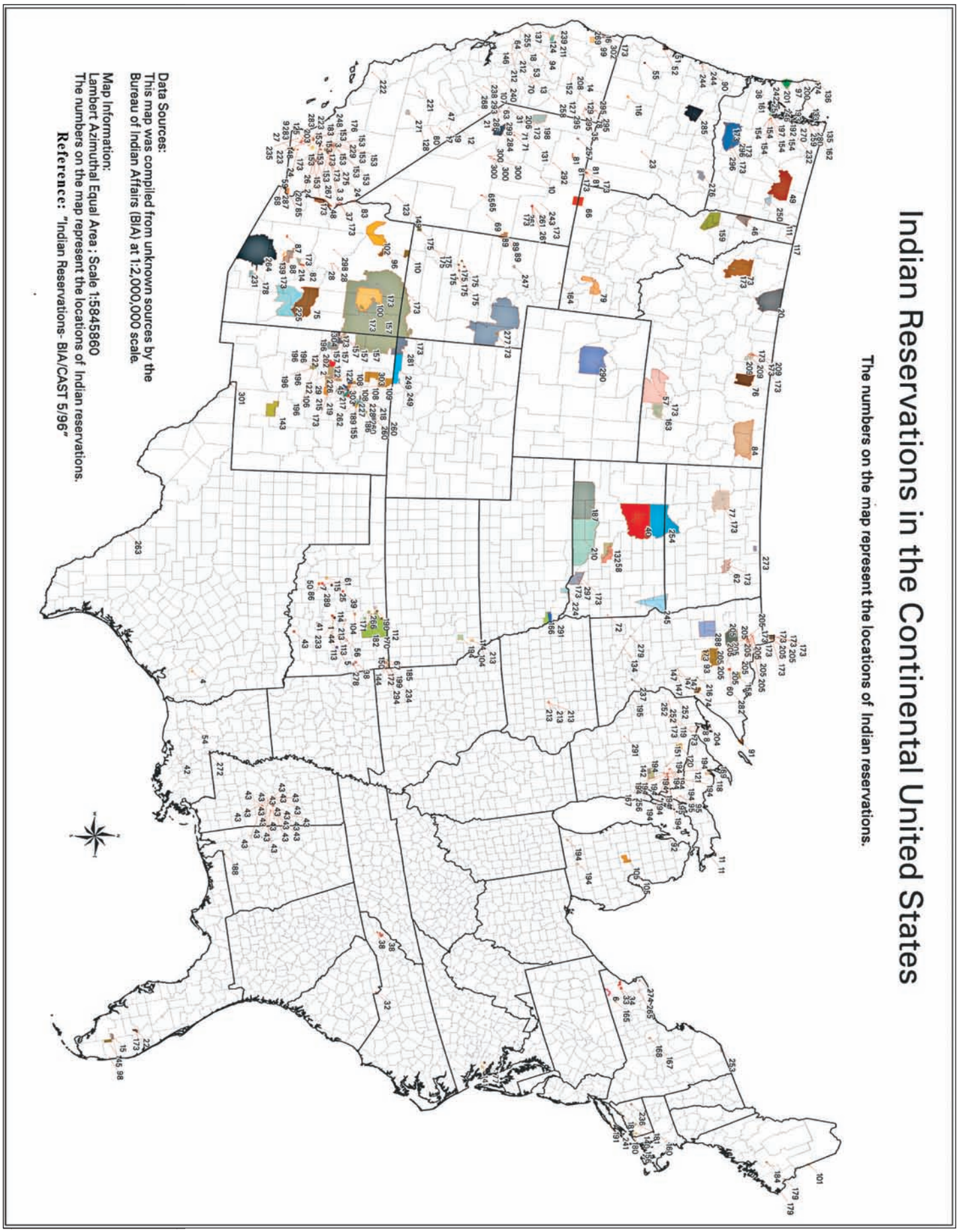
Providing for stays in the adjudications has allowed parties to participate in negotiations without prejudicing their litigation case. With this breathing room, the parties have dedicated personnel and resources to the negotiations instead of litigation. The Interior and Justice Departments have been active participants in several Indian water right negotiations over the past three decades.

As negotiations became more active and frequent, Interior began to establish protocol and other ground rules for federal participation in the negotiations. In 1990, Interior adopted the *Criteria and Procedures for the Participation of the Federal Government in Negotiations for the Settlement of Indian Water Rights Claims*, 55 Fed. Rg. 9223 (March 12, 1990). The *Criteria and Procedures* remain the basis for federal involvement in Indian water right negotiations. To provide overall policy oversight on proposed Indian water settlements and related matters, Interior established the Working Group on Indian Water Settlements, which is comprised of all assistant secretaries and the Solicitor. Currently, the Chair of the Working Group is Letty Belin, Counselor to the Deputy Secretary. In addition, the Secretary's Indian Water Rights Office, directed by Pamela Williams, oversees over 40 federal teams concerned with Indian water rights negotiations and other Indian water issues. Other important aspects of the federal participation will be highlighted in the course of discussing the New Team Factors below.

NEW TEAM FACTORS

Currently, there are 17 federal negotiation teams appointed under the auspices of Interior's working group on Indian water settlements. Interior continues to receive several requests from tribes, states, and others to appoint additional teams.

On February 3, 2010, the director of the Interior Secretary's Office of Indian Water Rights, Pamela Williams, issued a memorandum (February 2010 Memorandum) setting out ten factors that Interior would consider when addressing requests that a federal Indian water rights negotiation team be appointed. The February 3, 2010 memorandum is available by contacting *The Water Report* to request a copy (541/ 343-8504 or TheWaterReport@yahoo.com). The memorandum reports that "[O]n January 20th, 2010, the [Interior Department's] Working Group on Indian Water Settlements met and adopted the following factors to be considered in appointing new [federal] negotiation teams."



Tribal Negotiation Teams

Memorandum Guidance

The February 2010 Memorandum notes that "[m]any of these factors have been used by the [Interior] Department in its decision making in the past." This is the first time, however, that these New Team Factors have been collected into a single Departmental guidance document. The memorandum also provides supplementary information for each factor that explains the relative importance of the factors and provides guidance on how they will be applied. For anyone contemplating requesting the appointment of a federal team, the author recommends a careful review of the February 2010 Memorandum. Most importantly, the February 2010 Memorandum clarifies that no single factor should be considered determinative in the decision making process and that Interior will maintain maximum flexibility in team appointment decisions.

With this general principle in mind, this article introduces and briefly reviews each of the ten New Team Factors. As part of this introduction and to illustrate the application of the factors, the article also refers to the recent experience of the Confederated Tribes of the Umatilla Reservation (Umatilla Tribes), which along with other entities submitted to Interior in 2012 a request for the appointment of a federal team to participate in the negotiation of the Umatilla Tribes' water claims.

Factor No. 1:
Is there a pending general stream adjudication or other litigation?

Threshold Question

This first factor poses a threshold question for the federal government when considering whether to appoint a new federal negotiation team. As noted above, if a general stream adjudication has been initiated with jurisdiction to adjudicate tribal water claims, the United States as trustee must be on point to assert and defend those claims until final judgment is reached, whether or not the claims are negotiated. Over the years, it has been standard practice that, when settlement talks are proposed to resolve tribal water right claims pending in an adjudication, Interior will appoint a federal negotiation team. However, other key factors discussed below could influence the timing of the team appointment, such as whether the issues and timing are ripe for active negotiations.

Settlement Finality

The preference for negotiating Indian water right claims already pending in an adjudication makes sense because a settlement — once reached — will be brought to the adjudication court for final judicial approval as the tribe's adjudicated water right. This right will in turn be included in the final enforceable water rights decree for the concerned water basin. With this result, the federal government will have met its trust obligations to see the tribal claims to a final judicial determination. As stated in the February 2010 Memorandum, "the finality of settlement demand by the Department as the trustee of Indian resources can best be achieved by the entry of a final decree in a general stream adjudication."

Tribal Claims

In an adjudication, water right claimants are required to assert their entitlements to water rights and are allowed to object to other claims. This judicial review of claims serves to sharpen the respective parties' sense of the relative risks of pursuing or litigating against the tribal claims. Often, the United States and the tribe are asserting the earliest priority date within the basin and claiming rights to significant amounts of additional water sources to meet future or previously unmet tribal water rights. If successful in the adjudication, these tribal rights do not legally negate other junior water rights, but could likely curtail the water supplies available to meet those junior rights during times of water shortages.

No Pending Litigation

The February 2010 Memorandum makes clear that the lack of a pending adjudication is not in and of itself a bar to appointment of a federal negotiation team. What is further clarified, however, is that if no adjudication is pending, the parties will still have to factor in the need to reach a final settlement of the tribal claims as part of the negotiation. The implications of a lack of a pending adjudication were recently addressed as part of Interior's consideration of a request to appoint a federal negotiation team for the Umatilla basin.

The Umatilla Reservation, created by treaty in 1855, is located within the Umatilla River basin in northeast Oregon and is the homeland of the Umatilla Tribes. Over the past several years, the Umatilla Tribes, in concert with local parties, laid the groundwork for a negotiation of the Tribes' water right claims. There is not, however, a pending general stream adjudication, and, in fact, there is little likelihood that one will be initiated anytime soon: water rights in the Umatilla basin were adjudicated in the early 1900s and the State of Oregon's legal position is that all of the Umatilla Tribes' water rights were adjudicated at that time. Though the Umatilla Tribes and the federal government do not agree with the Oregon's position, there is little prospect of any party initiating a new adjudication.

Reclamation Contracts

Oregon has acknowledged that the Umatilla Tribes have inadequate water resources and joined in the Tribes' request for a federal negotiation team. Tribal, State, and federal representatives, working together, identified available mechanisms that could allow the parties to reach a final, enforceable settlement, such as State law authority to enter into agreements with tribes and the potential that at least some of the Umatilla Tribes' water rights could be held as contracts in a nearby Bureau of Reclamation irrigation project. This

Tribal Negotiation Teams

effort provided Interior with enough justification to appoint a federal negotiation team even without the prospect of a basin-wide adjudication.

Factor No. 2:
Is there an identified mechanism to bind necessary parties to the settlement, such as a court decree in a general stream adjudication?

Binding Settlement

As the February 2010 Memorandum notes, Factor No. 2 is closely related to the issue of finality discussed above, and mechanisms to bind parties are inherently built into the adjudication process. To date, Indian water right negotiations outside the scope of a pending general stream adjudication have been very rare. There is the potential, however, that states and other parties, recognizing the great expense and energy associated with recent basin-wide adjudications, will be turning to Interior to negotiate claims without a pending adjudication. In the absence of a pending adjudication, this factor will be given close scrutiny. This was the case with the recent consideration of the Umatilla Tribes' request discussed above, and was the prime motivation for the parties to that negotiation to carefully consider the full range of legal mechanisms that could be implemented and that would have the same functional effect of binding the parties normally found in an adjudication.

Factor No. 3:
[What is] the scope of the detriment being suffered by the tribe and immediacy of harm to trust resources?

Pressure to Develop

One would be hard-pressed to find an Indian reservation where adjoining non-Indian water resource development has not impacted tribal water and natural resources. The February 2010 Memorandum states that the "scope of detriment and necessity for immediate action should be carefully considered." In many cases there is pressure to develop the few remaining water resources within the basin, even if the rights to those resources are clouded by claims of tribal ownership. This competition for limited water sources can significantly compound the difficulty to reach settlement of the unresolved tribal water claims in the basin, and is likely to be weighed as significant as Interior addresses this factor.

Factor No. 4:
Are necessary parties committed to the settlement process?

Local Stakeholders' Commitment

As with politics, all Indian water settlements are local. The February 2010 memorandum notes that "[i]n order for a settlement to be successful, the primary water users in the basin must be interested in joining a settlement process and willing to compromise and seek consensus." To ensure a high level of commitment to negotiations, Interior, since issuance of the *Criteria and Procedures*, has adhered to the requirement that it will only "consider initiation of formal claims settlement negotiations when the Indian tribe and non-Federal parties involved have formally requested negotiations of the Secretary of the Interior." With the potential of being involved in several negotiations at any given time, it is imperative that Interior have assurances from the local parties that negotiations can be productive.

Traditionally, in situations where an adjudication has been initiated, the "necessary parties" are those who have filed water claims in the adjudication and who have standing to contest tribal water right claims. These parties are critical because, if there is not agreement among the claimants who are aligned against the tribal claims, any settlement will be subject to challenge in the adjudication court. If there is not a pending adjudication, the tribe proposing a federal negotiation team may have a higher bar to meet when identifying and confirming that other interested and affected parties are committed to the process.

Factor No. 5:
What is the level of factual and legal development of the tribal water claim?

Claims Development

As previously discussed, the United States as trustee must assert and defend tribal water right claims in a general stream adjudication, and this obligation includes the investment of significant legal and technical resources to support the claims. Turning to negotiations, the February 2010 Memorandum points out that "[b]efore the Department can gauge its own position in settlement, we must have some sense of the extent of the trust resource (e.g., the tribe's water rights) including the factual and legal underpinnings of the tribe's claims. Some level of claims development is also necessary for the tribe itself to assess potential settlement opportunities."

Often, this "claims development" has been done in the course of an adjudication. If, however, parties wish to negotiate at the start of an adjudication, or if there is not a pending adjudication, parties requesting a federal negotiation team will need to have specific plans on how to ensure that there can be adequate development of the claims in the negotiations.

Tribal Negotiation Teams

Supply Study

The parties preparing to negotiate the Umatilla Tribes' claims in northeast Oregon faced this issue some years ago. The Bureau of Indian Affairs and the Umatilla Tribes had prepared some studies which, although not exhaustive, did address current and future Tribal consumptive water uses. The Umatilla Tribes also had invested their own resources and had worked with federal and state agencies to develop hydrological and biological information to support Tribal claims for instream flows for their on- and off-Reservation treaty fisheries.

Finally, the Umatilla Tribes took the additional step in 2007 to request that the US Bureau of Reclamation prepare a basin-wide water supply study to examine all existing and potential water sources within the basin that could be considered for the negotiations. This study was completed in 2011. Together, this body of information provided a solid sense of the technical and legal underpinnings of the Umatilla Tribal water claims.

Non-Federal Cost Share

Factor No. 6:
Are the parties willing and able to commit to settlement cost sharing?

Interior's *Criteria and Procedures* make clear that the Department (and, by extension, the Administration) takes the position that there must be non-federal funding for settlement costs. Significant benefits accrue to non-federal and non-tribal entities in Indian water settlements. For example, virtually every settlement explicitly provides exemptions and protections for existing non-Indian water users holding state-law based water rights. Absent settlement, these rights likely would be junior to the tribal water rights. In addition, new or improved water resource projects, such as new irrigation facilities, often are proposed as part of an Indian water settlement, and these new projects often benefit both tribal and non-tribal water users. An appropriate non-federal contribution to these costs will be part of the negotiations.

That said, the issue of what should be the proper level of non-federal cost share is difficult to determine at the outset of a negotiation when the federal government is contemplating appointment of a federal negotiation team. Nonetheless, Interior will be looking for acknowledgement and commitment from the other parties that non-federal cost-share will need to be part of the negotiated solution.

Public Interest

Factor No. 7:
What is the level of public interest in settlement (State, local, congressional)?

Implicit in this factor is the fact that virtually all Indian water settlements — to become completely effective — require the legislative approval of all three involved governments. In many instances, as happened in the recent request for a federal team for Umatilla water right negotiations, members of the concerned state's Congressional delegation will send to the Secretary letters of support for the appointment of a federal team. Also, as noted in the February 2010 Memorandum, this evaluation is closely related to Factor No. 4, above, regarding committed parties.

Dispute Resolution

Factor No. 8:
Is it likely that the dispute can be resolved or is it anticipated that lengthy negotiation will result?

Several factors can influence the timeline of what ultimately will be a successful Indian water right negotiation, although these timeframes are almost always measured in years. It is the sense of the author that in the future, the weight that Interior gives to this factor will be greatest in situations where, all other things equal, circumstances appear to be ripe for reaching a settlement in the relatively near term if the federal government were to become engaged. In their recent request for a federal team, the Umatilla Tribes presented a good case that, due to their and other parties' efforts *prior* to the negotiations, settlement could be achieved within two years. These prior efforts included: narrowing-down the issues; identifying likely water sources for new tribal water rights; and engaging all appropriate stakeholders.

Other Issues: ESA

Factor No. 9:
Are there other Departmental interests or disputes that might also be resolved?

The question posed in this factor recognizes the breadth of potential water resource issues and disputes that may be raised or proposed for resolution in the course of a tribal water right negotiation — plus the fact that this broad range of issues can affect other federal programs or interests. The February 2010 Memorandum explains that if "other Department interests can be resolved simultaneously with an Indian water rights settlement, that is a factor that should be taken into consideration."

While the range of potential federal interests is broad, one emerging interest is worthy of particular notice. Throughout the West, the number of aquatic species listed for protection under the federal Endangered Species Act (ESA) continues to grow. The issue of how resolving tribal water rights might impact ESA-listed species (either positively or negatively) is one that has to be integrated into virtually

Tribal Negotiation Teams

Federal Staffing

every Indian water negotiation. Interior has taken great strides to include on its Indian water negotiation teams individuals from the US Fish & Wildlife Service and, as appropriate, the National Marine Fisheries Service (part of the Department of Commerce) to assist with those issues. This development better ensures that ESA issues can be factored into the negotiations in a timely way.

Factor No. 10:
Are Departmental resources, both personnel and financial, available to support the negotiation?

Within Interior, only a small handful of employees within the Secretary's Indian Water Rights Office are dedicated full time to Indian water right negotiations, and these employees must deal with a full range of issues for all settlements. Interior, in establishing teams, looks to all of its bureaus to staff the teams as they are established. To the extent available, most funding to support federal negotiations comes from the Bureau of Indian Affairs and the Bureau of Reclamation. As the roster of new federal teams continues to grow, these resources will continue to be stretched.

CONCLUSION

The accelerating trend toward resolving outstanding Indian water right claims through negotiation is a welcome one. As this trend continues, and the federal government receives increasing numbers of requests to appoint federal negotiation teams, considerations of how to prioritize federal resources for this effort will become paramount. The New Team Factors, in combination with the *Criteria and Procedures*, provide to non-federal parties a clearer understanding of the proper role and responsibilities of the federal government in the negotiations. For tribes and other parties contemplating settlement negotiations, the publication of the New Team Factors by Interior provides important guidance for preparing to make a case to the Department that their negotiations have matured to the point that a federal negotiation team is warranted.

For Additional Information:
Duane Mecham, US Department of the Interior Office of the Regional Solicitor
503/ 231-6299 or duane.mecham@sol.doi.gov

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

Conjunctive Use

Coordinated Use

Recharge Purposes

Underground Reservoirs

Influential Factors

CONJUNCTIVE USE IN CALIFORNIA'S CENTRAL VALLEY

MIXED RESULTS AFTER DECADES OF GROUNDWATER BANKING

by Jennifer Spaletta, Spaletta Law PC (Lodi, CA)

INTRODUCTION

California's Central Valley represents a grid of surface water delivery infrastructure overlying overdrafted groundwater basins. Implementing conjunctive use of groundwater and surface water to maximize supplies seems like an obvious solution to improve water supply reliability. Yet, conjunctive use and groundwater banking projects up and down the valley have met with mixed success. This article explores the attributes that have made some projects successful and others slow to get off the ground.

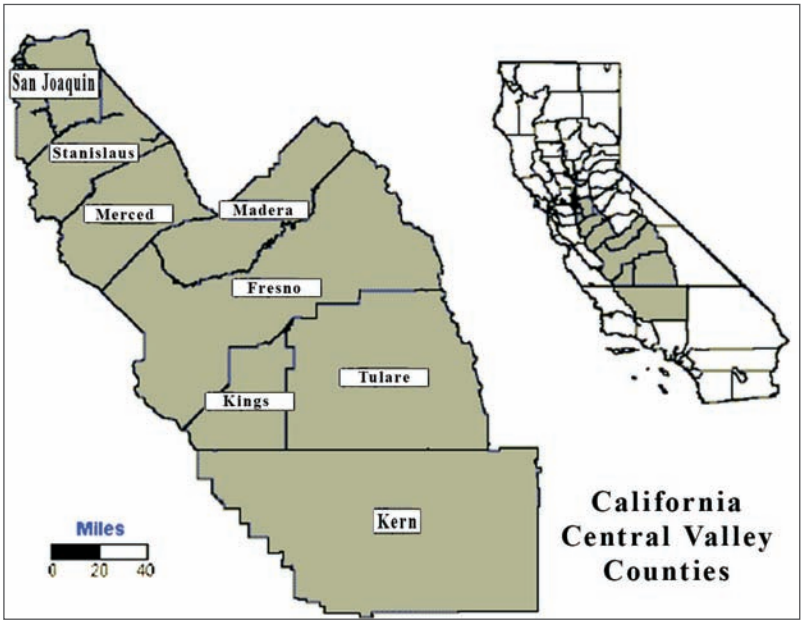
"Conjunctive use" as used in this article refers to the coordinated managed use of both groundwater and surface water resources in an area. Examples of conjunctive use projects include: (1) "in-lieu recharge" projects in which surface water is provided to farmers — who would otherwise pump groundwater — to effectuate conservation in the area aquifer of the quantity of water that would have been pumped absent the surface water provided by the project; or (2) "direct recharge" projects in which surface water is directly recharged into a groundwater basin through spreading basins or injection wells.

Aquifer recharge purposes may include any or all of the following:

- Correcting overdraft that has already occurred
- Repelling saline intrusion that is damaging the aquifer
- Storing surface water in wet years for later use in dry years by local pumpers
- "Banking" water for an outside entity, pursuant to an agreement that will allow the banking customer to withdraw water for later use for a fee

Overdrafted groundwater basins in California's Central Valley represent vast reservoirs for potential storage of water that can compliment surface water storage facilities to maximize conservation yield. Yet, not every overdrafted groundwater basin is being used for this purpose and some are being used more than others. In a wet year, when hundreds of thousands of acre-feet of water flow out to sea through the Bay, many Californians scratch their heads and wonder why we aren't doing more to capture and store these flood flows underground for later use. The devil — of course — is in the details. While the concept is simple, the mechanics of actually designing, financing, and operating conjunctive use projects is challenging. The level of difficulty also depends on where you are in the Central Valley. Geography, local politics, existing infrastructure, and sometimes just the sheer will of the project proponents can make the difference between a project that is planned versus a project that becomes reality.

While there are dozens of examples of local conjunctive use efforts in the Valley, this article will contrast efforts in Kern County, in the southern part of the Central Valley, and San Joaquin County, in the northern part of the Central Valley.



Conjunctive Use

TWO CASE STUDIES: KERN COUNTY & SAN JOAQUIN COUNTY

By the Numbers

Kern County covers over 8,000 square miles in the southern part of the Central Valley and houses a population of about 850,000. The economy is based on value-added agriculture with leading crops of milk, grapes, citrus, almonds, and carrots (www.kern.ca.us).

San Joaquin County covers over 1,390 square miles in the northern part of the Central Valley and houses a population of about 700,000. The economy is also based on value-added agriculture with leading crops of milk, grapes, walnuts, and almonds (www.san-joaquin.ca.us).

Overdrafted Aquifers

Overdrafted groundwater basins underlie the valley floor portion of each county. The Kern County subbasin in Kern County has an estimated remaining groundwater supply of 40,000,000 **a**cre-**f**eet (AF). The dewatered portion of the aquifer has the potential to store 10,000,000 AF. Average basin inflow is 1,534,000 AF/year and average basin outflow is 1,400,300 AF/year. Fifty-five percent (843,000 AF) of the average basin inflow comes from direct water recharge projects. (*See* www.water.ca.gov/groundwater/bulletin118/update2003.cfm).

Inflow/Outflow

The Eastern San Joaquin subbasin underlying San Joaquin County (and parts of two adjacent counties) has an estimated groundwater storage capacity of 42,400,000 AF with a total aquifer volume of 579,900,000 AF. Average basin inflow is 738,069 AF and average basin outflow is 809,321 AF, for an average annual overdraft of about 70,0000 AF. (*See* www.water.ca.gov/groundwater/bulletin118/update2003.cfm). The average basin inflow from direct recharge projects is less than 5,000 AF/yr in San Joaquin County, although districts in the County, as in Kern County, provide surface water to accomplish in-lieu recharge.

Local Conjunctive Use Projects

Geography

Water users in both San Joaquin County and Kern County have to some extent utilized conjunctive use on a local basis for decades. Both counties are adjacent to the Sierra Nevada Mountains. In Kern County, the Kern River flows down from the mountains and runs westward through the County, eventually terminating in an area of the valley known as Tulare Lake (which is not an actual lake except during extreme flood events). In San Joaquin County, three main rivers (the Mokelumne, Calaveras, and Stanislaus) and several smaller streams also flow westward from the mountains through the county, eventually emptying into the Bay Delta. River flows levels vary widely from year-to-year — making it impossible for water users to rely solely on surface water.

Direct Recharge

Water users with superior (senior) rights to these river systems rely primarily on surface water while those with no, or junior rights, either rely on groundwater or have joint water delivery systems capable of switching from groundwater to surface water when surface supplies are available. However, maintaining joint delivery systems is expensive, which is particularly burdensome for farms that are smaller in size. Further, farms that are not located close to rivers cannot be served with surface water without constructed canals and pipelines. The marginal cost of these conveyance facilities increases, per acre-foot of water that they will carry, when they can only be used intermittently in wetter years.

Direct Recharge in Kern County
Spreading Basin photo courtesy of Rosedale Rio Bravo Water Storage District

This reality led water districts in both San Joaquin and Kern Counties to investigate ways that they could directly recharge groundwater in wet years with surplus surface water supplies, without relying on farmers to use the surface water to accomplish "in-lieu" recharge. Districts in both counties have implemented direct recharge projects, although the projects in Kern County are substantially larger than those in San Joaquin County.

In Kern County, districts accomplish direct recharge by spreading surplus surface water in the alluvial fan of the Kern River and in large "spreading basins" (i.e., lands hemmed in with constructed berms to hold water) that collectively cover several thousand acres. Landowners and commercial and municipal groundwater users in Kern County districts have financed the cost of these direct recharge facilities in part through groundwater extraction fees.

Conjunctive Use

Groundwater Use Fees

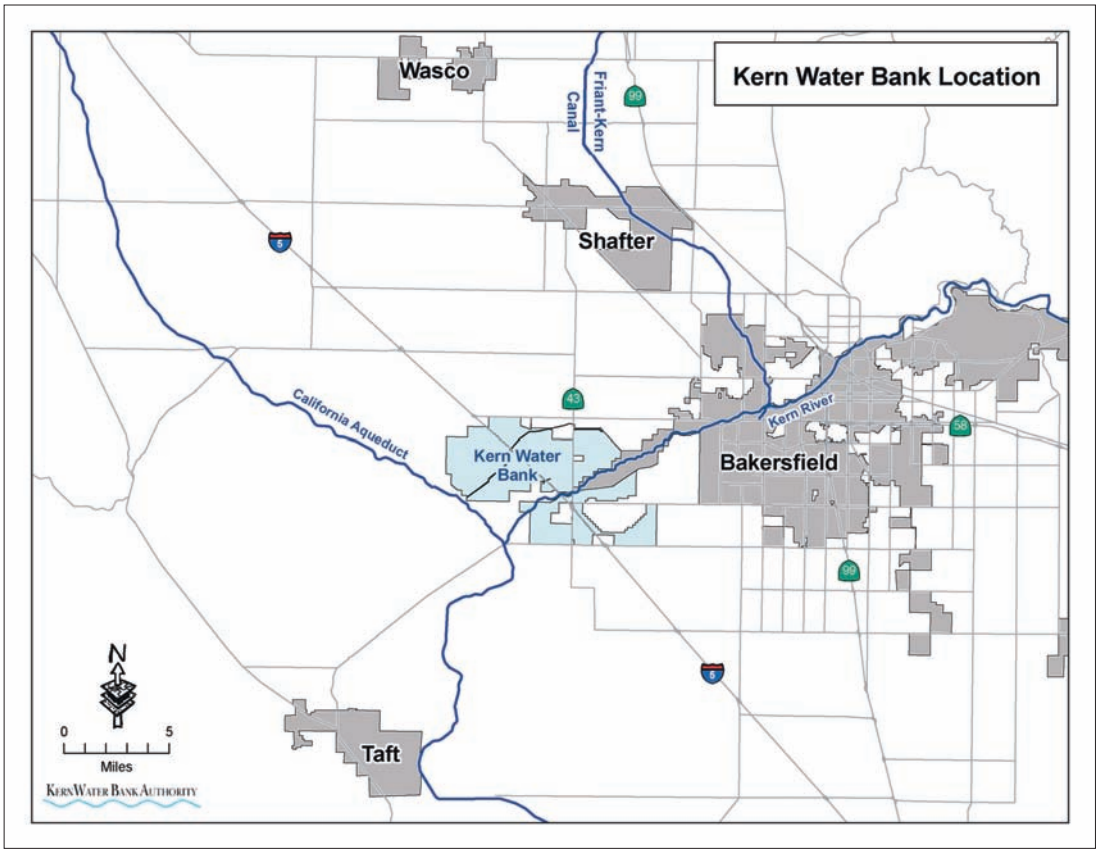
In San Joaquin County, direct recharge efforts have occurred on a much smaller scale. Two districts have constructed small spreading basins for recharge that collectively cover less than 100 acres. The districts also rely on conveying water through unlined canals and stream channels to accomplish recharge. To date, groundwater users in San Joaquin County have been reluctant to pay groundwater extraction fees to finance the cost of more groundwater recharge efforts. In one district in San Joaquin County in 2009, voters sponsored an initiative to repeal a groundwater charge that would have funded groundwater recharge projects designed to ensure the district fully utilized a water right that was at risk of loss due to non-use.

Groundwater Banking Projects

San Joaquin County and Kern County have both extensively investigated groundwater banking involving interests outside their basins, but only Kern County has made its groundwater banking projects a reality.

Kern Water Bank

While there are several groundwater banking programs in Kern County, the Kern Water Bank is one of the largest. The Kern Water Bank is operated by the Kern Water Bank Authority, which is a public agency known as a Joint Powers Authority. The Authority's members include water districts, a water agency, and a mutual water company. The Kern Water Bank operates 7,000 acres of recharge ponds on both sides of the Kern River, which can recharge 30,000 to 72,000 AF of water per month. The Kern Water Bank enters into agreements with outside parties to store water in the bank for a fee. These fees are used to pay for bank operations as well as infrastructure and improvements that can be used by water users in the member districts.



Adapted from Kern Water Bank website: www.kwb.org]

Pilot Project Discontinued

In San Joaquin County, groundwater banking is discussed as an element of the County's groundwater management plan. (*See* www.gbawater.org/_pdf/Groundwater%20Management%20Plan%20Final.pdf). Yet, to date, the County has not fully implemented a groundwater banking project. In 1999 the County conducted one pilot project with an outside interest, East Bay Municipal Utility District (EBMUD), to directly recharge a small quantity of water for EBMUD with the intention of later extraction. The project evaluated the effectiveness of direct recharge using an injection well and determined that the injected water remained in the vicinity of the well and, thus, could be later extracted. However, the project was abandoned before the extraction occurred. While the County continues to investigate additional banking projects, none have actually occurred.

Conjunctive Use

Delivery Infrastructure

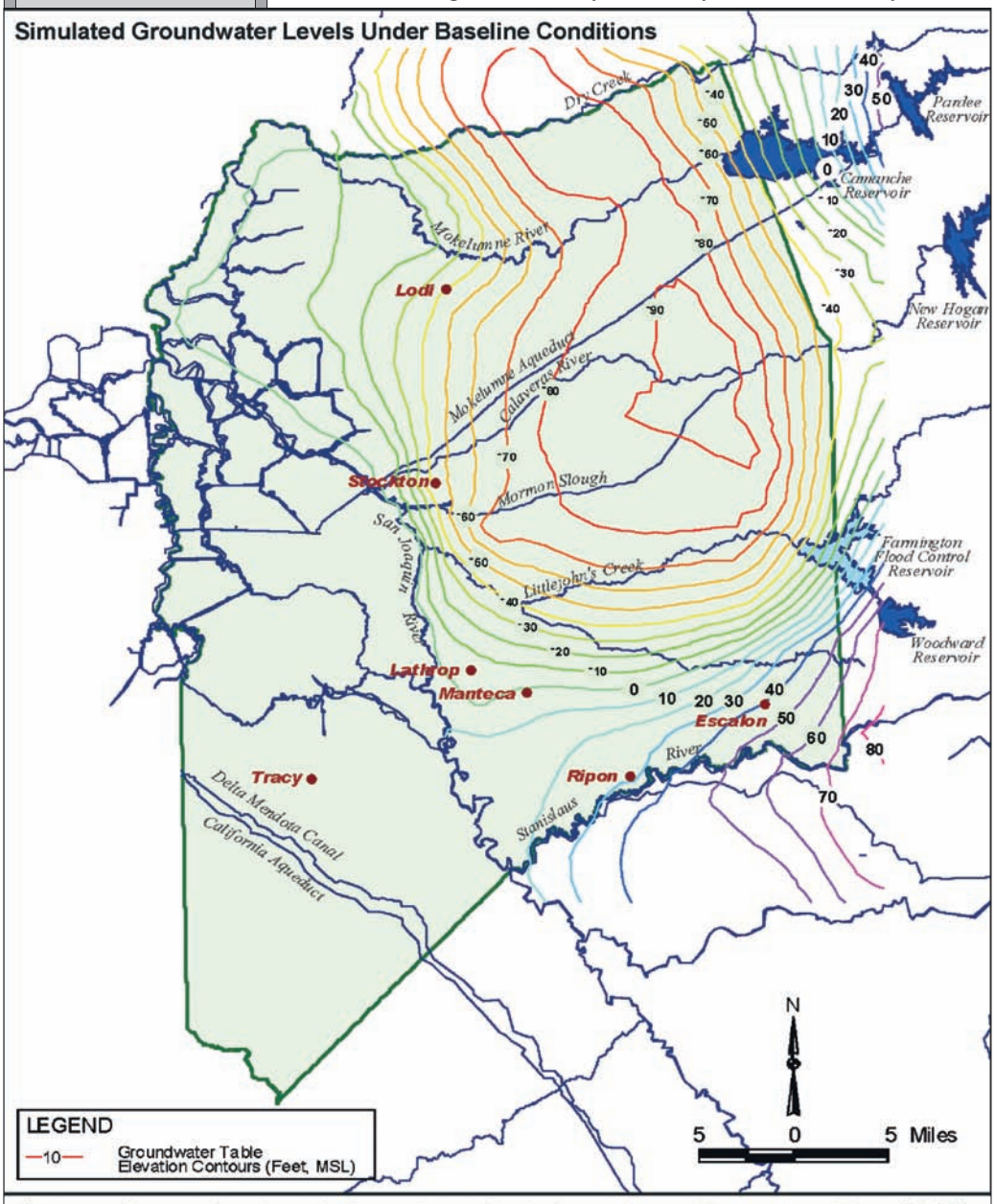
Facility Access

The Importance of Plumbing

One reason for the marked difference in the scale of conjunctive use and groundwater banking programs in Kern County versus San Joaquin County is "plumbing" — i.e., differences in the extent and location of major water delivery infrastructure that connects water supplies in different parts of the county and water supplies from outside the county to the county.

California's Central Valley has two major water supply conveyance projects: the federal Central Valley Project (CVP) and California's State Water Project (SWP). The plumbing for these two projects provides a critical asset for conjunctive use programs in Kern County. CVP's Friant-Kern Canal runs along the eastern edge of the valley in Kern County, providing delivery of wet-year water for groundwater recharge. SWP's California Aqueduct runs along the western part of the valley in Kern County, providing delivery of surface water from the SWP and the ability to convey recovered (stored) groundwater south, to the greater Los Angeles metropolitan area. Kern County's physical access to the CVP and SWP, combined with the sheer number of other water users in the State with similar access to the same system, enables Kern County to market to numerous groundwater banking partners who can use water exchanges in the SWP or CVP to facilitate the "put" and "take" of water in and out of Kern County water banks.

Kern County' water agencies have also constructed a network of canals and pipelines that connect virtually all of the surface and groundwater facilities in the County to the SWP and CVP, and to each other, further increasing the flexibility of their system for in-county water movement.



Source: *Eastern San Joaquin Groundwater Basin Groundwater Management Plan* (2004)

By contrast, the conveyance facilities of the CVP and SWP do not overly the overdrafted groundwater basin (which runs north-south through eastern San Joaquin County) as they do in Kern County. San Joaquin County is located adjacent to the Bay-Delta where the Sacramento and San Joaquin Rivers converge and flow out to sea through the estuary. SWP and CVP conveyance facilities begin at the southern end of the Delta and run southward. Surface water supplies available to eastern San Joaquin County come from three rivers that originate in the Sierra Nevada Mountains and flow westerly into the Delta. While it is physically possible to move surface water from eastern San Joaquin County down these streams, through the Delta, and then south through the CVP and SWP canals, conveyance losses through the Delta are substantial. More critically, the opposite is not true — outside interests with excess surface water from the CVP and SWP cannot physically move this excess surface water into eastern San Joaquin County for storage underground. Thus, all water to be "banked" in eastern San Joaquin County has to either enter San Joaquin from the streams flowing from the east, or be conveyed into eastern San Joaquin County through new facilities.

Conjunctive Use

Limited Flexibility

Also, unlike Kern County, San Joaquin County does not have an internal system of man-made canals and pipelines that link together different agencies in the County, limiting in-county delivery flexibility. Most water conveyance in San Joaquin County is accomplished through the use of natural stream channels that flow eastward toward the Delta. There are no existing canal systems in San Joaquin County that link together these different stream watersheds, although the concept of building such a canal has been discussed for years. There are also significantly fewer in-county canal systems that distribute surface water from the streams to lands away from the stream, limiting opportunities for in-lieu recharge absent further infrastructure development. While the presence of four main rivers in San Joaquin County and numerous natural creeks may seem like an attribute, it actually has made the construction of additional infrastructure for water conveyance challenging because of the need to obtain expensive and time-consuming regulatory approvals for any new infrastructure that modifies a natural stream channel.

Conjunctive Use

EBMUD Pipeline

The East Bay Municipal Utility District (EBMUD), which provides water service to the greater East Bay, does have an existing pipeline that runs through San Joaquin County from east to west to convey surface water supplies from the Mokelumne River, through San Joaquin County east to the Bay area. This pipeline represents one of the few existing infrastructure opportunities for San Joaquin County to accept wet year water from an outside banking partner for storage in San Joaquin County's groundwater basin. Unlike the network of connecting canals in Kern County which provide operational flexibility for location of recharge projects, groundwater storage projects for EBMUD must be located adjacent to this existing pipeline for "put" and "take" unless new conveyance facilities are built.

Local Politics

Local politics have also played an important role in the relative success of conjunctive use and groundwater banking programs in Kern County and San Joaquin County. Both counties have a groundwater protection ordinance as part of their County codes, but the content and application of the ordinance in each county varies significantly.

"Native" Groundwater Protection

Kern County's groundwater protection ordinance was adopted in 1998 (Kern County Code of Ordinances Title 19, Chapter 19.118). The ordinance is expressly limited to direct or indirect export of "native" groundwater out of the County and only applies to the southeastern portion of the County. Thus, the ordinance does not apply to the Central Valley floor area of the valley where most conjunctive use projects are taking place and does not apply to banking projects designed to recharge and extract imported water.

Broad Ordinance

San Joaquin County's groundwater protection ordinance was adopted in 2000 (San Joaquin County Code of Ordinances, Title 5, Division 8, Chapter 3). Unlike the limited scope of Kern County's ordinance, San Joaquin County's ordinance applies county-wide to the direct or indirect export of any form of groundwater, whether native or the result of banking operations. The ordinance requires a discretionary county permit for any form of groundwater extraction that will deliver water outside the County and the permit is only good for a three-year term. These requirements essentially place the County Board of Supervisors in the position of being able to condition any groundwater banking project in the County and revise these conditions every three years. These requirements have caused EBMUD and other outside parties interested in utilizing San Joaquin County for banking to shy away.

Land and Agricultural Economics

While many may view agriculture in California's Central Valley as homogeneous, there are actually substantial differences in farm size and type in different parts of the valley. These differences have contributed to the relative success of conjunctive use and groundwater banking programs in Kern County and San Joaquin County.

Farm Size Differences

The US Department of Agriculture, National Agricultural Statistics Services, performs a Census of Agriculture. The last published census data from 2007 show that San Joaquin County had 3,624 farms on 727,503 acres, with an average farm size of 204 acres. Kern County had 2,117 farms on 2,361,765 acres with an average farm size of 1,116 acres — five times the size of the average farm in San Joaquin County. In San Joaquin County, more than 60% of the farms are less than 49 acres in size with only 156 farms 1,000 acres or larger. In Kern County, 40% of the farms are less than 49 acres in size with 348 farms 1,000 acres or larger. The average per acre market value of farmland in San Joaquin County in 2007 was $10,168/acre but only $4,626/acre in Kern County.

Pump Lift

Finally, while both counties overlie overdrafted groundwater basins, the average pump lift in Kern County is more than double the average pump lift in San Joaquin County — meaning each acre-foot of groundwater pumped in Kern County is more expensive to use. Further, absent extensive direct groundwater recharge in Kern County, the annual overdraft is substantially more than in San Joaquin County, threatening to further lower groundwater levels. By contrast, the limited conjunctive use and direct recharge occurring in San Joaquin County today has stabilized groundwater levels in the last twenty years, by offsetting the continued annual overdraft of 70,000 AF/year.

Overdraft

Larger size farms in Kern County can utilize economies of scale to help spread the cost of intra-county conveyance system infrastructure and dual water systems that allow for the use of both groundwater and surface water. Also, the smaller number of farmers in relation to farm size may help water districts in Kern County achieve consensus for projects faster than in San Joaquin County. Finally, the cost to pump groundwater in Kern County is a larger percentage of farmland value than in San Joaquin County, making it a higher priority for farmers to control their pump lift costs.

Pumping Costs

Overcoming the Fear of Losing Paramount Groundwater Rights

Conjunctive Use

"Native" v. Imported Groundwater

In California, overlying owners have "correlative" (equal) rights to underlying groundwater and must share the groundwater in times of shortage with other overlying owners — akin to riparian rights in a surface stream. In relation to non-overlying water users, overlying landowners have a "paramount" right to pump native groundwater from a common basin for use on their overlying lands. Other users who pump groundwater for conveyance and use on non-overlying lands are deemed appropriators whose rights are junior to the paramount rights of overlying owners and are limited to groundwater that is surplus to the needs of the overlying owners. *Katz v. Walkinshaw,* 141 Cal. 116 (1903). However, any user storing imported water underground also has a paramount right to recapture that stored water and thus be rewarded for their efforts. *Los Angeles v. San Fernando*, 14 Cal.3d 199, 294 (1975). Of course, the molecules of native and imported water cannot be separated underground. Thus, in a drought situation, when water users want to extract both native and imported water from the basin, there is the distinct possibility for conflict and a battle over facts as to what type of water is being pumped. The conflict lies not only in what water is being extracted by whom, but in the temporary but significant decline in groundwater levels that can occur — potentially making it more expensive for either the paramount overlying owners to access native groundwater or for those pumping imported water that was stored underground.

Wolf at the Door?

When EBMUD conducted its pilot project in San Joaquin County in 1999, there was fear that spread in the agricultural community that a wolf was at the door — a large urban water supplier from the Bay Area seeking to get its straw in the basin that belonged to local San Joaquin County farmers. This fear led to the more expansive San Joaquin County groundwater protection ordinance mentioned above. Since that time, EBMUD and County officials and water agencies have worked diligently to address this concern and come up with water banking parameters that would govern any future program. After more than a decade, however, there still has not been another attempted project.

Monitoring & Contracts

In Kern County, the water agencies conducting groundwater banking projects with outside entities have been able to allay this fear, in part, with monitoring programs and contractual agreements designed to protect paramount overlying rights to groundwater — even in times of drought — when banking partners want to extract the water they have stored. This monitoring and contractual approach is not perfect. During dry years when banking customers have extracted large quantities of water at the same time landowners are also increasing pumping, problems have arisen. To date, though, the problems have been resolved without the County finding it necessary to expand the scope of its groundwater protection ordinance.

CONCLUSION

THE FUTURE OF CONJUNCTIVE USE AND GROUNDWATER BANKING IN THE CENTRAL VALLEY

Banking Test

Conjunctive use of groundwater and surface water, at the local level, in California's Central Valley is essential to meet current and future water demands. However, the extent to which large-scale groundwater banking projects, such as those in Kern County, will take hold in other counties with overdrafted basins, such as San Joaquin, remains to be seen. The regulatory environment for surface water delivery in California has changed dramatically since the last extended drought in the late 1980's and early 1990's, limiting surface water deliveries in normal years as well as dry years. Kern County's banking programs have yet to be tested in an extended drought under this new regulatory regime. When it does happen — which it will — the strength of Kern County's monitoring and contractual protections will be truly tested.

Risk v. Reward

If they survive that test and continue to perform as they have, farmers in areas such as San Joaquin County will likely be more willing to accept the risk of allowing outside interests into their basin in exchange for the return of higher water levels and outside financing for improved water delivery infrastructure. Also, if groundwater levels in San Joaquin County drop significantly with the next extended drought, as they have in the past, San Joaquin County may wish it had pursued groundwater banking *sooner* to finance the internal infrastructure required to maximum surface water use in San Joaquin County when it is available, thereby reserving more of its native groundwater to weather the drought.

For Additional Information:
Jennifer Spaletta, Spaletta Law, PC, 209/ 224-5568 or Jennifer@spalettalaw.com

Jennifer Spaletta practices water and environmental law in Lodi, California, with Spaletta Law, PC. She has worked on groundwater and conjunctive use issues for the last fifteen years with entities in Kern and San Joaquin Counties and other areas of the state. Spaletta's practice also involves obtaining and defending water rights, water quality regulation, water and endangered species related litigation and real estate transactions.

KLAMATH ADJUDICATION UPDATE

ADMINISTRATIVE PHASE COMPLETE — JUDICIAL REVIEW BEGINNING

by Sarah R. Liljefelt & Laura A. Schroeder, Schroeder Law Offices (Portland, Oregon)

Klamath Adjudication

Administrative Phase

On March 7, 2013, the Klamath Basin Adjudication reached a historic milestone. On that date, the Oregon Water Resources Department (OWRD) entered a Final Order of Determination (FOD), ending the Adjudication's administrative phase. The FOD, filed with the Klamath County Circuit Court, begins the Adjudication's judicial phase that will culminate in a water rights decree determining the relative water rights in the Klamath River Basin.

Permit System

Oregon's surface water code was enacted on February 24, 1909, creating an administrative system to acquire surface water rights. Pre-1909 water uses remain valid (ORS §§ 537.120, 539.010), but must be adjudicated before the State manages and enforces those "vested" rights within Oregon's priority of use system. Moreover, federal reserved water right claims are determined for federal and tribal lands in Oregon's adjudicative process.

Adjudication

ORS Chapter 539 governs general stream adjudications. To summarize a complicated and lengthy process, adjudications begin when OWRD issues a notice that particular surface waters or complete water basins will be adjudicated. Claims and contests are filed with OWRD and OWRD refers a preliminary determination of those claims and their respective contests to the Office of Administrative Hearings (OAH) for presentation of testimony and other evidence. Settlements between the claimants, contestants, and agencies may occur through the OAH process.

Upon the completion of each OAH hearing, the Administrative Law Judge at OAH issues proposed final orders to which the parties to that OAH hearing may submit exceptions. Taking these proposed final orders and exceptions into account, OWRD completes the Findings of Fact and Order of Determination, finally deciding all claims at the agency level. The Findings and Determination is submitted to the appropriate county circuit court for the judicial phase of adjudication. Unless stayed, the Findings and Determination is the final order upon which OWRD may manage and enforce the relative water rights.

Judicial Phase

At the judicial phase, exceptions may be submitted against OWRD's final order, and the court will hold hearings and enter a judgment affirming or modifying the final order. Appeals may then be taken from the circuit court's final judgment. Like most adjudications, it is expected that exceptions will be filed and some modification of the final order will occur.

Klamath Findings

Nearly 40 years ago, in 1975, OWRD initiated the Klamath Basin Adjudication. Through the administrative phase, OWRD reports that the validity of 730 claims were determined and 5,660 contests were resolved (40 claims were denied, 168 claims were voluntarily withdrawn, and all other claims were recognized at least in part). See OWRD Press Release (March 7, 2013), available at: www.oregon.gov/owrd/Pages/adj/index.aspx (last viewed May 1, 2013).

Several landmark cases delayed the Klamath Adjudication. These decisions, summarized briefly below, are complicated and warrant a detailed reading to fully understand the Ninth Circuit's holdings.

Federal Reserved Rights Ruling

When the State of Oregon initiated the Klamath Basin Adjudication in 1975, the United States filed suit in federal court seeking declaration of federal water rights within a portion of the Klamath River Basin. In 1983, the Ninth Circuit decided the case *U.S. v. Adair* (723 F.2d 1394), determining validity and priority of federal water rights claims, as follows: 1) The Klamath Tribes are entitled to non-transferable water rights in an amount sufficient to support current tribal hunting and fishing on former reservation lands to maintain the livelihood of tribal members with a priority date of "time immemorial"; 2) Individual Indian owners of former reservation lands are entitled to use water essential for agriculture with an 1864 priority date (the date of the Klamath Treaty); 3) Non-Indian successors in interest to former reservation lands are entitled to appurtenant water rights with an 1864 priority to irrigate the actual acreage under irrigation when he/she acquired title from an Indian predecessor, plus water for additional acreage that is placed under irrigation with reasonable diligence after the passage of title ("Walton rights"); 4) The federal government, holding title to 70% of the former reservation, including the Klamath National Wildlife Refuge and portions of the Winema National Forest, is entitled to claim rights as a non-Indian successor in interest with an 1864 priority; and 5) The federal government cannot claim additional reserved (*Winters*) rights for the same former reservation lands. The Ninth Circuit confirmed the validity of the above federal water rights and specified the proper method for measuring those rights, but declined to quantify the rights to avoid determining questions of state water law. The court left quantification for judicial determination in Oregon's adjudication process.

Klamath Adjudication

Sovereign Immunity

After *U.S. v. Adair*, OWRD reissued notices of intent to adjudicate all water rights in the Klamath River Basin. The United States brought another suit in federal court, alleging the United States had not waived sovereign immunity, and was not required to participate in the State Adjudication. The Klamath Tribes intervened, arguing that OWRD's process would deny the Tribes due process due to OWRD's bias. The Tribes alleged the State had a history of hostility to tribal treaty rights, including water rights claims. In 1994, the Ninth Circuit decided *U.S. v. State of Oregon* (44 F.3d 758), holding the Tribes had not proven bias by OWRD, and that the McCarran Amendment (43 U.S.C. § 666) waived sovereign immunity for "suits" to adjudicate water rights, even if adjudications originate within an administrative body. Thus, the Ninth Circuit ruled that the Tribes' claims and federal reserved water rights would be determined as part of Oregon's adjudication of the Klamath River Basin.

"Calls" for Regulation

Conclusion

While an undoubtedly lengthy judicial process lies ahead, the end of the administrative phase of the Adjudication clearly marks noteworthy, historical progress in the Klamath Basin Adjudication.

Recognized rights will now be enforced by the State under the priority system ("first in time, first in right") central to western water law. Senior water right holders now have the ability to makes "calls" for water delivery, which may require junior users to abstain from water use until senior rights are satisfied.

Several landmark decisions will govern future adjudications in the State of Oregon. Currently, hearing dates in the Klamath County Circuit Court have not been set, but various parties responded to the State's Motion for Setting an Initial Hearing Date with different suggested timelines — ranging from 90 days to one year after an order is entered.

For Additional Information:
Sarah Liljefelt, Schroeder Law Offices, 503/ 281-4100 or s.liljefelt@water-law.com
Laura Schroeder, Schroeder Law Offices, 503/ 281-4100 or schroeder@water-law.com

The Klamath Adjudication: Past, Present and Future
June 4th Educational Event, Klamath Falls, Oregon

Tuesday, June 4, 10:00 AM until Noon
Klamath Basin Research and Extension Center - Vandenberg Office, 3328 Vandenberg Road

Schroeder Law Offices is hosting an educational event open to the public, *The Klamath Adjudication: Past, Present and Future*, in Klamath Falls on June 4, 2013.

Contact: Daryl Cole 503/ 281-4100 or daryl@water-law.com
to reserve space or arrange an individual meeting.
www.water-law.com/klamath/index.html

Sarah Liljefelt, JD, is an associate attorney in Schroeder Law Offices' Portland, Oregon office. Sarah focuses her practice on water rights review, permitting, transfers and cancellation, water-related real property issues (easements, licenses, and right-of-ways), real property disputes (prescription, adverse possession, and condemnation), public records, meetings, and contracting compliance, administrative contested cases, and state and federal civil litigation. Education: JD, Cum Laude, Northwestern School of Law, Lewis and Clark College, Portland, Oregon. Bar Admissions: Oregon, 2010; California, 2011.

Laura Schroeder, JD, is a shareholder in Schroeder Law Offices, PC. Her practice includes: water rights acquisitions; sales; contracts; easements; well share and water delivery agreements; adjudications; permitting; extensions; transfers; certification; regulatory compliance; and litigation of water rights disputes before state administrative bodies as well as State and Federal trial and appellate courts. She also has extensive experience working with the United States Bureau of Reclamation on behalf of her irrigation district clients in contract negotiations and title transfers. Her practice also addresses water quality issues including: development of conservation and water management plans; instream leases; reuse and recharge permitting; wetlands maintenance, creation and mitigation; water quality permitting; and storm drain permitting and use. Ms. Schroeder earned her BA in 1972 from the University of Oregon and her JD in 1987 from Northwestern School of Law, Lewis & Clark College. She is admitted to practice law in State and Federal Courts in Oregon, Idaho, Nevada and Washington.

WATER BRIEFS

KEYSTONE XL PIPELINE US

EPA RAISES OBJECTIONS

On April 22, the US Environmental Protection Agency (EPA) sent a letter to the State Department raising objections to that Department's draft Supplemental Environmental Impact Statement (DSEIS) concerning the proposed Keystone XL pipeline. EPA had reviewed the DSEIS for a Presidential Permit application by TransCanada Keystone Pipeline, LP (TransCanada) to construct and operate the Keystone XL pipeline that would carry oil sands crude from Canada to the Texas Gulf Coast for refining. The State Department has authority over the pipeline since it crosses the US border.

The DSEIS, issued in March, concluded that the project would not create significant environmental impacts. EPA, on the other hand, raised several concerns in their letter, acting under their authority under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. EPA had "several recommendations for improving the analysis and considering additional mitigation as you [State Department] move forward to complete the NEPA process." EPA Letter, page 1. EPA specifically addressed greenhouse gas emissions that would be expected from oil sands crude with its "potentially large climate impacts." *Id*. at 2.

EPA also addressed "Pipeline Safety" extensively. EPA noted that oil sands crude spills "may require different response actions or equipment from response actions for conventional oil spills. These spills can also have different impacts than spills of conventional oil. We recommend that these differences be more fully addressed in the final EIS, especially as they relate to the fate and transport of the oil and the remediation that will be required." *Id*. Pointing to the 2010 Enbridge spill of oil sands crude in Michigan, EPA stated, "oil sands crude sank to the bottom of the Kalamazoo River, mixing with the river bottom's sediment and organic matter, making the oil difficult to find and recover. After almost three years of recovery efforts, EPA recently determined that dredging of bottom sediments will be required to protect public health and welfare and the environment. This determination was based in large part on demonstrations that the oil sands crude associated with the Enbridge spill will not appreciably biodegrade. We recommend that the Final EIS more clearly acknowledge that in the event of a spill to water, it is possible that large portions of dilbit will sink and that submerged oil significantly changes spill response and impacts." *Id*. at 3-4. "Dilbit" is a combination of oil sands crude and a petroleum-based product that is required to make a less viscous liquid (dilbit) for transport via pipeline.

EPA then discussed specific measures required of TransCanada to undertake to prevent and detect oil discharges. In addition to a recommendation regarding an opportunity for public review and comment on TransCanada's analysis, EPA also recommended "that the Final ElS consider requiring TransCanada to establish a network of sentinel or monitoring wells along the length of the pipeline, especially in sensitive or ecologically important areas, as well as where water supply wells are located and at stream crossings to provide a practical means for early detection of leaks that are below the proposed detection limit (1.5- 2%) of the pipeline flow rate." *Id*. at 4. The letter from EPA also recommended "additional mitigation measures regarding preparedness to reduce the impacts of a spill… ." *Id*.

EPA recommended another permit condition to develop a plan for long-term sampling/monitoring in the event of an oil discharge to assess and monitor the impacts of the release of the dilbit. "The DSEIS also recognizes that dissolved components of the dilbit that may be transported through the pipeline, such as benzene, polycyclic aromatic hydrocarbons (PAHs), and heavy metals, could be slowly released back to the water column for many years after a release and could cause long-term chronic toxicological impacts to organisms in both the benthic and pelagic portions ofthe aquatic environment. We recommend that the Final EIS more clearly recognize that this characteristic of dilbit is different from the fate and transport of oil contaminants associated with conventional crude oil and refined product spills from pipelines." *Id*. at 5.

Additional concerns were noted by EPA regarding "Alternative Pipeline Routes" and the failure to "provide a detailed analysis of the Keystone Corridor Alternative routes… ." The letter specifically notes groundwater issues regarding the Ogallala Aquifer: "Another significant issue in the consideration of alternative routes for this Project has been the potential for impacts to the Ogallala Aquifer in the event of a spill. The alternative route in Nebraska has avoided most of the impacts to the Sand Hills Region, but still crosses the Ogallala Aquifer. The alternative laid out in the DSEIS that would avoid the Ogallala Aquifer is the I-90 Corridor Alternative, which largely follows the path of existing pipelines. The I-90 Corridor Alternative would significantly reduce the length of pipeline crossing the Northern High Plains Aquifer system, which includes the Ogallala formation, and would further reduce the potential for adverse impacts to critical groundwater resources." *Id*. at 6.

Finally, EPA concluded that the State Department's analysis of the project's environmental impact is insufficient. "Based on our review, we have rated the DSEIS as E0-2 ("Environmental Objections - Insufficient Information")…We look forward to continuing to work with you and to provide assistance as you prepare the Final EIS. We also look forward to working with you as you determine whether approving the proposed project serves the national interest under Executive Order 13337… ."

For info: EPA Letter at: http://epa.gov/compliance/nepa/keystone-xl-project-epa-comment-letter-20130056.pdf

WATER BRIEFS

ACQUAVELLA DECISION WA "*ACQUAVELLA V*"

The Washington Supreme Court's recent opinion in *Department of Ecology v. Acquavella* (*Acquavella V*) brings water users in eastern Washington closer to the end of a 36-year battle over water allocation in the State's most fertile agricultural region. *Acquavella* is the Washington State Department of Ecology's lengthy effort to adjudicate approximately 40,000 claimed rights to surface water in the Yakima River Basin. *Acquavella V* is significant for several reasons. First, it affirms that the Yakama Tribe's "reserved" water rights include the right to store water during non-irrigation season. Second, the Supreme Court held that the trial court in the Acquavella Adjudication failed to determine the amount of irrigation water available to the Yakama Indian Nation and, therefore, remanded the case to determine that amount. Third, the Court also held that the trial court erred when it applied the "determined future development" exception to excuse a private party's non-use of its water rights.

The holdings and implications of *Acquavella V* will be the subject of a full length article by Jeff Kray of Marten Law's Seattle office next month in *The Water Report.*

For info: Jeff Kray, Marten Law, 206/ 292-2608 or jkray@martenlaw.com *Acquavella V* opinion available at: www.courts.wa.gov/index.cfm?fa=controller.managefiles&filePath=Opinions&fileName=862117.pdf

STATES DISAGREE UT/NV

BI-STATE AGREEMENT UNSIGNED

On April 3, Utah Governor Gary R. Herbert announced his decision to not sign an agreement between Utah and Nevada that addresses the management of the Snake Valley groundwater system which straddles the Utah-Nevada border. The states have been negotiating for nearly four years to come to an agreement to share water with Nevada in the controversial deal concerning an aquifer beneath the two states. "My decision was made as I visited with the good people who live in Western Utah — those most affected by the outcomes," Governor Herbert said. "I have also visited with local officials and county commissioners, even as recently as yesterday. A majority of local residents do not support the agreement with Nevada. Therefore, I cannot in good conscience sign the agreement because I won't impose a solution on those most impacted that they themselves cannot support."

The Governor's press release noted that Utah's process has been deliberative and methodical. "The Governor appreciates that many residents of western Utah have been actively engaged, working with local officials to find a solution. He also acknowledges the work and expertise of water, environmental, and legal experts who have provided valuable analysis in this uniquely complicated situation."

The Water Report #105 contained a "Water Brief" article about the report prepared for Governor Herbert by an independent panel of three Utah water lawyers (Report). Those experts, Steven Clyde, Dallin Jensen, and Warren Peterson — appointed by the Governor to prepare the Report — concluded that the Snake Valley Water Agreement with Nevada would be preferable to a protracted lawsuit between the two states and that the two related agreements "are in the best interest of Utah's citizens." The Report was released on October 29, 2012. *See TWR* #105, Water Briefs, November 15, 2012 for additional details regarding the Report.

The expert's Report summarized the risk for Utah if it refused to sign the agreements. "In the absence of these agreements, Nevada, because of its more pressing need for water, may simply appropriate the remaining available water in the Snake Valley Groundwater System to the exclusion of Utah's needs for future water supplies. The Snake Valley Water Agreement ensures that Utah will have an equal share of this limited but shared groundwater resource, regardless of the relative pace of development in both states, while providing a process to identify and mitigate potential harms both to water users, as well as to the environment." The Report noted that "without the agreements, it would simply be a race to development" and that "Nevada's current needs for water will all but guarantee that it beats Utah to the water supply." Report at 4.

The focus of the draft agreement is the Basin and Range aquifer in Snake Valley. The north-south running valley is nearly 120 miles long and over 15 miles wide, bound by the Snake Range and Deep Creek mountains to the west and the Confusion Range to the east.

The Southern Nevada Water Authority (SNWA) issued the following statement in response to the decision: "We are disappointed that Governor Herbert has unilaterally chosen not to comply with a Congressional directive to both his state and Nevada. The negotiating team — which included Utah representatives that reflected the interests of both state and local stakeholders — invested three years in determining the most equitable way to divide Snake Valley's groundwater resources in a manner that provided the maximum level of protection for Utah's water users and environment while allowing Nevada to draw upon a water supply that originates within its own borders. Congress provided for a $6 million study to conduct the most extensive hydrological analysis ever undertaken in that region to quantify the volume of water available for use by the United States Geological Survey, Utah Geological Survey, and Desert Research Institute. Yet, despite this overwhelming body of scientific evidence and legally binding safeguards, Governor Herbert has elected to withdraw from the agreement. In the coming days and weeks, we will evaluate our options to address this unprecedented action."

For info: Nate McDonald, Gov. Herbert's Office, 801/ 538-1509 or nmcdonald@utah.gov; Report and Key Points at: http://www.waterrights.utah.gov/snakeValleyAgreement/Review_Clyde_Jensen_Peterson.pdf; Proposed Agreement at: http://naturalresources.utah.gov/pdf/snake_valley_agree.pdf

WATER CALL AGREEMENT CO

CALLS "RELAXED" FOR STORAGE

Two back-to-back, drought-plagued winters in Western Colorado have triggered an agreement to "relax" a senior water rights call on the Colorado

WATER BRIEFS

River at the Shoshone Hydro Plant to allow water providers to store more water this spring, a move that benefits Denver Water and the West Slope.

The Shoshone Hydro Plant in Glenwood Canyon is owned by Xcel Energy. Its senior 1902 water right of 1,250 cubic feet per second (cfs), when called for regulation to fulfill its senior status, is administered by the Colorado Division of Water Resources against junior water storage rights upstream that include Denver Water's Dillon and Williams Fork Reservoirs, the Colorado River District's Wolford Mountain Reservoir and the Bureau of Reclamation's Green Mountain Reservoir.

The agreement "relaxes" the call to 704 cfs when river flows are low, or takes a Shoshone call totally off the river when flows are rising, which was the situation on April 2. This practice gives upstream junior water rights holders the ability to store water once the spring runoff begins in earnest. On April 2, the Colorado River was flowing through Glenwood Canyon at about 825 cfs (long-term historical average for this date is about 1,150 cfs).

Two tripping points activate the agreement: when Denver Water forecasts its July 1 reservoir storage to be 80 percent of full or less, and when the Colorado River Basin Forecast Center predicts spring runoff flows at Kremmling in Grand County will be less than or equal to 85 percent of average. As of April 2, the reservoir forecast was 74 percent full on July 1 and the Kremmling forecast is 60 percent of average.

Denver Water has already enacted its Stage 2 Drought Restrictions to limit outdoor water use and enact other conservation measures.

The winter of 2012 was the fourth worst on record in the Colorado River Basin and 2013 has been tracking just as poorly, although Colorado did receive some snow recently. The only improvement between the two winters occurred in March 2013 as storms continued to build snowpack. By this time in 2012, runoff was already under way.

The relaxation period is between March 14 and May 20, in deference to boating season on the river and irrigation needs in the basin. As for the water that Denver Water gains by the relaxation, 15 percent of the net gain is saved for Xcel Energy power plant uses in the Denver Metro Area and 10 percent is delivered to West Slope entities yet to be determined by agreement between Denver Water and the Colorado River District.

"This is a statewide drought, and we all need to work together to manage water resources for the health and safety of our residents, our economic vitality and the environment," said Jim Lochhead, CEO/Manager of Denver Water. "The Colorado River Cooperative Agreement and the Shoshone Outage Protocol are great examples of the partnership between Denver Water and the West Slope to do just that. Last year, even though the CRCA was not yet in effect, Denver Water released water to the river even though the Shoshone Power Plant was not operating and the call was not on. This year, under the Denver Water-Xcel Energy agreement, the Shoshone call will be relaxed."

"Relaxing the Shoshone water right in this limited way benefits the West Slope as well," said Colorado River District General Manager Eric Kuhn. "It might make the difference between having a full supply at Green Mountain Reservoir and not having a full supply. In a year like this every extra drop of water we can store now will help us later."

For info: Jim Pokrandt, Colorado River District, 970/ 945-8522 or jpokrandt@crwcd.org; Stacy Chesney, Denver Water, 303/ 628-6700 or stacy.chesney@denverwater.org; Mark Stutz, Xcel Energy, 303/ 294-2800 or mark.stutz@xcelenergy.com

MINING BILL VETO MT

GROUNDWATER AND SURFACE FLOW IMPACT

On May 3, Montana's Governor Steve Bullock vetoed SB 347 following some intensive pressure by Trout Unlimited and others. The mining industry had obtained passage of the bill, which would have drastically altered the standards governing water quality protection and could have significantly impacted groundwater and surface flow as well.

In editorials appearing throughout Montana on April 22, Trout Unlimited's Bruce Farling equated the law to giving the mining industry the "ability to trump water rights." Farling argued that the bill "ensures that the effects of massive groundwater pumping or diversions for mines will not be reviewed under the 'nondegradation policy' of Montana's Water Quality Act." He also maintained, "[M]assive pumping of groundwater for keeping underground mines dry can deplete connected surface flows in streams. The nondegradation standards are the only legal backstop existing water right holders have to ensure pumping doesn't diminish their rights to surface water. Because pumping or diverting from streams to keep mining operations dry doesn't require water rights, affected users with water rights, such as irrigators and cities, can't file objections under Montana's water use law claiming harm."

The Governor's veto letter concisely laid out the status quo and the changes proposed by the bill. "Under existing laws protecting water quality, which have been in effect for two decades, an activity that decreases water flow does not have a significant impact to water quality if the decrease is within measurable numeric limits. A decrease in flow outside of these numeric limits may still be acceptable, if the Department of Environmental Quality (DEQ) makes certain findings based on specific criteria. SB 347 would amend the Montana Water Quality Act, replacing these protections with only a narrative standard that would require DEQ to determine if the decrease in flow would 'have a reasonable possibility to cause a significant adverse impact on a fish population.' "

Governor Bullock's letter pointed out three concerns with the bill's approach. "SB 347 would replace a set standard that is measurable and understood ('decrease in the mean monthly flow of a surface water by less than 15% or the seven-day 10 year low flow by less than 10%'), with a narrative description that is subject to dispute and differing scientific opinions. The vagueness of the narrative standard in

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SB 347 was identified by several parties during the legislative process. This is sure to generate litigation. Second, the reference to 'a fish population,' while very important, is not consistent with our laws relating to surface water quality which generally focus on protecting 'aquatic life' as the yardstick. A stream should be protected from dewatering even if it does not contain fish. Besides, every angler knows that healthy aquatic insects are critical for healthy fish populations. Third, the Legislature has previously determined that the impacts on existing beneficial uses of water are an important consideration (section 75-5-301 (5)(c)(i), MCA). SB 347 does away with this consideration, except when protecting 'a fish population' also happens to protect these other uses of water (or where the decrease in flow is for a beneficial use, which is then reviewed for its impacts on senior water right holders under Title 85, Chapter 2, MCA)."

For info: Judy Beck, Governor's Office, 406/ 444-7857; Montana Trout Unlimited website: http://montanatu.org/

TEXAS/MEXICO PROBLEMS TX

ACCUSATIONS OF WATER WITHHELD

A dual press release issued by the Texas Commission of Environmental Quality (TCEQ) and the Texas Department of Agriculture issued April 16 accuses Mexico of continuing to withhold water from the Rio Grande system that should be delivered to the United States. Agriculture Commissioner Todd Staples and TCEQ Commissioner Carlos Rubinstein urged the International Boundary and Water Commission (IBWC) and the US State Department to compel Mexico to deliver Rio Grande system water to the United States. The two Commissioners asserted that under a 1944 Treaty, Mexico must deliver an average of 350,000 acre-feet of water annually to the United States and that Mexico has withheld more than 430,000 acre-feet owed to the US to date. In addition, the Commissioners maintained that the water deficit continues to grow, causing water suppliers across the Rio Grande Valley to run out of water.

In 2012, the IBWC was notified that millions of citizens in the Rio Grande Valley would face irreparable and catastrophic harm if Mexico did not immediately address the water deficit. Cameron County Irrigation District #2, one of the Valley's largest irrigation districts, has notified irrigation users that as of April 12 they will no longer take orders for new water deliveries. Farmers in the district will only have access to water currently committed. This will have catastrophic consequences to crop yields in this district and may result in total crop losses in some instances. Due to the interconnected nature of Valley's water distribution system, cities and industrial water users will have a difficult time acquiring water when irrigation water is exhausted. The Valley's two other largest districts, Hidalgo County Water District #9 and Delta Lake Irrigation District, have announced that without substantial new inflows from Mexico or substantial rain, they too will likely stop taking orders within 30 days.

Mexico is obligated to provide water to the US under the 1944 Water Treaty, unless Mexico is suffering exceptional drought conditions. The press release referred to drought maps (http://youtu.be/o9tOK-1KT6E; prepared with input from Mexico) that allegedly show that Mexico's portion of the Rio Grande basin that contributes to treaty inflows has not been under exceptional drought conditions since at least May 2012.

For info: Bryan Black, Agriculture, 512/ 463-7664 or bryan.black@texasagriculture.gov; Terry Clawson, TCEQ, 512/ 239-5000

FRACKING RISKS LAWSUIT CA

BLM LEASES & NEPA REVIEW

On March 31, a federal magistrate judge ruled that the US Bureau of Land Management (BLM) violated the National Environmental Policy Act (NEPA) by failing to prepare an Environmental Impact Statement (EIS) before entering into four oil and gas leases for approximately 2,700 acres of public land with companies that sought to conduct hydraulic fracturing (known as "fracking"). *Center for Biological Diversity v. Bureau of Land Management*, No. 11-06174, Order Re Cross-Motions for Summary Judgment (Order), at 5 (N.D. Cal. Mar. 31, 2013).

The court held that "BLM violated NEPA in its environment assessment of the leases by unreasonably relying on an earlier single-well development scenario. That scenario did not adequately consider the development impact of hydraulic fracturing techniques popularly known as 'fracking' when used in combination with technologies such as horizontal drilling. Not only was the environment assessment erroneous as a matter of law, the BLM's finding of no significant impact based on the assessment and resulting decision not to prepare an environmental impact statement also was erroneous as a matter of law." *Slip Op*. at 1-2. The Center for Biological Diversity's Brendan Cummings, who argued the case, said "[T]his is a watershed moment — the first court opinion to find a federal lease sale invalid for failing to address the monumental dangers of fracking."

The judge began his discussion by explicitly stating what the case was not about. The case "is not…[a] policy question of whether fracking in the Monterey Shale or anywhere else is a good thing or a bad thing. At all times in its review of the pending motions, the court bears in mind that it is the BLM that is the recognized expert in this field, not the court. At the same time, while this review is deferential to the agency's recognized expertise in the field, the court must not 'rubber-stamp' agency decisions. Instead, the court must ensure that the agency has taken a 'hard look' at the environmental consequences, 'carefully reviewing the record to ascertain whether the agency decision is founded on a reasoned evaluation of the relevant factors.'" (citations omitted) *Id.* at 14-15.

Following a lengthy discussion about BLM's analysis and actions, the judge concisely stated the rationale for his decision. "Ultimately, BLM argues that the effects of fracking on the parcels at issue are largely unknown. The court agrees. But this is precisely why proper investigation was so crucial in this case. BLM's dismissal of any development scenario involving fracking as 'outside of its jurisdiction' simply did not provide

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the 'hard look' at the issue that NEPA requires." *Id*. at 27-28.

The judge granted plaintiffs' motion for summary judgment on the NEPA argument. The judge noted possible remedies, including "enjoining further surface-disturbing activity pending EIS analysis, or invalidating the improperly-granted leases," then ordered the parties to confer and submit an appropriate judgment to the court. *Id*. at 28.

For info: Order available at: www.sierraclub.org/pressroom/downloads/CBD-BLM-Sept-2011-lease-order.pdf

WATERS DIGITAL LIBRARY ID

IDAHO WATER ISSUES

On April 9, the University of Idaho Library's Digital Initiatives Department announced the release of the new and improved Idaho Waters Digital Library. The Idaho Waters Digital Library provides access to information about water issues in key Idaho river basins with particular emphasis on the Coeur d'Alene and Boise Basins. The collection presently emphasizes Idaho Water Resources Research Institute (IWRRI) reports and publications from 1958 to 2012.

The digital library includes the addition of new search features and documents, and offers the people of Idaho and the region enhanced access to current and historical water research. The collection was selected for inclusion in the Western Waters Digital Library, which provides access to "digital collections of significant primary and secondary resources on water in the Western United States." The collection will be updated on a rolling basis with the hope that it will include a complete run of IWRRI documents by the year 2015.

For info: Devin Becker, UI Librarian, dbecker@uidaho.edu or www.lib.uidaho.edu/digital/iwdl/

CALIFORNIA WATER ATLAS CA

WATER RIGHTS CLAIMS

The first-ever public "California Water Rights Atlas," designed to enable citizens, policymakers, media and others to view thousands of current California water rights claims via the Internet, was unveiled April 12th by Huey Johnson, president of the Resource Renewal Institute (RRI). RRI is a nonprofit, public interest organization that is providing the information free of charge.

The Water Rights Atlas addresses California's water crisis by opening, organizing, and distilling "dysfunctional state-level data to improve efficiency and access for water resource managers and the public," RRI says. "California's water crisis is exacerbated by incomplete, inaccessible data. Currently, water rights holders claim they divert, in aggregate, approximately 250 million acre feet of water each year. But California receives just 71 million acre feet of usable water from annual precipitation on average. We've created a water rights atlas to provide real-time and open information to create more effective citizen participants," Johnson said.

For info: Atlas available at: http://ca.statewater.org/water-rights

KLAMATH DAMS OR/CA

DAM REMOVAL EIS RELEASED

The US Department of the Interior released its final Environmental Impact Statement (EIS) on Klamath River dam removal on April 4. The EIS supports full removal of four dams on the Klamath River, through what would be the largest dam removal and river restoration project in history if it comes to pass.

The EIS was conducted as part of the Klamath Settlement Agreements signed in 2010 by three Indian Tribes, the states of Oregon and California, Federal agencies, dam owner PacifiCorp, irrigation communities, fishing communities, and non-governmental organizations. The agreements, which ultimately depend on Congressional approval, laid out a path for dam removal, fisheries restoration, and water allocation.

One of many contentious aspects of the Klamath Settlement Agreements is the Clean Water Act abeyance that exempts PacifiCorp from water quality standards in the Klamath River. State agencies in California and Oregon normally have authority to enforce the Federal Clean Water Act.

Meanwhile, controversy is heating up again in the Klamath Basin with the filing of a 60-day notice of intent to sue by Oregon Wild and WaterWatch of Oregon. They are raising objections to the new water management plan for the US Bureau of Reclamation's (Reclamation's) irrigation project in Oregon and California area south of Klamath Falls. The Project provides irrigation water to approximately 210,000 acres of cropland. The environmental groups maintain that the plan will cause problems for river conditions similar to 2002, when thousands of adult salmon died. The new management plan implemented by Reclamation controls the amount of water allocated to irrigation and how much is allocated for fishery purposes NOAA Fisheries Service (NMFS) finished its review of potential harm to threatened salmon. NMFS was scheduled to finish its review later in April.

For info: Final EIS available at: www.KlamathRestoration.gov; Reclamation website: www.usbr.gov/projects/Project.jsp?proj_Name=Klamath+Project#Group528620

COLORADO STORAGE WEST

LAKE MEAD SHORTAGE LEVELS

The Southern Nevada Water Authority's (SNWA's) webpage contains an article about the low winter water yields in the Colorado River Basin. SNWA reported that Lake Mead could drop another 30 feet by 2015, dangerously close to shortage levels, according to new projections by the US Bureau of Reclamation (Reclamation). Reclamation projects Lake Mead could sink to 1,084 feet by Fall 2013 — its lowest level since 2010 and just 9 feet from triggering a federal shortage declaration, which would reduce Nevada and Arizona's available Colorado River water. *See* www.usbr.gov/lc/region/programs/crbstudy.html. Nevada receives approximately 300,000 acre-feet of Colorado River water annually. The projections follow a mild winter and an unseasonably warm spring, drying up any hope of increased run-off.

The Colorado River system depends on snowmelt from the Rockies to feed tributaries that flow into the river and subsequently lakes Powell and Mead. Lake Mead has dropped more than 90

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feet since the drought began over a decade ago, and another Reclamation study predicts those challenging conditions will persist.

SNWA also noted that the US and Mexico recently entered into an innovative agreement to temporarily shore up Lake Mead levels. Minute No. 319 allows Mexico to store as much as 1.5 million acre-feet of water in Lake Mead while repairs are being made to that country's water infrastructure, which was damaged in a 2010 earthquake. *See* Kowalski, *TWR* #107.
For info: Reclamation website: www.usbr.gov/lc/riverops.html; SNWA website: www.snwa.com/about/news_lake_levels.html

OIL SPILL FINE MT

EPA ENFORCEMENT

On May 7th, EPA announced that Keller Transportation, Inc. (Keller) has agreed to pay penalties totaling $83,500 to settle Clean Water Act claims related to a 2008 tanker truck spill approximately 500 feet from the shores of Flathead Lake and within the exterior boundaries of the Confederated Salish and Kootenai Tribes (CSKT) of the Flathead Nation. The tanker spill resulted in more than 6,300 gallons of gasoline entering springs along Flathead Lake, impacting groundwater as well as the lake. The proposed settlement addresses violations of the Oil Pollution Act, which prohibits the discharge of oil to waters of the US.

"Truck accidents can have a significant impact on the environment and in this case caused a threat to public health," said Mike Gaydosh, EPA enforcement director in Denver. "This penalty serves as a strong reminder that every effort must be taken to avoid accidents and spills when hauling hazardous materials. EPA will take necessary steps to protect the public."

The tanker truck accident occurred on April 2, 2008 and was determined to have been caused due to excessive speed around a curve on Montana Highway 35 in Lake County, Montana, resulting in the second tanker trailer striking a rock embankment causing the trailer to rupture. Gasoline from the tanker discharged onto the embankment directly up gradient from Flathead Lake, impacting the seeps, springs, and adjoining shorelines of the Flathead Lake. Fumes from the spill resulted in the evacuation of five homes along the lake for nearly a year.

EPA, in coordination with CSKT, has been working with Keller on the cleanup at the site since April 2008. In May 2008 and amended September 2008, EPA issued an administrative order to Keller for the remediation activities that were necessary at the site. Remediation activities have included installation of air abatement systems in the affected homes, ongoing air monitoring, removal and appropriate disposal of contaminated soil, and installation of a groundwater collection trench and permanent water treatment system to treat the contaminated groundwater.

Annual air monitoring has indicated that the abatement systems are working properly as there have been no identified indoor air violations in the affected homes in the past three years. Groundwater sampling shows that the area of contamination is decreasing, but there are still high levels of contamination in the main spill pathway. Keller will continue to operate the water treatment system under the requirements of EPA's administrative order until such time as EPA determines that appropriate clean up levels have been met. Keller has complied with all the cleanup requests that have been required by EPA.

For more information on the Oil Pollution Act requirements: www.epa.gov/emergencies/content/lawsregs/opaover.htm
For info: Darcy O'Connor, EPA, 303/312-6392 or oconnor.darcy@epa.gov

SEDIMENT CONTROL AZ

ADEQ-EPA GRANT PROGRAM

In April, the Arizona Department of Environmental Quality (ADEQ) announced that a $387,800 grant has been awarded to Pioneer Irrigation Company Inc. of Springerville to construct 6,000 feet of additional piping to help control sedimentation into the Little Colorado River.

The grant is one of four in Arizona this year administered by ADEQ's Water Quality Improvement Grant Program (WQIG) to address polluted runoff from many different sources. The WQIG Program allocates money from EPA to interested parties for implementation of nonpoint source management and watershed protection. The distribution of grant funds from the EPA is provided pursuant to Section 319(h) of the Clean Water Act and administered by the ADEQ Water Quality Division. ADEQ uses these federal funds to implement on-the-ground water quality improvement projects to control nonpoint source pollution.

Nonpoint source pollution is polluted runoff from many different sources and remains the nation's largest source of water quality problems. It occurs when rainfall, snowmelt or irrigation runs over land or through the ground, picks up pollutants and deposits them into rivers, lakes, and coastal waters or introduces them into ground water. Agriculture, forestry, grazing, septic systems, recreational boating, urban runoff, construction, physical changes to stream channels and habitat degradation are potential sources of nonpoint source pollution. WQIG projects must focus on improving or protecting water quality within the state of Arizona.

The piping project will be in the Big Ditch, a drainage area for the Little Colorado River which has been impacted by heavy erosion. The West Fork of the Little Colorado is currently listed as impaired for turbidity, which means there is a high level of suspended particles in the water.

"These funds will help restore water quality in one of the state's most important mountain watersheds," ADEQ Director Henry Darwin said. "Our program has funded more than 100 projects throughout the state and has had a significant impact on improving the health of our waterways."

The Big Ditch Piping Project will add more than a mile of the 36-inch pipe to an earlier WQIG piping project in the area in 2000, addressing existing erosion issues in areas where the ditch runs parallel to the Little Colorado River. In

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addition, the grant funding will pay for an evaluation of pollution control in the watershed.
For info: Samuel Breedlove, ADEQ Grant and Watershed Coordinator, 602/771-4243 or sb12@azdeq.gov
Website: www.azdeq.gov/environ/water/watershed/wqig.html

WATERSHED GROUPS US RECLAMATION FUNDING APPLICATIONS SOUGHT

On May 1st the US Bureau of Reclamation (Reclamation) announced it is seeking applications for its Cooperative Watershed Management Program to assist with the establishment or expansion of watershed management groups. The Cooperative Watershed Management Program provides funding for watershed groups to encourage diverse stakeholders to form local groups to address their water management needs and is part of the WaterSMART initiative.

An entity is limited to $50,000 but may be awarded an additional $50,000 for another year if sufficient progress is demonstrated. No cost-share is required.

Applicants are eligible under two categories through this funding opportunity. The first category is for the establishment of a watershed group. Eligible applicants are states, Indian tribes, irrigation districts, water districts or other organizations with water or power delivery authority located in the western United States or United States Territories. The second category is for the expansion of a watershed group. Eligible applicants must be a current watershed group or a participant in an existing watershed group that is legally incorporated within the state in which they operate and meets the definition of a watershed group as defined in the funding opportunity.

The Cooperative Watershed Management Program also supports the Blueways System at the Department of the Interior. The National Blueways System highlights and supports river and watershed strategies for sustainable watershed resources that are led by stakeholder communities and organizations.

In 2012, Reclamation selected eight entities to receive $333,500 in grants under the WaterSMART Cooperative Watershed Management Program.

The WaterSMART (**S**ustain and **M**anage **A**merica's **R**esources for **T**omorrow) effort was launched in February 2010 to facilitate the work of Interior's bureaus in pursuing a sustainable water supply for the nation. The program establishes a framework to provide federal leadership and assistance on the efficient use of water and integrating water and energy policies to support the sustainable use of all natural resources.

Applications are due by 4 p.m. MDT, June 11, 2013.
For info: Funding opportunity information is available at www.grants.gov by searching for funding opportunity: R13AS80015

CVP SUPPLY CA RECLAMATION STRATEGIES

On April 15th Reclamation announced a number of actions and strategies to improve water supplies for California's Central Valley Project (CVP) and CVP Contractors

The driest January through March on record is causing water supply challenges for much of California, particularly for the CVP agricultural water service contractors in the western San Joaquin Valley. Reclamation, working closely with the California Department of Water Resources, has implemented several actions to improve water supply conditions south of the Sacramento-San Joaquin Delta to the greatest extent possible and is preparing to implement certain additional actions in the near future.

Five specific actions are improving CVP water supplies by more than 100,000 **a**cre-**f**eet (AF) to support current westside water allocations. Several other actions to augment future water supplies, including water transfers, could total another 200,000 AF. In addition, new rescheduling guidelines implemented by Reclamation this past winter has allowed CVP contractors to carry over 225,000 AF of their 2012 supplies for use in 2013.

"Reclamation is currently working every prudent avenue, with our partner agencies and customers, to deliver water to where it is needed in this critically dry year," said Mid-Pacific Regional Director David Murillo. "For the long-term, successful completion of the BDCP, including a new diversion and conveyance facility, would have state of the art protections for the benefit of endangered fish species, would help restore some of the natural flow of water through the Delta, and would provide some certainty and stability to California's water supply."

CVP provides water for agricultural, municipal and industrial, and environmental purposes through complex processes, driven by numerous factors, including: hydrology; operational limitations; environmental considerations; regulations; court decisions; and a changing climate. THE FOLLOWING FIVE ACTIONS have been included as factors in calculating the current CVP allocation for south-of-Delta water service contractors:

1) Delta-Mendota Canal Intertie: Use of the Intertie between the Delta-Mendota Canal and the California Aqueduct, located in Alameda County, west of Tracy, California. The Intertie has been used to improve water supplies by 38,000 AF to date in 2013.
2) Yuba River Accord: Through agreement with the California Department of Water Resources, a portion of the water made available by the Yuba County Water Agency will add to CVP supplies this summer. After system losses, the CVP will likely receive about 24,000 AF.
3) CVP Water Use Flexibility: Under a "flexibility" agreement, the San Joaquin River Exchange Contractors have used alternative sources of water supply early in the year to delay use of CVP water supplies from the Delta. This potentially provides more Delta water supplies for delivery to CVP water service contractors on the west side of the San Joaquin Valley during the peak irrigation season. About 9,000 AF of water demand is projected to be shifted for use later in the year.

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4) Stanislaus River Fishery Flows: Reclamation is accommodating the release of water from senior water rights holders on the Stanislaus River for fishery benefits, with secondary benefits of improving Delta exports to the CVP and State Water Project. The water would be released from New Melones Reservoir in April and May, and a portion would be diverted for CVP and SWP use. About 30,000 AF will likely be available for supplemental CVP allocation.

5) Refuge Groundwater Pumping: Groundwater wells in the Grasslands Resource Conservation District and the Grassland Water District will be available to pump additional water. Half of the water pumped will be used to meet refuge Level 2 water demands in lieu of using CVP water, with a like amount of water going back into the CVP yield for allocation to the west side of the San Joaquin Valley. The pumped groundwater total will be about 4,000 AF, making 2,000 AF available to improve CVP supplies.

Additional reclamation actions to augment future water supplies include:

Water Banking: Since 2001, Reclamation has approved 20 requests from CVP contractors to bank CVP water for use in dry years. So far this year, Reclamation has approved the return of 20,000 AF of banked CVP water to south-of-Delta water users for the 2013 water year.

Water Transfers: Reclamation approves transfer of CVP water and enters into Warren Act contracts for the movement and storage of non-CVP water transfers. Reclamation is evaluating the quantity and timing of water transfer opportunities through the Delta this summer. Transfers allow CVP contractors to augment their CVP allocation. Potential transfers include north-to-south transfers of Yuba River water, estimated at 50,000 AF; east-to-west transfers of 37,000 AF; and San Joaquin River Exchange Contractor Long-Term Transfer Program transfers of about 62,000 AF. Reclamation has approved a south-of-Delta water rights transfer of 12,000 AF and San Joaquin Valley in-basin transfers of 5,620 AF.

Reclamation's actions are helping to offset the impacts of this year's dry hydrology, exacerbated earlier this winter when pumping was restricted for a certain period of time to protect salmon and other fish species, leading to the loss of approximately 250,000 AF of water for south-of-Delta CVP contractors.

For info: www.usbr.gov/mp/PA/water/index.html

COMPACT COMPLIANCE NE

republican river compact actions

Water is being released to Kansas from Harlan County Reservoir as part of the State of Nebraska's ongoing efforts to comply with the three-state Republican River Compact. This action came after Kansas ultimately could not agree on a plan suggested by Nebraska that would have allowed Kansas water users access to this water during future irrigation seasons.

"It was my hope that the State of Kansas and the Bureau of Reclamation could have worked out a plan over the past four months that would have benefited basin water users by making this water available to them without compromising Nebraska's ability to comply with the Compact. This did not happen," Nebraska Department of Natural Resources (NDNR) Director Brian Dunnigan said.

At the beginning of this year NDNR officials determined that additional water would need to flow into Kansas for compliance with the Compact. Kansas had recently expressed interest in having the water that is now being released from Harlan County Lake to instead be retained so it could be used next year and possibly in 2015. Nebraska officials are agreeable to doing so, as long as Kansas would agree to hold Nebraska harmless for any computed shortfall that results from strict application of compact accounting.

Nebraska's compliance efforts are based on the proactive Integrated Management Plans that were jointly adopted in 2010 and 2011 by NDNR and the three Republican River Basin Natural Resources Districts. The primary actions taken thus far to address the forecasted shortfall for 2013 have been the implementation of activities by the Natural Resources Districts (NRDs) to reduce water consumption and increase streamflow. These actions by the NRDs have been coupled with actions by the NDNR to ensure that this water is made available to Kansas. To carry out NDNR efforts a "compact call" was placed on surface water in the Basin at the beginning of the year. This call has restricted surface water users and irrigation districts in Nebraska from storing or diverting streamflows in the Republican Basin. "It is unfortunate that these actions are necessary, but when these plans were being developed three years ago everyone anticipated dry years and that this day would likely come. I believe that Nebraska put a very reasonable solution on the table for the State of Kansas that would likely have benefited all water users in the basin, but Kansas appears to be much more concerned about the strict accounting result for 2013, so we are left with no other options but to release the water so that the accounting books will balance. The risk of non-compliance with the Compact is too great for Nebraska to wait until the end of the year to take these actions," said Director Dunnigan.

By taking these actions it is expected that compliance with the Compact will be achieved for the sixth straight year.

The release of approximately 20,000 AF of water from Harlan County Lake that began Wednesday, May 1st, is expected to take approximately fifteen days.

For info: Laura Paeglis, NDNR, 402/471-2366 or laura.paeglis@nebraska.gov

WQ ASSESSMENT MAP UT

udeq online tool

The Utah Division of Water Quality (UDWQ) has announced the availability of a web-based mapping tool to help identify the designated beneficial uses of surface waters in Utah as well as their water quality conditions based on scientific assessments. Some of the beneficial uses assigned to Utah waters include: domestic drinking water; agricultural use; aquatic life;

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and recreation. UDWQ intends the interactive mapping tool to increase public awareness of local water quality conditions, provide information on areas of concern, and serve as a basis for establishing water quality objectives statewide.

Users have two options for retrieving information from the map: "Search" and "Navigate."

The Search option entails entering a stream name, Assessment Unit ID, Unit ID, or location coordinates of the waterbody of interest. The Navigation feature entails selecting an Assessment Unit or waterbody using an online map.

The areas selected will provide detailed information. If the waterbody is impaired and water quality restoration plans have been approved, the "TMDL Information" field and Web link will appear, allowing users to view the plan to restore the waterbody to its designated beneficial use. You can print the current map view and information from the left window pane using the "Print to PDF" button. Selected maps include contact information for the watershed scientist assigned to the waterbody if users have questions or need further assistance.

For info: www.waterquality.utah.gov/WQMap/index.htm

DIESEL SPILL UT

UDWQ ENFORCEMENT

As part of a Notice of Violation and Compliance Order (NOV/CO) issued on April 12th, the Utah Division of Water Quality (UDWQ) is asking Chevron Pipeline Company to provide a report on cleanup activities and its response plan for the pipeline rupture that leaked approximately 21,000 gallons of diesel near Willard Bay Reservoir on March 18, 2013.

The NOV/CO is not a penalty. Rather, it details findings of fact regarding the spill, violations based on these findings, and mandatory compliance provisions for cleanup and monitoring.

Chevron has the opportunity to review the document, and submit a response or challenge the NOV within thirty days of receipt. Chevron will also have sixty days to submit a response to the Compliance Order. Once Chevron's response to the NOV has been received and reviewed, the state will begin a process to determine whether a penalty will be levied for the spill.

"We are working with the Attorney General's Office to ensure Chevron is held accountable for the spill and its impacts," said DWQ Director Walt Baker. "This release has had a significant effect on a fragile ecosystem. The popular bird watching and recreational area has been closed because of this spill."

So far 408 barrels of diesel have been recovered and an estimated 70 barrels remain in the surrounding soil and water. The March 18th spill into Willard Bay State Park marks the third time in the last three years Chevron has been issued a notice of violation for pipeline problems.

A french drain constructed to intercept contaminated groundwater flowing into Willard Bay appears to be working. Continued trace levels of diesel-related hydrocarbons in surface water samples in early April suggested to UDWQ scientists that groundwater flowing into the Bay had been contaminated by the spill. Since the installation of the drain, levels of contaminants have decreased. UDWQ anticipates these reductions in trace contaminant levels will continue over time.

Groundwater contamination from the pipeline leak will not jeopardize the park's drinking water, which is supplied by the City of Willard. Preliminary assessments by the Utah Departments of Environmental Quality and Health suggested that fish from Willard Bay will likely be safe to eat. UDWQ is considering sampling of fish for diesel-related contamination to support this finding.

Monitoring wells will be constructed to evaluate the extent of groundwater contamination over the long-term.

For info: Walt Baker, UDWQDirector Division of Water Quality,
801/ 536-4310
Website: www.deq.utah.gov/locations/willardbay/willardbay.htm

GROUNDWATER SURVEY US

GOVERNANCE REPORT AVAILABLE

In the fall of 2012, the Water Resources Research Center and the University of Arizona Udall Center for Studies in Public Policy initiated the "Groundwater Governance in the US" project, with the goal of better understanding the scope of current groundwater governance across the country. The project launched a national-scale survey of US state agency officials, aiming to acquire baseline information regarding state-level practices. The resulting report presents major findings from the survey, and focuses on analyzing results. Depending on available funding, future efforts will expand upon this research and include a broader set of survey participants. The Report is available from following website.

For info: www.groundwatergovernance.org/

STORMWATER PROGRAM AZ

EPA-ADOT AGREEMENT

EPA has reached an agreement with the Arizona Department of Transportation (ADOT) to improve the State's stormwater management program as part of EPA's national effort to reduce pollution of waterways by runoff from cities and statewide transportation agencies. ADOT manages 18,000 travel lane miles across the State, and stormwater runoff from its roads and maintenance facilities contain pollutants such as metals, sediment, oil, grease, pesticides, and trash.

ADOT voluntarily addressed many of EPA's concerns by enhancing its program with the addition of new positions in its Office of Environmental Services, and by mapping its storm drain outfalls and roadside water filters. Detailed mapping allows the State to predict where flows will go and how best to contain them, information critical in emergency situations such as tanker truck spills. The agreement requires ADOT to conduct additional corrective measures and establishes a series of compliance dates to resolve by March 2014 the remaining findings of an EPA audit.

WATER BRIEFS

"The protection of surface waters is a priority in a desert environment, and cutting stormwater pollution from roads is a key goal under the Clean Water Act," said Jared Blumenfeld, EPA's Regional Administrator for the Pacific Southwest. "We are confident the progress ADOT has taken thus far, along with the actions they commit to in this agreement, will improve water quality throughout Arizona."

The agreement is the result of EPA's week-long audit in October 2010, which evaluated ADOT's compliance with its municipal stormwater permit. The audit included inspections of 57 ADOT construction sites and maintenance facilities in four districts encompassing Phoenix, Flagstaff, Tucson, and Prescott, and included document reviews, interviews and field verification inspections. The permit was issued by the state of Arizona under the Clean Water Act to protect the state's water resources from polluted runoff.

Nationally, stormwater runoff is a primary cause of water quality impairments. Under the federal Clean Water Act, National Pollutant Discharge Elimination System (NPDES) permits regulate the discharge of pollutants, including municipal and industrial stormwater runoff, into waters of the United States.

Since 2001, EPA's Pacific Southwest Region has conducted numerous audits of municipal stormwater programs, including state transportation agencies, to evaluate program effectiveness and assess compliance with their permits.
Audit reports can be viewed at: http://www.epa.gov/region9/water/npdes/ms4audits.html
For info: Rusty Harris-Bishop, EPA, 415/ 972.3140 or harris-bishop.rusty@epa.gov
EPA Stormwater Program website: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

MOUNTAIN-TOP MINING US

EPA VETO AUTHORITY

On April 23, the US Court of Appeals for the District of Columbia (Court) reversed a lower court's ruling and held that EPA has the legal authority to retroactively veto a portion of a water pollution permit. The case involves one of West Virginia's largest mountain-top removal sites and a permit to discharge dredged or fill material from the mountain-top coal mine into three streams and their tributaries.

The Court ruled that EPA, under subsection 404(c) of the Clean Water Act (CWA), may withdraw any defined area as a disposal site from a CWA dredge-and-fill permit, even though EPA withdrew two of the three streams designated as permitted disposal sites three years after the permit was issued by the Army Corps of Engineers (Corps). *Mingo Logan Coal Co. v. EPA*, No. 1:10-cv-00541 (April 23, 2013). EPA did not exercise its authority to veto the three selected disposal site streams at the time the permit was issued, although it did express concerns in a letter to the Corp at that time: "EPA expressed its concern that 'even with the best practices, mountaintop mining yields significant and unavoidable environmental impacts that had not been adequately described in the document.'" *Slip Op*. at 4. The Court held that EPA does have "post-permit withdrawal authority" but remanded the case back to the lower court to rule on the undecided issue of whether or not EPA's action was arbitrary and capricious in violation of the Administrative Procedure Act (APA), 5 U.S.C. §§ 701 et seq. *Id*. at 2-3.

The case turned on the Court's interpretation of subsection 404 and its conclusion that "the language unambiguously expresses the intent of the Congress." *Id*. at 7. After noting that Congress granted permitting authority for dredge and fill permits to the Corps, the Court went on to state that, "[N]onetheless, the Congress granted EPA a broad environmental 'backstop' authority over the Secretary's discharge site selection in subsection 404(c)… ." The language of 404(c), quoted in full by the Court, contains language that persuaded the Court to find post-permit withdrawal authority exists: "The Administrator is authorized to prohibit the specification (*including the withdrawal* of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (*including the withdrawal* of specification) as a disposal site, *whenever* he determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas." (emphasis added by *TWR*). *Id*. at 8.
For info: Case available at: www.cadc.uscourts.gov/internet/opinions.nsf/ >> Browse by Date (April 23, 2013)

POWER PLANT TOXICS US

REDUCED DISCHARGES TO WATERWAYS
EPA PROPOSING EFFLUENT LIMITATIONS

EPA is proposing to amend the effluent limitations guidelines and standards for the Steam Electric Power Generating category (40 CFR Part 423). A proposed rule was signed by the EPA Acting Administrator and is being prepared for publication. In mid-April, EPA proposed a range of options to help reduce pollutants, including mercury, arsenic, lead, and selenium that are released into U.S. waterways by coal ash, air pollution control waste and other waste from steam electric power plants. The proposal includes a variety of options for whether and how these different waste streams should be treated. Steam electric power plants currently account for more than half of all toxic pollutants discharged into streams, rivers and lakes from permitted industrial facilities in the United States. EPA will take comment, to help inform the most appropriate final standard, for 60 days after publication in the Federal Register.
For Info: For additional technical information in the proposed Steam Electric Power Generating effluent guidelines, please contact Jezebele Alicea-Virella, EPA, alicea.jezebele@epa.gov or 202/ 566-1755. For economic information please contact James Covington, EPA, covington.james@epa.gov or 202/ 566-1034.
EPA website: http://water.epa.gov/scitech/wastetech/guide/steam-electric/index.cfm

CALENDAR

May 14-17 AZ
The Environmental Awareness Bootcamp, Scottsdale. Hilton Garden Inn, Scottsdale Old Town. For info: EPA Alliance Training Group, www.epaalliance.com

May 15 MT
Columbia River Treaty Study Results - Open House, Eureka. RiverStone Lodge, 6370 Hwy 93 North, 4-7pm. Presented by Army Corps of Engineers & Bonneville Power Admin. For info: www.crt2014-2024review.gov

May 15 CA
Integrated Regional Water Management Workshop, Red Bluff. Elks Lodge, 355 Gilmore Road. Presented by California Dept. of Water Resources. For info: www.water.ca.gov/irwm/stratplan/workshops.cfm

May 15-17 OR
National Pretreatment & Pollution Prevention Workshop, Portland. DoubleTree by Hilton. Presented by Nat'l Ass'n of Clean Water Agencies. For info: NACWA, 202/ 833-2672 or registration@nacwa.org or www.nacwa.org

May 15-17 GA
2013 National Brownfields Conference, Atlanta. Georgia World Conference Ctr. Presented by EPA. For info: www.epa.gov/brownfields/bfconf.htm

May 16 WA
Hatcheries & Fisheries Conference, Seattle. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

May 16 CA
Integrated Regional Water Management Workshop, Sacramento. Sacramento Regional County Sanitation Dist., Valley Oak Conf. Rm., 10060 Goethe Road. Presented by California Dept. of Water Resources. For info: www.water.ca.gov/irwm/stratplan/workshops.cfm

May 16 MT
Columbia River Treaty Study Results - Open House, Kalispell. Kalispell Red Lion, 20 N. Main St., 4-7pm. Presented by Army Corps of Engineers & Bonneville Power Admin. For info: www.crt2014-2024review.gov

May 16 WEB
Development of Markers to Identify Nutrient Sources Impacting Surface Water Bodies (Webinar), WEB. Presented by WateReuse Research Foundation. For info: www.watereuse.org/foundation/webcasts/09-08

May 16-17 CA
Flood Management Tour (Field Trip), American River. Presented by Water Education Foundation. For info: www.watereducation.org

May 16-17 CA
Water & Agriculture: A Real Asset Investor Summit, Los Angeles. Terranea Resort. Hosted by Westwater Research & American Water Intelligence. For info: www.agwaterinvest.com

May 17 OR
Agricultural Law Section Annual "Round-Up" CLE Program, The Dalles. The Columbia Gorge Discovery Ctr. Presented by Agricultural Law Section, Oregon State BAR. For info: Daryl Cole, 503/ 281-4100 or daryl@water-law.com

May 17-20 MO
River Rally 2013, St. Louis. Sponsored by River Network & Waterkeeper Alliance. For info: www.rivernetwork.org/events/river-rally

May 19-22 OH
World Environmental & Water Resources Congress 2013, Cincinnati. Duke Energy Convention Ctr. Sponsored by American Society of Civil Engineers. For info: http://content.asce.org/conferences/ewri2013/

May 20-21 TX
Endangered Species Act Conference, Austin. Omni Hotel. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

May 21 AZ
Rainwater Stormwater Professionals Network Annual Meeting, Tucson. WRRC Sol Resnick Conference Rm., 12 pm. For info: Susanna Eden, WRRC, www.wrrc.arizona.edu

May 21-22 Ontario
Grey to Green: Conference on the Economics of Green Infrastructure, Toronto. Evergreen Brick Works. For info: conference@greenroofs.org or www.GreytoGreenConference.org

May 22 CA
Sustainable Water Management & Landscape Design Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

May 22 WEB
Onsite Water Reuse: Exploring New Opportunities & Overcoming Obstacles Webinar, WEB. For info: www.watereuse.org/webcasts/onsite-reuse

May 29 NM
New Mexico Drought Workshop: Drought Outlook & Management Considerations for Rangeland Livestock Production, Socorro. Socorro County Extension Ctr. Hosted by New Mexico Section of the Society for Range Management, National Drought Mitigation Center & National Drought Mitigation Center. For info: Nathan Combs, Society for Range Management (NM Section), 575/ 838-1251 or ncombs@blm.gov

May 29-31 Netherlands
Developing Capacity from Rio to Reality: Who's Taking the Lead - 5th Delft Symposium on Water Sector Capacity Development, Delft. For info: www.unesco-ihe.org/CD-Symposium

May 29-31 AZ
Natural Resources Law Teachers Institute, Flagstaff. Little America. Presented by Rocky Mt. Mineral Law Foundation. For info: www.rmmlf.org/

May 31 AK
ESA - Impacts on Alaska Seminar, Anchorage. Dena'ina Convention Ctr. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com or www.lawseminars.com

June 2-6 France
10th IWA Leading Edge Technology Conference on Water & Wastewater Technologies, Bordeaux. Presented by International Water Ass'n. For info: www.let2013.org/

June 4 OR
The Klamath Adjudication: Past, Present & Future Workshop, Klamath Falls. Klamath Basin Research & Extension Center. Presented by Schroeder Law Offices. For info: www.water-law.com/klamath/index.html

June 4 VA
Water Acquisition Modeling: Assessing Impacts Through Modeling & Other Means Workshop (Potential Impacts of Hydraulic Fracturing), Arlington. EPA Conference Ctr. at One Potomac Yards. Presented by EPA. For info: Lisa Matthews, EPA, 202/564-6669, lisa@epa.gov or www.epa.gov/hfstudy/techwork13.html

June 5 WEB
Strategic Integrated Water Resources Management: Implementation at the State Level in Oregon & California Webinar, WEB. Presented by American Water Resources Ass'n. For info: www.awra.org/

June 5 VA
Hydraulic Fracturing Case Studies Workshop (Potential Impacts of Hydraulic Fracturing on Drinking Water Resources), Arlington. EPA Conference Ctr. at One Potomac Yards. Presented by EPA. For info: Lisa Matthews, EPA, 202/564-6669, lisa@epa.gov or www.epa.gov/hfstudy/techwork13.html

June 5-6 CA
Successful CEQA Compliance Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, http://extension.ucdavis.edu/

June 5-7 NV
ABA Water Law Conference, Las Vegas. Red Rock Resort. Sponsored by the American Bar Ass'n. For info: www.americanbar.org/groups/environment_energy_resources.html

June 6 OR
Re-Using Contaminated Land: Transactions & Technologies Conference, Tacoma. Greater Tacoma Convention & Trade Center. Presented by: the Commercial Real Estate Development Association; Washington State Department of Ecology; and the Northwest Environmental Business Council (NEBC). For info: Jeff Jordan, NEBC, 503/ 227-6361 or jeff@nebc.org; www.nebc.org

June 9-13 CO
Uniting the World of Water: AWWA Annual Conference & Exposition (ACE13), Denver. Colorado Convention Ctr. Presented by American Water Works Ass'n. For info: www.awwa.org/conferences-education/conferences/ace13-annual-conference.aspx

June 10 WA
Toxics in Washington: Reducing Toxics in Fish, Sediment & Water Conference, Seattle. For info: Environmental Law Education Center, 503/ 282-5220 or www.elecenter.com

June 10-11 DC
Developing a Research Agenda for the Energy-Water Nexus Workshop, Washington. NSF Headquarters. Sponsored by National Science Foundation. For info: Sharon Bernard, UT Austin, sbernard@mail.utexas.edu

June 10-13 FL
Second Int'l Bioremediation & Sustainable Environmental Technologies Symposium, Jacksonville. Hyatt Regency Riverfront Hotel. For info: http://conferences.battelle.org/bioremediation/index.html

June 11-13 CA
Sustaining Water Resources & Ecological Functions in Changing Enviroments Conference, Lake Tahoe. Sponsored by Universities Council on Water Resources. For info: http://ucowr.org/conferences/item/36-2013-conference

June 12-14 CA
Bay-Delta Tour (Field Trip), Sacramento. Presented by Water Education Foundation. For info: www.watereducation.org

June 14 TX
Hydraulic Fracturing Conference, Houston. St. Regis. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

June 17-21 OR
Water Conflict Management Course, Corvallis. Presented by Oregon State University. For info: http://outreach.oregonstate.edu/nrla/

June 18 CA
Stormwater Workshop, Los Angeles. Metorpolitan Water District. Presented by Southern California Water Committee. For info: Kym Belzer, kbelzer@fionahuttonassoc.com or www.SoCalWater.org

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

CALENDAR

(continued from previous page)

June 18-21 NV
New MODFLOW Course: Theory & Hands-On Applications, Las Vegas. Presented by Nat'l Ground Water Ass'n. For info: www.ngwa.org/Events-Education/shortcourses/Pages/258jun13.aspx

June 18-21 CA
The Environmental Awareness Bootcamp, San Diego. DoubleTree Downtown. For info: EPA Alliance Training Group, www.epaalliance.com

June 19 AZ
The Colorado River & Yuma State Historic Park - Brownbag Seminar, Tucson. WRRC Sol Resnick Conference Rm., 12-1:30pm. For info: wrrc.arizona.edu/brownbag

June 20-21 OR
15th Annual Oregon Wetlands & Aquatic Resources Seminar, Portland. World Trade Ctr. Two. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

June 24-25 WA
Water Law in Washington Seminar, Seattle. Washington State Convention Ctr. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com or www.lawseminars.com

June 24-26 WY
Western States Water Council Summer (172nd) Council Meeting, Casper. Hilton Garden Inn. For info: www.westernstateswater.org/upcoming-meetings/

June 24-26 CT
2013 AWRA Summer Specialty Conference: Environmental Flows, Hartford. Hilton Hotel. For info: www.awra.org/meetings/EnvironmentalFlows2013/

June 25-27 NE
2013 Water & Natural Resources Tour: Managing Nebraska's Water Resources, Kearney. Sponsored by Nebraska Water Center. For info: Steve Ress, NWC, sress1@unl.edu or http://watercenter.unl.edu/Archives/2012/2012_ResourcesTour.asp

June 26-28 CT
2013 AWRA Summer Specialty Conference: Healthy Forests = Healthy Water, Hartford. Hilton Hotel. For info: www.awra.org/meetings/HealthyForest2013/

June 28-30 UT
Western Governors' Ass'n 2013 Annual Meeting, Park City. Montage Deer Valley. For info: Sarah Olsen, WGA, 720/ 897-4540, solsen@westgov.org or www.westgov.org

July 1-4 Australia
Asia Pacific Water Recycling Conference, Brisbane. For info: www.awa.asn.au/recycling13/

July 9-11 TX
Unconventional Oil & Gas Water Management Forum, Grapevine. Gaylord Texan Hotel. Presented by Ground Water Research & Education Foundation. For info: www.gwpc.org/sites/default/files/events/WaterManagementFlier.pdf

July 12 TX
Texas WateReuse Conference, Austin. Convention Ctr. Presented by Texas Section, WateReuse Ass'n. For info: www.watereuse.org/sections/texas

July 15-16 AZ
Arizona Water Reuse 2013 Conference, Flagstaff. Little America Hotel. Presented by Arizona Water Ass'n. For info: www.watereuse.org/sites/default/files/u8/SaveTheDatePostcardc.pdf

July 15-18 Greece
Annual International Forum on Water, Athens. For info: www.atiner.gr/water.htm

July 16-19 CO
The Environmental Awareness Bootcamp, Colorado Springs. Antlers Hilton. Presented by EPA Alliance. For info: www.epaalliance.com/envbootcampcolsprings13.html