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WATER CONSERVATION INITIATIVES WESTERN STATES TAKE ACTION



by Craig Bell, Western States Water Council (Midvale, Utah)

INTRODUCTION

Because of the West's arid climate and booming population, water conservation has become an increasingly important issue to the western United States. Even in those states where water resources appear to be relatively abundant (such as the Northwest) regulatory and societal demands to preserve instream flows for fish, wildlife, recreation and aesthetics have made providing an adequate water supply a pressing issue. This issue is made more important by the fact that the governing body of water law in the West — the Prior Appropriation Doctrine, with its principles of "first in time, first in right" and "use it or lose it" — can act as a disincentive for water conservation. Thus, water users who do implement conservation measures may risk losing or forfeiting the amount of water conserved.

It is important to understand that conservation is a tool that can help ensure future water supplies and get us through temporary shortages, rather than an end in and of itself. Water conservation measures also must be evaluated on a site-specific basis because of potential drawbacks — principally third party adverse impacts to the environment and other uses. Nevertheless, while every state in the West noted the need for additional storage in meeting future demands, their 1997 report included this significant statement: "[S]tates will carefully consider opportunities to 'stretch' existing supplies of water through water conservation, reuse, and reservoir reoperation, prior to the development of new storage facilities." [See Western States Water Council (WSWC), Water in the West Today: A States' Perspective: Report to the Western Water Policy Review Advisory Commission (Feb. 1997)]

With this in mind, both states and local governments as well as private individuals and organizations have set about finding ways to conserve water. State efforts have resulted in water statutes to mitigate or remove the disincentive inherent in the Prior Appropriation Doctrine. While typically targeted at agriculture, state programs also address municipal conservation. Additionally, the states as well as private organizations have provided incentives to conserve water using water banks. Lastly, local governments and private organizations have taken a grassroots approach, banding together as stakeholders in a watershed to conserve water resources.

THE LEGISLATIVE APPROACH TO ENCOURAGING WATER CONSERVATION

One of the challenges facing western states is how to encourage water conservation within the Prior Appropriation system. That doctrine was designed to provide for the orderly development of the resource, as well as to discourage speculative endeavors and prohibit waste. Agricultural conservation is typically seen as the primary source of new water for other uses because agriculture is by far the largest user and usually holds the most senior water rights. On the other hand, municipal conservation is widely emphasized in state and local programs, and is often a prerequisite for state funding.

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Disincentives

Conserved Water

Methods

Transfers

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State Agricultural Conservation Incentives

The Prior Appropriation Doctrine has been criticized for discouraging agricultural conservation for two reasons. First, conserving water, i.e. using less water for the same purpose, has traditionally been regarded as evidence of "waste." Water users are not allowed to "waste" water under the concept of "beneficial use" (another fundamental principle of the Prior Appropriation Doctrine). Second, appropriative law generally prevents the expansion of a water right by "spreading" the conserved water to additional lands (which is viewed as an expansion of the water right). In an attempt to promote agricultural water conservation, at least four western states have removed legal disincentives inherent in the Prior Appropriation Doctrine. These states include California (Cal. Wat. Code §1011), Washington (RCW §90.42.005-900), Montana (MCA §85-2-419) and Oregon (ORS 537.455-500).

California

Recognizing that potential forfeiture for non-use can discourage conservation of water, Cal. Wat. Code §101 (enacted in 1979) allows water users to retain their rights to all water "saved" as a result of water conservation efforts. Conserved water can be "sold, leased, exchanged, or otherwise transferred" (Cal. Wat. Code § 1011(b). Section 1011 specifically targets agricultural conservation by recognizing fallowing and crop rotations as conservation methods. For instance: "[L]and conversion from agricultural use to urban use would typically not qualify as a water conservation effort under Water Code 1011." [See State Water Resources Control Board (SWRCB), *A Guide to Water Transfers 6-6* (1999), website: www.waterrights. ca.gov/watertransferguide.pdf]

The impact of section 1011 on water consumption and conservation is difficult to quantify. Most water transfers authorized through section 1011 "involve conservation efforts that apparently would have occurred for other reasons. [However,] [s]ection 1011 probably has served to reduce resistance to water conservation." [See Andrew H. Sawyer, *Improving Efficiency Incrementally: The Governor's Commission Attacks Waste and Unreasonable Use*, 36 McGeorge L. Rev. 209, 241 (2005)]

It should also be noted that not all water saved can be transferred, as there are provisions to protect other water users, as well as fish and wildlife from injury and adverse effects. [See SWRCB Order No. WR 99-12, at 11-13 (Dec. 28, 1999); holding that water conserved pursuant to Cal. Wat. Code § 1011, may only be transferred in compliance with Cal. Wat. Code § 1725)]

Washington

Washington also provides an incentive for water users to conserve through the "trust water rights" program (trust program) established in 1992. "Net saved water" may be acquired by the state for various uses through negotiation where a state or federal agency provides public funding for water conservation projects. (RCW §90.42.030). The trust program is administered through the Department of Ecology (Ecology). Ecology has been particularly active in the Yakima River Basin, frequently in concert with the Bureau of Reclamation. Through the Yakima Enhancement Project the Washington State Legislature and US Congress authorized federal, state, and local cost-sharing for conservation projects (RCW §43.21A.470). Where state funding is provided, however, a portion of net water savings (typically proportionate to the percentage of state funds invested in the project) is acquired by contract for the trust program. Negotiations between the state and water right holder determine the exact amount of conserved water that will become a trust water right. Allocations are accomplished though transfer, lease, or other agreement. Under the trust program, rights retain the original priority date, unless the water right is split between the original user and the state, in which case the trust water right is inferior in priority (RCW §90.42.030(2)-(3)).

Washington's trust water rights program has been seen as successful. State and federal funding of conservation projects has been key, along with the fact that the water saver may be permitted to retain and use some of the saved water (Email from Ken Slattery, Program Manager, Ecology's Water Res. Prog., to Elizabeth Crane, Law Clerk, WSWC, June 23, 2006 (on file with the WSWC). Further, conserved water which is not managed through the trust program may be considered waste, subject to relinquishment (RCW § 90.14.160).

Montana

Another state that allows water right holders to maintain their right to "salvaged" water is Montana. Typically, Montana does not allow water users on their own initiative to spread salvaged water to additional land. However, if the user applies to do so through a change of use permit, they may put the conserved water to beneficial use on other lands provided the water saver can demonstrate the proposed method will salvage at least the amount of water asserted. The water user must also meet all other change application

Return Flows

Options for Water

Allocations

Interest Increasing criteria — including beneficial use and "injury" requirements — and make a showing that water quality will not be adversely affected. See MCA §§ 85-2-419, 85-2-402(1), (2)(e), 85-2-410.

While Montana's salvage statute provides the opportunity to better use limited water resources, determining whether the conservation measures implemented actually save water can be difficult and complex. These difficulties have limited the success of Montana's program. For example, the Montana Department of Natural Resources and Conservation has noted that permitting an applicant to enlarge their irrigated acreage, based on the water saved when switching from flood irrigation to a sprinkler system, may diminish return flows thereby injuring junior appropriators or other third parties.

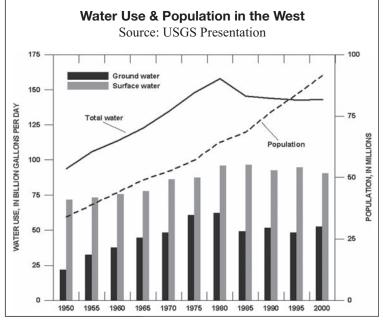
Oregon

Oregon also has a state policy of aggressively promoting conservation. The Allocation of Conserved Water Program (Program), administered by the Oregon Water Resources Department (OWRD) reflects this ethic (see ORS 537.455-500). Under Oregon law since 1987, a water user who has either conserved water within the last five years or who plans on conserving water may apply to use the water on additional land, sell or lease the water, or dedicate it to instream flows. The original water right holder has the option of fixing the new priority date as either the same as or one minute after the priority of the original water right (ORS 537.485(1)). At least 25 percent of the water conserved, however, must be allocated to the state, either for instream dedication (if needed for flow) or for appropriation by the next user in priority (ORS 537.470(3)). Additionally, agencies and other state political subdivisions are authorized to purchase rights to conserved water or except them as a gift (ORS 537.495). Initially the burden of proof was on the water saver to demonstrate that water saved would otherwise have been irrecoverably lost, but the 1993 legislature eliminated this obstacle. [See OWRD website: *Allocation of Conserved Water*, www.wrd.state. or.us/OWRD/mgmt conserved water.shtml]

Until recently, Oregon's Program had not met with success. The Allocation of Conserved Water Program was initiated in 1988. However, by 2000 only 10 applications had been received. At least part of the reason there were not more applicants was the expense of installing conservation measures that would comply with the Program's demands. Despite the expense, however, there appears to be increasing interest in the Program. In 2005, the OWRD reported that 30 new applications had been received since 2000, partially attributable to increased support for streamflow restoration. [See *Allocation*, supra note 26; see also *Applying for the Allocation of Conserved Water Program* (Mar. 2006), OWRD website: www1.wrd. state.or.us/pdfs/conserved.pdf]

Municipal Water Conservation Incentives

In addition to encouraging efficient irrigation practices, statutory incentives have targeted municipal water use to encourage cities to better manage their water resources and ensure sustainable supplies. Municipal conservation has been encouraged both through state and local action, using educational programs, planning mandates, funding incentives, and statutory requirements. [See generally Nevada Div. of Water Planning, *Nevada State Water Plan* at 1A-1 – 1A-2 [hereinafter *Nevada Water Plan*], website:



http://water.nv.gov/Water%20planning/wat-plan/pt3-1a.pdf); and RCW §90.03.330(7)]

While state and local incentives have largely been successful, there are some possible drawbacks to municipal conservation that need to be considered. Possible problems include: higher waste concentrations in the wastewater; less water available for reuse; reduced return flows; and less groundwater recharge. In addition, once conservation programs have successfully dealt with the "low hanging fruit" a "hardening" of demand may well occur — thereby reducing a city's available options during drought periods. [See Peter D. Nichols & Douglas S. Kenney, *Watering Growth in Colorado: Swept Along by the Current or Choosing a Better Line?* 6 U. Denv. Water L. Rev. 411, 440-47 (2003) (noting that Denver Water "only realized eighteen percent annual savings from drought restrictions in 2002," due to the previous emphasis on water conservation)]

The following three examples from Washington, California, and Arizona illustrate some of the ways states have encouraged municipal conservation.

Unperfected Rights

Development Schedules

"Urban Water Suppliers" Plan

> GPCD Use Targets

ADWR Models

Water "Deposits"

Washington

The passage of Washington's 2003 Municipal Water Law brought about substantial changes to water management in Washington (see RCW §70.119A.180). Among other things, all municipalities were required to implement "cost effective" conservation measures. Washington allows municipalities in compliance with their water conservation goals to change or transfer unperfected water rights so long as certain provisions are met. These provisions include the municipality having established instream flows and a watershed plan, and a determination that the proposed change(s) will not increase consumptive use. [Editor's Note: "unperfected" water rights are rights which have not yet been put to a beneficial use.] To help municipalities set and achieve their conservation goals, the Washington Department of Health (WDOH) may provide technical assistance. WDOH may use the "full range of compliance mechanisms available to [them]," in order to ensure municipal compliance. WDOH, along with Ecology, also considers whether the municipality has implemented a conservation program when "considering development schedules for municipal water supply rights." Water right permits contain a development schedule that outlines when a project may begin, when it must be completed, and when the water must be fully applied to a beneficial use. [See Ecology, Frequently Asked Questions About Water Rights in Washington (Feb. 2006), website: www.ecy.wa.gov/pubs/961804swr.pdf]

California

California's Urban Water Management Planning Act (Act) requires all "urban water suppliers" to prepare an Urban Water Management Plan (UWMP). Urban water suppliers must describe any conservation measures that are planned or have been implemented, including efficiency and demand management measures (Cal. Wat. Code § 10631). State grants and loans for various programs, as well as drought assistance, are contingent on compliance with the Act and submission of a UWMP to the California Department of Water Resources every five years. Additionally, UWMP's must comply with the conservation and information requirements of both the California State Water Resources Control Board (SWRCB) and the state Public Utilities Commission, or any other requirement imposed by "state law, regulation, or order." Cal. Wat. Code § 10653.

Arizona

Arizona's 1980 Groundwater Management Act set the state on a course to achieve safe and sustainable aquifer yields. It utilizes an aggressive water conservation program with specific plans and goals that require developers to demonstrate that they have an assured and adequate supply of water. It also requires water providers to meet gallon per capita per day (GPCD) targets in five different Active Management Areas. At present, the target for interior water use for new residential development is 57 GPCD, with outdoor targets ranging from 178 gallons per housing unit per day (GPHUD) in Phoenix and 118 GPHUD in Tucson, to 75 GPHUD in Prescott. There are also "individual user" requirements for deliveries to new large cooling users, turf-related facilities, and landscaping in public rights of way. In addition, large providers (those that serve more than 250 acre-feet per year) must limit lost and unaccounted for water to no more than 10 percent, and small providers to not more than 15 percent. While developers are not specifically subject to these requirements, water use by new developments can affect the ability of the provider to meet its requirements. Water use models for new residential development, which assume water conservation practices and devices, were developed by the Arizona Department of Water Resources (ADWR) and used in determining the provider's GPCD goals.

The Arizona Water Efficient Plumbing Act of 1992 requires installation of fixtures that are compatible with ADWR's interior water use models. [See ADWR, *Application for Delivery, Analysis of Accrued Water Supply*, 28-000001, (2002)]

An alternative conservation program is available in areas where the GPCD has proven infeasible. [See ADWR, *Program Framework: Modified Non-Per Capita Conservation Program* (Oct. 5, 2006)]

WATER BANKING: DEPOSITING CONSERVED WATER FOR OTHER USES

Water banking is yet another way to promote conservation. Conservation in a water banking program lies in the ability to "deposit" — rather than forfeit or abandon — temporarily excess water. Often, the incentive may be primarily financial — a user receives money in exchange for permanently or temporarily transferring all or a portion of their water right to the water bank. [RE: water banks generally, see Peggy Clifford, Clay Landry & Andrea Larsen-Hayden, *Analysis of Water Banks in the Western States*, 2 (Ecology & WestWater Research, LLC July 2004), at Ecology's website: www.ecy.wa.gov/pubs/0411011.pdf]

Forfeiture

Drought Options

Instream Flows

Local Initiatives

Upper Salmon Basin

Walla Walla Basin

Voluntary Measures Because the creation of a water bank necessarily includes removal of the threat of forfeiture or abandonment, excess water is thereby "conserved" for alternative uses at a future date. [See Janet C. Neuman, Symposium on Water Law: *Beneficial Use, Waste and Forfeiture: The Inefficient Search for Efficiency in Western Water Use*, 28 Envtl. L. 919, 929 fn. 52 (1998)]

An example of a state water bank that encouraged water conservation to provide emergency drought relief is California's Drought Water Bank. In 1991, 1992, and 1994, California experienced severe drought conditions. To obtain water for critical needs, the Department of Water Resources (DWR) contracted with voluntary sellers to use groundwater instead of surface water, fallow their agricultural land, or sell rights to water that was being stored in reservoirs. Acting as a broker, DWR then resold most of the water to purchasers who were prioritized according to need. By all accounts, the California Drought Water Bank was successful, both for agriculture generally and the state as a whole. [See Richard Howitt, Nancy Moore, & Rodney T. Smith, *A Retrospective on California's 1991 Emergency Drought Water Bank* 20 (1992)]

Through Idaho's water banking system, conserved water has been "banked" for subsequent use in augmenting instream flows to meet environmental regulatory requirements. Idaho's water banking system is comprised of the Water Supply Bank, administered by the state, and five rental pools administered by local water districts. Water deposited or rented from any of Idaho's water banks is not subject to water right forfeiture. Although primarily used to facilitate voluntary transfers between agricultural uses, Idaho's water banking system has been adapted and expanded to meet environmental objectives and federal Endangered Species Act (ESA) requirements. The US Bureau of Reclamation (Reclamation) has participated in the water banking system for a number of years, leasing water from the Water Supply Bank and rental pools for the benefit of endangered fish species, primarily salmon and steelhead. [See Clifford et al., *supra* note 46, at 61-64). Of note, special state legislation was required to allow federal leasing of water (Idaho Code § 42-1763B(2)]

THE WATERSHED APPROACH TO INCENTIVIZE WATER CONSERVATION

In addition to legislative reform and water banking programs, smaller projects involving local players and state agencies have also arisen. These projects have the ability to respond quickly and to tailor their efforts to the needs of their particular watershed. Such watershed efforts have successfully encouraged water conservation, in spite of the disincentives inherent in appropriative law. Idaho's Upper Salmon Basin Watershed Project and watershed efforts in Washington's Walla Walla Basin are excellent examples of local water conservation initiatives that have seen success.

The Upper Salmon Basin Watershed Project is Idaho's largest watershed project located off of federal lands. The Watershed Project is financed by: state agencies; the Lemhi and Custer water conservation districts; and the Bonneville Power Administration. The Project is led by an advisory committee that represents many stakeholders, including: private interests; state and federal agencies; tribal representatives, and other local interests. One of the primary endeavors undertaken by the Watershed Project is to encourage and assist the surrounding irrigators to implement more efficient irrigation systems. These conservation measures allow more water to remain in streams, providing for more spawning and rearing habitat, as well as eliminating some fish passage barriers. [See Northwest Power and Conservation Council, Fish & Wildlife Success Stories – Upper Salmon River Basin Watershed Restoration, Council website: www.nwcouncil.org/fw/stories/uppersalmon.htm; see also: Upper Salmon Basin Watershed Project: www.modelwatershed.org/Projects2.html]

The Walla Basin provides another example of an effective local watershed conservation initiative. In 2001, Walla Basin stakeholders took note as water contracted for delivery under Reclamation contracts was cut off for irrigation use in favor of meeting ESA requirements during a drought year in the Klamath Basin. The Walla Walla Basin stakeholders took drastic steps to ensure that nothing of that sort happened to them. One result of their efforts is that the Walla Walla River flowed continuously for the first time in over 100 years. Voluntary efforts by the local agricultural community received funding assistance from the Walla Walla Basin Watershed Council. Water conservation measures, including replacing dirt diversion canals with piping, were implemented to provide the instream flows. The success of the watershed effort is evident in that the annual bull trout and steelhead salmon rescues are no longer necessary — the fish can now navigate the river unaided by bucket or truck. [See Matthew Preusch, *Walla Walla Basin Sidesteps a Water War*, High Country News (Aug. 19, 2002); see also Brian Wolcott, *Director's Update: Basin ESA Accord* 1 (Aug. 2006), wwbwc.org/Media/WWBWC-newsletter-2006-08.pdf]

Aquifer Recharge

Net Benefits

Aquifer Impacts Idaho Decision

Conservation Impacts

ESA Compliance

LEGAL AND POLICY ISSUES

In evaluating conservation measures on a case-by-case basis, one must realize that unless consumptive use is reduced, "conservation has limited impacts to overall water supply." [See WSWC, *Water in the West Today, supra* note 1, at 26]

Further, as previously mentioned, conservation measures may reduce return flows and aquifer recharge — thereby injuring third parties. [See SWRCB, *A Guide to Water Transfers*, at 6-4 (Jul. 1999), website: www.waterrights.ca.gov/watertransferguide.pdf; and Donna M. Cosgrove, et al., *Snake River Plain Aquifer Model Scenario Update: Hydrologic Effects of Continued 1980-2002 Water Supply and Use Conditions Using Snake River Plain Aquifer Model Version 1.1, 10 (2005): www.if.uidaho.edu/~johnson/BaseCase_Final v1-1 mod.doc]*

Additionally, state public interest criterion and federal laws such as the ESA may limit the implementation of conservation measures. [See Nichols & Renney, *supra* note 38, at 430]

Third Party Impacts

Preventing water conservation measures from injuring third parties can be difficult. Leveling agricultural fields, lining irrigation ditches, and installing ultra-low flush toilets may reduce the amount of water diverted from a river, but do not necessarily result in net benefits. "Many of the wetlands and wildlife habitat areas...have developed due to the use of irrigation water." As a result, the impacts of conservation, at least from agricultural uses, need to be carefully examined. WSWC, *supra* note 1, at 26.

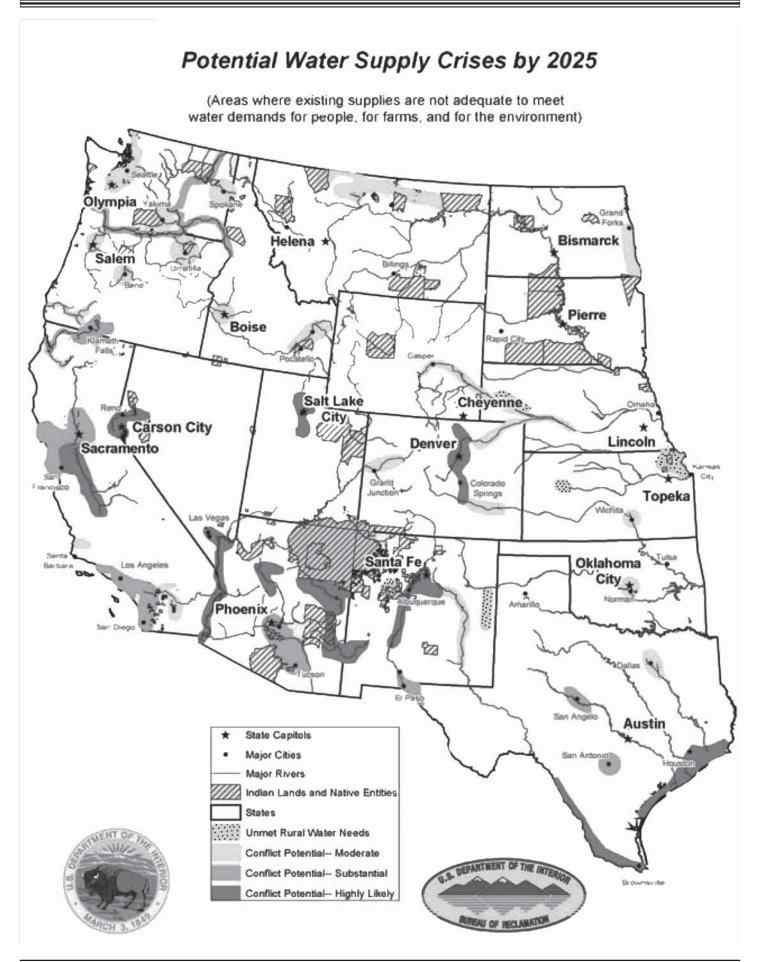
For example, agricultural conservation measures implemented in the area overlying the Eastern Snake Plain Aquifer in Idaho reduced that aquifer's recharge rate. The aquifer is hydraulically connected to the Thousand Springs area of the Snake River. As a result, discharges into Thousand Springs have also declined, negatively impacting trout farms with senior surface water rights. WSWC, Administration Update/Water Resources, Special Report #1517 (June 13, 2003) (on file with the WSWC). [Editor's Note: On March 5, Idaho Supreme Court handed down an important decision concerning conjunctive use between surface water and groundwater. To VIEW DECISION SEE: www.isc.idaho.gov/opinions/falls.pdf]

"Public Interest" Review

The history of the Salton Sea in California illustrates other issues that may arise from water conservation — namely, the potential for conflict with the public interest. Irrigation diversion losses and return flow runoff from water delivered by the Imperial Irrigation District (IID) both created and maintain the Salton Sea. In 1998, the IID entered a water conservation and transfer agreement with the San Diego County Water Authority. IID was persuaded by the California State Water Resources Control Board (SWRCB) to conserve water for transfer by improving the water delivery system, promoting irrigation efficiency, and encouraging land fallowing. The agreement was challenged by Imperial County. In its final order, SWRCB noted that the transfer was subject to public interest review, because of the potential impacts to the fish and wildlife, and the surrounding economy. SWRCB approved the transfer after weighing the public and private costs and benefits, as well as California's interstate obligations under the Colorado River Compact. However, California's Department of Water Resources (DWR) was tasked with proposing a plan to save the Salton Sea. [See In the Matter of IID, WRO 2002 – 0013 Revised (Oct. 28, 2002), website: www.waterrights.ca.gov/hearings/WaterRightOrders/WRO2002-13Revised.pdf; see also Aaron Ralph, Drain the Water and Pull the Plug on the Economy of One Community So that Another Community Can Brim Over with Economic Development: Is It Any of the State Water Resource Control Board's Business? 34 McGeorge L. Rev. 903, 914-15 (2003)]

Endangered Species Act

Adding to potential state law complications are federal laws such as the Endangered Species Act of 1973 (ESA), 16 U.S.C. §§ 1531-1544. The ESA may be implicated by water conservation measures in two different ways. First, as in the Lemhi and Walla Walla Basins, compliance with the ESA may be the driving incentive to conserve water. Alternatively, the ESA may inhibit water conservation measures if they reduce return flows and thereby take critical habitat. For example, conservation measures implemented by the IID reduced farm runoff and increased the salinity of the Salton Sea, making the water body less habitable for endangered species. [See *In the Matter of IID*, WRO 2002 – 0013 Revised at 2, 20 (noting that IID's conservation project "has the potential to 'take' certain threatened and endangered species), website: www. waterrights.ca.gov/hearings/WaterRightOrders/WRO2002-13Revised.pdf; see also *Border Power Plant Working Group v. DOE*, 260 F. Supp. 2d 997 (S.D. Cal. 2003); DWR, *Salton Sea Ecosystem Restoration Program*: www.saltonsea.water.ca.gov/; and IID, *Salton Sea*: www.iid.com/Water Index.php?pid=600]



Trade-Offs

Adverse Effects

A Colorado River Basin Perspective

In a study recently released, a committee assembled by the Water Science and Technology Board of the National Research Council took note of the steadily increasing population and urban water demands in the Colorado River region and found that "increasingly costly, controversial, and unavoidable trade-off choices" would need to be made. In looking at the various options for dealing with these challenges, the committee examined the prospects of both urban and agricultural water conservation. While acknowledging inefficiencies in agricultural water applications, the committee also noted the potential adverse ecological effects of improved efficiencies. Further, in looking at all options, the committee concluded as follows: "Technological and conservation options for augmenting or extending water supplies, although useful and necessary – in the long run will not constitute a panacea for coping with the reality that water supplies in the Colorado River basin are limited and that demand is inexorably rising." I believe a similar conclusion would be reached after examining the other major river basins of the West. [National Research Council of the National Academies, *Colorado River Basin Water Management – Evaluating and Adjusting to Hydroclimatic Variability* 53 (February 21, 2007)]

CONCLUSION

Given the increasing pressure on the western appropriative system under the Prior Appropriation Doctrine, conservation will continue to be an important management option for the states in their effort to provide sustainable water supplies for the future. To this end, some western states have removed the traditional disincentive for agricultural water conservation, in addition to encouraging municipal water use efficiency. Additionally, water banking programs and watershed groups have encouraged water conservation efforts. However, conservation is not an end unto itself. Rather, it is important that each project be evaluated individually to ensure it actually results in net benefits. Where such net benefits exist, water conservation measures should be seen as a top priority in meeting the increasing demands for this vital resource.

Editor's Note: This article is based on a presentation by Craig Bell at the American Bar Association Section of Environment, Energy, and Resources 25th Annual Water Law Conference, from the session entitled "*Promoting Conservation by Law*" held in Coronado, California on February 22-23, 2007. Some additional material was added for this article. All statute citations are through the 2006 legislative sessions and the author last visited cited websites in January, 2007.

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Texas Water Conservation Assessment: "An Assessment of Water Conservation in Texas" — a recent report prepared by the Texas Water Development Board and the Texas State Soil & Water Conservation Board — is available at TWDB's website: www.twdb.state.tx.us/home

D. Craig Bell joined the Western States Water Council in 1974 as Assistant Director, and has been involved in many activities concerning federal/state relations in water law. He has written several briefs which have been endorsed and filed by many of the western states before the United States Supreme Court in water rights litigation. On November 1, 1980, Craig was appointed as Executive Director of the Council where he supervises the staff work of analyzing and evaluating developments regarding a broad range of water policy issues affecting the eighteen states affiliated with the Council, and responding to those developments as directed by the Council's representatives. However, the article does not necessarily represent the views of the Western States Water Council or its member states

TEXAS GROUNDWATER

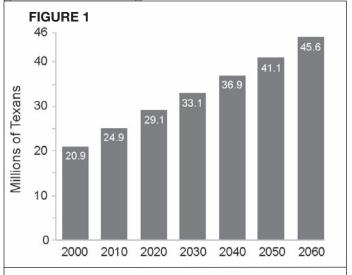
RULE OF CAPTURE AND GROUNDWATER MANAGEMENT IN TEXAS: PART I by Bruce K. Darling, Ph.D., P.G.LBG-Guyton Associates (Austin, Texas)

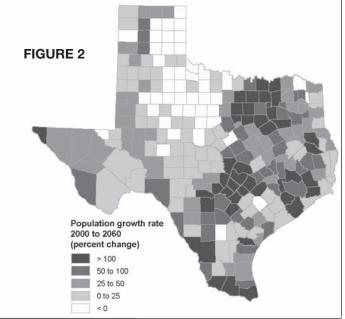
This article summarizes aspects of historical legal, socio-political, and technical considerations which continue to influence the use and management of groundwater in the State of Texas. The article is intended to provide a working perspective for professionals, from various backgrounds, who are interested in understanding why Texas stands where it does today with respect to the management of groundwater. It will also posit the direction which the State will likely take over the next few decades. A subsequent article will address the influence of the Rule of Capture and water planning on the marketing of groundwater in the State.

General Comments

The population of Texas is expected to grow by more than 100 percent between the years 2000 (20,850,000) and 2060 (45,560,000) (Figure 1). The growth of population is expected to be greatest in the counties of central, eastern, and southern Texas and low to negative growth rates are forecast for most of the counties making up the Southern High Plains and Rolling Plains (Figure 2). Water demand over that period of time (Figure 3) is expected to increase from 17 million acre-feet (AF) to 21.6 million AF (a 27 percent increase). The smaller percentage increase in projected water demand compared to population growth will be due principally to decreasing demand for irrigation water and to greater efficiencies in other

Water Demand





major categories of water usage (Figure 4). See Texas Water Development Board (January 2007), *Water for Texas 2007*, Vol. 2, Ch. 4 – Population and Water Demand Projections. Although the comparatively smaller percentage increase in water demand compared with population growth is good news for the State, Texas' major sources of water will be pushed to the limit to meet all expected demands. The stress will likely be greatest on Texas' nine major and 21 minor aquifer systems (Figures 5 and 6), which at present provide 59 percent of the water used within the State's borders.

The Texas Water Development Board (TWDB) estimates that groundwater usage will decrease by 32 percent between 2010 and 2060 — from 8.5 million AF down to about 5.8 million AF. The decrease will be due primarily to depletion of the Ogallala Aquifer (about 2.5 million AF per year reduction by 2060), and to reduction in pumpage from the Gulf Coast Aquifer to prevent land surface subsidence (about 160,000 AF per year reduction by 2060). Texas Water Development Board (January 2007), *Water for Texas 2007*, Vol. 1, Ch. 7 – Groundwater Resources.

In recent years, the Texas Legislature has responded to concerns about the long-term availability and supply of water by mandating an ongoing statewide planning program administered by TWDB. The enabling legislation for the comprehensive water planning program was Senate Bill 1 (SB-1), approved by the 75th Texas Legislature (1997). The program involves interaction between the TWDB, representatives of 16 water planning regions (Figure 7), and consultants hired by each region. Money to support the water planning effort has been provided by the Legislature. The program has evolved over the last decade from generalized assessments of the needs of the 16 regions to the development of: (1) Groundwater Availability Models (GAMs) designed to evaluate the availability of water from the major and minor aguifers in each region of the State; and (2) Water Availability Models (WAMs) intended to assess the likelihood that surface water rights will be met under a range of hydrologic conditions. The program has involved the development of strategies to meet water supply deficiencies in all of the 16 planning regions of Texas.

Change of System?

Rule of Capture

Figures 3 & 4 Water Demand Proections 2000-2060 The current water rights system whereby landowners, cities, and industries are allowed access to groundwater (the Rule of Capture – described in the next section) is one around which a great many institutional uses have developed and residents of Texas have become dependent upon over the years. A great many problems have been identified and solutions proposed since the passage of SB-1. One central issue, however, has yet to be explicitly addressed in any of the regional water plans submitted to the TWDB. This issue can be expressed as the question: *Are there sufficient reasons to adopt a system of groundwater rights different from that which the State has relied upon for many decades?* Many Texans fear that adopting a new system of groundwater rights would undermine existing institutions and amount to an unjustified "taking" of property. Other Texans argue that the current system encourages inefficient uses of groundwater, waste, and devaluation of a resource to which all residents of the State have a claim to because of its role in sustaining health, safety, and welfare.

Hydrogeologists and engineers who have worked on water supply and water management projects in Texas for many years have heard *ad nauseam* all of the arguments for and against the current system of groundwater rights and groundwater management. There is no easy answer to what the State ought to do, but it is clear to all involved that the issue is politically charged and a minefield for any politician or consultant who addresses that topic without knowing: (1) the legal basis on which the current system rests; and (2) the extent to which a great many of the State's residents, cities, and industries are wedded to the system.

The Rule of Capture and the Supreme Court of Texas

Among the states which make up the southwestern and western areas of the United States of America, Texas stands out as an anomaly with respect to the laws which govern access to and use of groundwater. While most western states long ago adopted one allocation program or another based on a systems of permits, correlative rights or prior appropriation, Texas has remained averse to state control of groundwater,

preferring instead to rely on the English Common Law doctrine (*Acton v. Blundell*, 12 M. & W. 324, 152 Eng. Rep. 1223 (Ex. 1843)) of absolute ownership (i.e. the "Rule of Capture"). Under the Rule the Capture, landowners are granted the "right" to pump water from wells on their respective properties, notwithstanding the impact on others, provided the pumping: (1) can be demonstrated to be for a beneficial use; and (2) not be a cause of environmental damage (particularly subsidence). At least in Texas, pumping which is deemed to be wasteful or for malicious purposes is not protected by the doctrine.

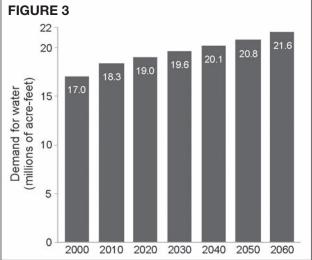
The Rule of Capture was enunciated in 1904 by the Supreme Court of Texas (Court) in *Houston & Texas Central Railroad Co. v. East* (98 Tex. 146, 81 S.W. 279 (1904)) and reaffirmed over the next 95 years in several cases which sought to overturn or modify the doctrine in order to establish pumping limits. For a complete discussion of this history, see Potter, H.G. III, "History and Evolution of the Rule of Capture" in *100 Years of Rule of Capture: From East to Groundwater Management*, eds. William F. Mullican III and Suzanne Schwartz. Texas Water Development Board Report 361, Ch. 1, p 1-10.

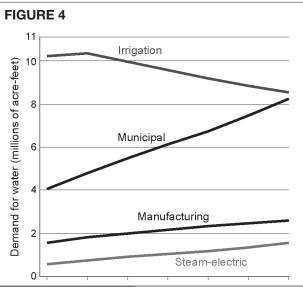
The Court's decision in *East* was based on consideration of two factors which were first stated in a case decided in 1861 in Ohio (*Frazier v. Brown*, 12 Ohio St. 294 (1861)):

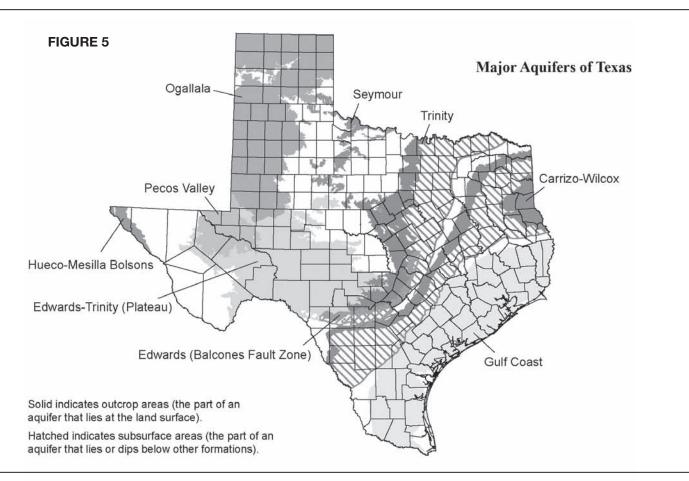
"... the existence, origin, movement, and course of such waters, and the causes which govern and direct their movements, are so secret, occult, and concealed that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would, therefore, be practically impossible."

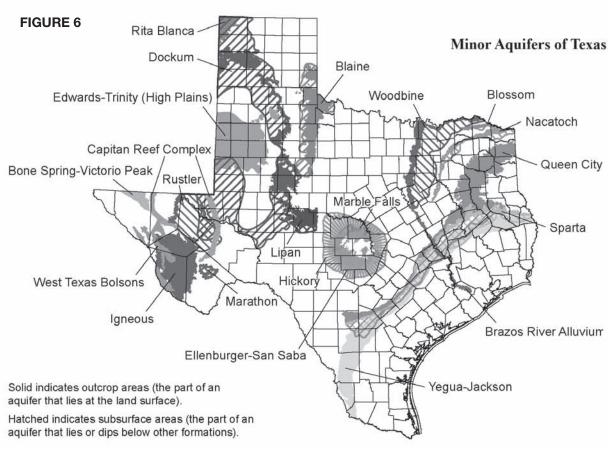
and

"... any such recognition of correlative rights would interfere, to the material detriment of the commonwealth, with drainage and agriculture, mining, the construction of highways and railroads, with sanitary regulations, building, and the general progress of improvement in works of embellishment and utility."





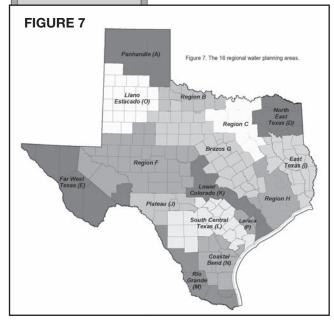




Technical v. Legal View

Conservation Amendment

Common Law



In East, the Court quoting from the English doctrine, ruled as follows:

"That the person who owns the surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure; and that if, in the exercise of such right, he intercepts or drains off the water collected from the underground springs in his neighbor's well, this inconvenience to his neighbor falls within the description *damnum absque injuria* [10], which cannot become the ground of an action."

The Court's description of the flow of groundwater as "secret, occult, and concealed" has for many decades been a source of pointed commentary by groundwater hydrologists and civil engineers in Texas (see Mace, R.E., Cynthia Ridgeway, and J.M. Sharp, Jr. (2004), "Groundwater is No Longer Secret and Occult – a Historical and Hydrogeological Analysis of the East Case" in 100 Years of Rule of Capture: From East to Groundwater Management, eds. William F. Mullican III and Suzanne Schwartz, Texas Water Development Board Report 361, Ch. 5, p 63-88. The commentary serves to underscore what some might regard as a sharp divide between the perspective of the legal establishment with respect to matters of natural-resource evaluation and management, as opposed to that of earth scientists and engineers — who rely upon well-established principles of physics and hydraulics to describe, predict, and manage the flow of subsurface fluids. Furthermore, the Court's continued deference to the decision rendered in East has accentuated, in the minds of many earth scientists and engineers, the propensity of the legal system to lag decades behind and to remain unresponsive to developments in science and engineering as found in peer-reviewed journals and applied on a daily basis in the interests of the public's health, safety, and welfare.

Texas has not been entirely unrelenting in its support of the Rule of Capture, however. At least two factors, often overlooked by the groundwater scientists, engineers and advocates of a system of water rights other than the Rule of Capture when criticizing the Court's rulings, establish some historical grounds for disagreement. The first is the passage, in 1917, of the Conservation Amendment of the Texas Constitution. (Const. art. XVI, § 59(a)). The second is a dissenting opinion regarding advancements in hydrogeology, rendered more than 50 years ago, which calls into question the earlier Court's assertion that the flow of groundwater is "secret, occult, and concealed."

The Conservation Amendment applies to "all" of the natural resources of the State (see Mace, infra). The Court cited that amendment in a 1996 ruling (*Barshop v. Medena County UWCD, et al.*, 925 S.W.2d 618 (Tex. 1996)). In *Barshop*, the Court determined that the State has the responsibility under the Texas Constitution to preserve and conserve water resources (groundwater and surface water) for the benefit of all Texans. The effect of the ruling was to emphasize that natural resource management is the responsibility of the Legislature, not the Court. See Wasinger, B., "Groundwater (Background & Recent Cases)," Paper presented at Texas Water Law Institute – Water Law for the New Millennium; Austin, TX, Sept. 30 – Oct. 1, 1999. Paper also found at: www.bickerstaff.com/files/BEW_Groundwater_for_TWLI___Sept_1999_.pdf

In a case decided in 1999 (*Sipriano, et al. v. Great Spring Waters of America, Inc., et al., 1S.W. 2d 75, 79-80* (Tex. 1999)) the Court discussed at length the Common Law as applied to water management

and commented on the Legislature's efforts to fulfill its responsibility for water management under the provisions of the Conservation Amendment:

"By constitutional amendment, Texas voters made groundwater regulation a duty of the Legislature. And by Senate Bill 1, the Legislature has chosen a process that permits the people most affected by groundwater regulation in particular areas to participate in democratic solutions to their groundwater issues. It would be improper for courts to intercede at this time by changing the common-law framework within which the Legislature has attempted to craft regulations to meet this State's groundwater conservation needs. Given the Legislature's recent actions to improve Texas's groundwater management, we are reluctant to make so drastic a change as abandoning our rule of capture and moving into the arena of water-use regulation by judicial fiat. It is more prudent to wait and see if Senate Bill 1 will have its desired effect, and to save for another day the determination of whether further revising the common law is an appropriate prerequisite to preserve Texas's natural resources and protect property owners' interests."

Reasonable Use

Dissenting Opinion Overlooked

The Court also commented as follows:

"We do not shy away from change when it is appropriate. We continue to believe that 'the genius of the common law rests in its ability to change, to recognize when a timeworn rule no longer serves the needs of society, and to modify the rule accordingly.' And *Sipriano* presents compelling reasons for groundwater use to be regulated. But unlike in *East*, any modification of the common law would have to be guided and constrained by constitutional and statutory considerations. Given the Legislature's recent efforts to regulate groundwater, we are not persuaded that it is appropriate today for this Court to insert itself into the regulatory mix by substituting the rule of reasonable use for the current rule of capture."

The second factor which many often overlook is in the form of a dissenting opinion by Justice Will Wilson in a case heard 52 years ago (*City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W. 2d 798 (1955). Justice Wilson wrote:

"I have this to say about reaffirming the rationale of the East case, Frazier v. Brown, and Acton v. Blundell. These cases were decided (1843-1904) before the development of most of our present knowledge of geology and hydrology and there has been a great advance in knowledge since these decisions."

and

"It is understandable that this rationale should appeal to this court in 1904 but I regret to see us reaffirm it now, as the majority does, in 1955 – especially in view of the development since 1904 of our comprehensive knowledge and experience in oil and gas regulation. I am convinced that the rationale of Frazier v. Brown has been rebutted and answered by the course of our history and the entire trend of our jurisprudence since that decision and since the East case. Although this court can close its eyes to the advancement of scientific and legal knowledge and governmental techniques by reaffirming this rationale as the majority do here, I do not believe that this court will always do so, and for that reason the substance of this dissent seems worth filing."

Legislative Obligation

The Court's rulings in *Barshop* and in *Sipriano* serve as much needed reminders that the Constitution of the State of Texas establishes the basis for the management of all of the State's natural resources. This is good news for people who object to judicial activism, and bad news for all who hope for a quick solution (in the form of a Court-administered sledgehammer) to what they regard as a matter of major concern to all Texans. The dissenting opinion written in 1955 by Justice Wilson, however, underscores the point that members of the Court are, in fact, aware of developments in the field of groundwater hydrology and are willing to factor these developments into their deliberations regarding the Common Law as it applies to water management. It also seems reasonable to infer that the Court will not intercede in water issues, as long as the Legislature takes seriously its obligation as required by the Conservation Amendment, to manage the State's water resources for the benefit of the State's residents.

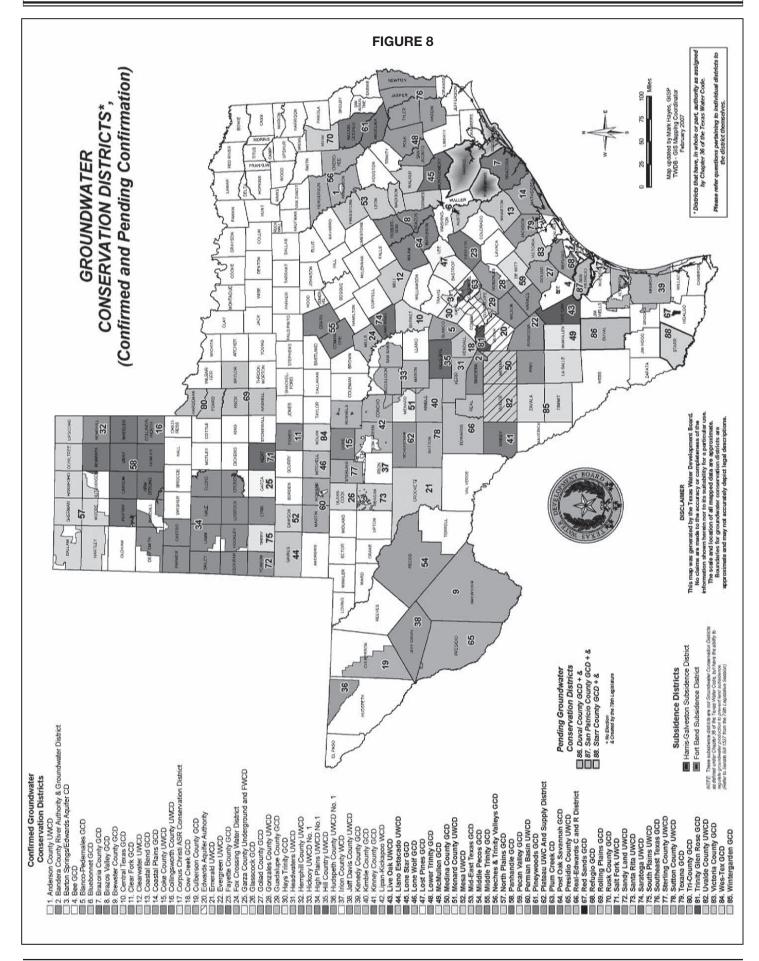
Decentralized System

Groundwater Conservation Districts

Public Resource

The Rule of Capture notwithstanding, the State has sought to manage groundwater through a decentralized system of conservation districts which allow a high degree of local control. In 1949, the Texas Legislature authorized the establishment of "undergroundwater conservation districts" (now "groundwater conservation districts" — GCDs). The establishment of GCDs was in response to recommendations in the 1930s and 1940s by the Texas Board of Water Engineers (TBWE), a predecessor agency of the TWDB) calling for a law to declare all underground waters to be public waters of the State. In his book *Land of the Underground Rain: Irrigation on the Texas High Plains, 1910 – 1970,* Donald Green quotes from TBWE's 11th biennial report (1934) in which the board recommends a law "first to declare the underground water of the State to be the property of the State; second, to guarantee the vested rights of those who have already made beneficial use of underground water; and third, to exercise proper control over future underground-water development." Green, D.E. (1973), The University of Texas Press, Austin, TX, p. 295.

According to Green, TBWE reiterated in its 13th report (1938), the recommendation to declare groundwater a public resource. This was followed by recommendations from urban and industrial interests who were concerned about falling water levels throughout the High Plains and other areas of Texas. Green also notes, however, that bills dealing with State control of groundwater were defeated in the Texas Legislature in 1937, 1941, and 1947.



The Water Report

Texas Groundwater

Correlative Rights

District Formation

GW Management

GCD Plans

Guidance

Enforcement

Funding Issue

Deterrent

The issue of the control of groundwater came up again in the 1949 session of the Texas Legislature. Opposition from High Plains irrigation interests, however, was sufficient to defeat a proposal by the Texas Water Conservation Association (TWCA) that would have substituted a doctrine of correlative rights for the Rule of Capture. Under the correlative rights doctrine, landowners must prorate their use of groundwater in proportion to the relative percentage of the land area which each owns over a common aquifer.

Negotiations between TWCA and the High Plains Water Conservation Users Association (HPWCUA) led to a compromise bill based on locally controlled districts. Green points out that some irrigators regarded the compromise as a capitulation by TWCA. He quotes the editor of *Southwestern Crop and Stock*: "Until such time as they deem it necessary to call in state assistance to protect the water supply, West Texans can consider the water their own — to use or to waste as they please." (See Green, infra).

Under the 1949 law, districts could be established either by special legislation or by a petition from landowners. In 1985, an amendment also allowed TWDB and the Texas Commission on Environmental Quality (TCEQ) to recommend the formation of a district. As of 2007, there are 89 GCDs in Texas — 84 of which are confirmed (Figure 8). Five districts have yet to be confirmed by voters through local elections. Of Texas' 254 counties, 144 are either fully or partially within a GCD. There are 59 single-county districts, and 30 which cover more than one county.

Functions of GCDs

GCDs have been charged with managing groundwater through rules promulgated in accordance with the provisions of Chapter 36 of the Texas Water Code. GCDs are authorized to make and enforce rules limiting the pumpage of groundwater — based on considerations of tract size or the spacing of wells — to provide for conservation, protection, and recharge of aquifers in order to control subsidence, prevent degradation of water quality, or prevent waste of groundwater. A GCD may also conduct research projects authorized by its board of directors, or enter into service contracts with consulting firms, educational institutions, or State agencies.

Every GCD is also responsible for developing a comprehensive management plan.

EACH GCD PLAN MUST:

- Provide for the most efficient use of groundwater
- · Control and prevent waste of groundwater
- Provide for the conservation of groundwater
- Control and prevent subsidence
- Address conjunctive surface water management issues (conjunctive use between surface water and groundwater)
- · Address all related natural resource issues
- · Plan for drought conditions

Each management plan must also be consistent with the contents of the respective regional water plans developed under SB-1 guidelines and with the overall objectives of the statewide water management plan developed by TWDB.

The GCDs are authorized to enforce the rules of Chapter 36 of the Texas Water Code by injunction or through the court system. A GCD's board of directors may set civil penalties for violations of any of its rules.

Problems Underlying the Creation and Operation of GCDs

Although the creation of a GCD is intended to place the responsibility for management of groundwater resources into the hands of local residents and to avoid the perception that State agencies dictate operational policies and goals, TWDB, TCEQ and other observers have noted several problems regarding the creation and operation of GCDs.

ONGOING GCD PROBLEMS INCLUDE:

- 1) The designation of a GCD involves a resource-intensive effort prior to the development and adoption of operating rules. The economic resources which GCDs are willing and able to commit to the employment of technical experts vary significantly from one district to another. Although many GCDs are well funded, others especially those in predominantly rural counties with small populations do not have budgets to pay for required consulting services.
- 2) The creation of a GCD is a complex and lengthy process. The level of effort and the length of time required to get a GCD up and running might be a deterrent to the creation of a district in some areas. The process should be tailored to address the specific needs and resources of individual districts.

Boundaries

GCD Cooperation

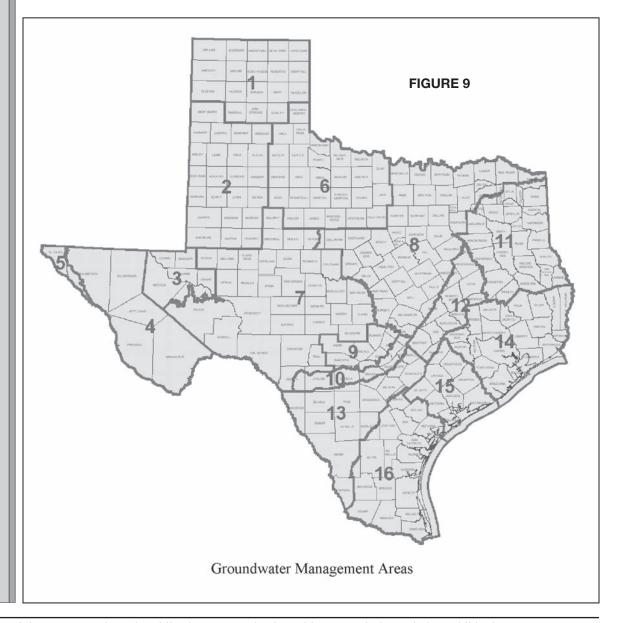
Joint Planning

3) While the State seeks to develop a regional approach to the management of groundwater resources, the boundaries of many GCDs are delineated on the basis of political subdivisions, not hydrogeologic boundaries. This has had the unintended consequence of leading to a proliferation of smaller districts, with conflicting rules and management objectives.

Groundwater Management Areas

As noted in the previous section, GCDs are often delineated on the basis of political — as opposed to hydrogeological — boundaries. Although the districts have been encouraged to work with each other to produce coherent management plans, prior to 2005 it was often the case that there was little interaction among GCDs and that many ended up pursuing objectives which were not in sync with those of neighboring districts. To rectify shortcomings inherent in the GCD system, the Legislature in 2005, adopted House Bill 1763, which required joint planning among GCDs within designated Groundwater Management Areas (GMAs). The Legislature, in 2001, directed TWDB to delineate GMAs that cover all of the State's major and minor aquifers. Furthermore, the Legislature specified that TWDB was to use aquifer boundaries or subdivisions of aquifer boundaries in its delineation of a GMA. TWDB responded by proposing 16 management areas (Figure 9), with boundaries which reflect those of the major aquifers. See Mace, R.E., R. Petrossian, R. Bradley, and W.F. Mullican, III, "A Streetcar Named Desired Future Conditions: The New Groundwater Availability for Texas." Paper presented at the 7th Annual The Changing Face of Water Right in Texas, State Bar of Texas, May 18-19, San Antonio, TX. Paper also found at: www.twdb.state.tx.us/gam/03-1 mace.pdf

Aquifer Boundaries



16

Desired Future Conditions

Prospect of Limitations

Regional Planning Under the provisions of the 2005 law, representatives of GCDs are required to meet at least once a year to conduct joint planning and to review groundwater management plans and accomplishments in their respective GMAs. A major component of joint planning is the identification of *desired future conditions*— which are used to calculate managed available groundwater volumes. Desired future conditions are defined as "the desired, quantified conditions of groundwater resources (such as water levels, water quality, spring flows, or volumes) at a specified time or times in the future or in perpetuity." As such, a desired future condition is "a management goal that captures the philosophy and policies addressing how an aquifer will be managed." Desired future conditions and groundwater volumes are to be used for regional water plans, groundwater management plans, and permitting. See Mace, Petrossian, Bradley & Mullican, infra at page 3.

The intended long-term effect is to force conservation districts to work together under rules which will lead to a better understanding not only of hydrogeological conditions, but also of the availability of groundwater throughout the State. From this, it is expected that coherent sets of management plans will be developed and initiated to ensure that sufficient groundwater resources will be available to residents of Texas for many years to come.

Status of the Rule of Capture

Although the Rule of Capture is still the official groundwater doctrine of the State, one might nevertheless be justified in asking the question: With the advent of regional planning and the requirement that GCDs participate in joint planning based on GMA boundaries, is it reasonable to conclude that the Rule of Capture — as originally spelled out by the Court in the 1904 ruling in East — is under attack by the Legislature?

The answer depends largely on who responds to the question. Many landowners, representatives of GCDs and potential water marketers might feel such is the case. Where there was once the freedom to pump groundwater, at will, for beneficial purposes, there is now the *prospect* of limitations in the form of pumping restrictions, well permits, and spacing requirements. Environmentalists and others, however, might regard the developments as more cosmetic than substantive. It is your author's opinion that things have changed and that more change is on the way. It will take several more years, though, before anyone can say with certainty what will evolve from the planning process.

A good many hydrogeologists, engineers, and planners long ago recognized that Texas would not be able to satisfy all of the demands for water over the long-term unless changes were made to the status quo. It will be necessary to address and resolve many complex problems associated with the quantification of groundwater resources in order to ensure that sufficient water will be available to sustain the State's rapidly growing population and vibrant economy. If not for the influence of the Conservation Amendment of 1917 and the Supreme Court's observation that natural resource management is a responsibility of the Legislature, the State might not have developed the ongoing water planning program described above. The Legislature has responded to concerns about water availability and management, not by changing the basic doctrine, but by calling attention to water resource problems in a constructive manner. Through the regional planning process initiated in 1997, the Legislature has engaged stakeholders from across Texas in discussions about water availability and the methods by which water resources ought to be managed to ensure that the public's heath, safety, and welfare are best served through thoughtful resource management.

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CALIFORNIA WATER RIGHTS FEES



FEE REGULATIONS OVERTURNED

by Kristin Castaños, Somach, Simmons & Dunn

On January 17, 2007, the California Court of Appeal for the Third Appellate District overturned the California State Water Resources Control Board's (SWRCB's) "regulatory fee" program. The court found that SWRCB's fee regulations were unconstitutional and invalid. SWRCB was ordered to refund fees that were illegally assessed. *California Farm Bureau Federation, et al. v. State Water Resources Control Board, et al.* (2007), 146 Cal.App.4th 1126. The battle over the so-called "water rights fees" has waged since late 2003 and the Court of Appeal's decision comes after SWRCB had already collected four year's worth of fees from water right holders throughout the State of California (State). While the decision is specific to approximately \$4.4 million in fees SWRCB collected for fiscal year 2003-2004, it has implications for the fees that were collected in fiscal years 2004-2005, 2005-2006, and most recently, in 2006-2007. More broadly, the decision suggests that SWRCB cannot rely on regulatory fees to fund its entire water rights program. The decision, therefore, has the potential to create substantial uncertainty for SWRCB under the current statutory structure.

BACKGROUND

In late 2003, the California Legislature passed and then Governor Davis signed Senate Bill 1049 (SB 1049). It imposed a myriad of new charges and increased existing charges, for, among other things, dam safety inspections, sportsman's licenses, hunting licenses, registration and renewal of aquaculture facilities, licensing and certification regarding pesticide sales, fire suppression, applications for proposed generating facilities, and water rights. With respect to water rights, SB 1049 requires SWRCB to collect fees to pay for the activities of SWRCB's Division of Water Rights, in an amount equal to the amount set by the Legislature in the Budget Act (Cal. Wat. Code, § 1525). The Division of Water Rights, which had previously been primarily funded by the State's General Fund, would now be primarily or perhaps entirely, funded through fees imposed on water right holders.

SB 1049 requires SWRCB to adopt a fee schedule by emergency regulations each year, with two basic categories. First, the fee schedule must establish "one-time" charges for certain specific services. In particular, SB 1049 requires a charge to be imposed on each person or entity who files an application for a new water right or a request for a change to an existing water right, among other things. The second part of the fee system is an annual assessment levied on all permit or license holders based upon the varying extent of their water rights regardless of whether SWRCB takes any action with regard to those rights. Specifically, SB 1049 provides, "[e]ach person or entity who holds a permit or license to appropriate water...shall pay an annual fee according to a schedule established by the board." (Cal. Wat. Code, § 1525.)

The imposition of these annual charges on water rights became the subject of litigation spearheaded by the Northern California Water Association and Central Valley Project Water Association, and joined by over 200 water users (collectively, the petitioners are referred to as "NCWA, et al."). The California Farm Bureau Federation filed a separate lawsuit on behalf of its members and the two cases were consolidated in Sacramento Superior Court. NCWA, et al. challenged both the fee regulations and the underlying statute on which the fees are based. The crux of NCWA, et al.'s case was that the fees amounted to taxes, adopted in violation of the California Constitution. NCWA, et al. argued that the charges are taxes because: (1) they are imposed on real property – water rights – based solely on ownership of that property; and (2) they are not reasonably related to the regulatory service provided by the Division of Water Rights. Under Proposition 13 of the California Constitution, all new taxes must be adopted by a two-thirds majority of the Legislature. SB 1049, however, was approved by a simple majority. Thus, NCWA, et al. argued the fees were, in fact, taxes adopted in violation of the California Constitution.

Compounding the problems created by SB 1049 is the fact that fully 35% of the water rights that are subject to this new "fee" are held by the United States. The US, as a sovereign, cannot be assessed the charge regardless of whether it is called a tax, a fee, or something else. The Legislature's solution to this otherwise debilitating problem was to authorize SWRCB to pass through the "fee" to those who contract with the US. As a result, those who contract with the US to receive water from the Central Valley Project (CVP) bear the US' entire share of the annual water rights fees. In fact, the CVP contractors hold contract rights to only 6% of the United States' water rights, but the contractors were assessed, on a pro-rata basis, the full amount of the United States' share of the "fees."

The Sacramento Superior Court upheld the fee structure in 2005. NCWA, CVPWA and the other petitioners then appealed to the Third Appellate District. On January 17, 2007, the Court of Appeal

SB 1049

Division of Water Rights

Annual Fees

Taxes Issue

Constitutional Argument

CVP Contractors

Proposition 13

Regulatory Fees

SWRCB Jurisdiction

Water Rights Overview

Hybrid System

Priority

"Pre-1914" Rights

Riparian Flows

issued its decision upholding the statute, but finding the regulations unconstitutional. The State petitioned for rehearing of the Court of Appeal's decision, which was denied on February 16, 2007 and the Court of Appeal's decision became final on that day. All parties have petitioned for review to the California Supreme Court.

Regulatory Fee Legal Background

California's Proposition 13 provides "any changes in state taxes enacted for the purpose of increasing revenues collected pursuant thereto whether by increased rates or changes in methods of computation must be imposed by an Act passed by not less than two-thirds of all members elected to each of the two houses of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed." (Cal. Const., art. XIIIA, § 3). Proposition 13 limits real property taxes and restricts government's ability to create new taxes. Regulatory fees, adopted for the purpose of paying for a regulatory program, are an exception to the requirements of Proposition 13.

Regulatory fees are valid if they "do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and [they] are not levied for unrelated revenue purposes." *Sinclair Paint Co. v. SWRCB of Equalization* (1997), 15 Cal.4th 866, 878. If a fee is challenged as an unlawful tax, the state must show: "(1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity." (*Ibid.*)

California's Water Rights System

California recognizes two distinct classifications of water for the purposes of administering water rights: 1) water flowing in known and definite channels, otherwise known as "surface water;" and 2) percolating groundwater. SWRCB does not exercise regulatory jurisdiction over percolating groundwater. Instead, SWRCB's jurisdiction is limited to surface water. (Cal. Wat. Code, §§1200, 1201).

The California First District Court of Appeal's decision in *United States v. State Water Resources Control Board* (1986), 182 Cal.App.3d 82 (commonly known as the "*Racanelli*" decision after Justice John T. Racanelli, who authored the opinion) provides what is generally considered an authoritative overview of California's water right law. In California, one cannot take water from a stream without acquiring some type of water right. While a water right is *usufructuary* in nature, once it is perfected it becomes a vested property right (*Id.* at 100-101). [Editor's Note: a "usufrucuary right" is a right that allows the use of property that belongs to another.]

California's current system of water rights is a dual, or hybrid system of water rights. Under this dual system, both riparian and appropriative rights are recognized. The Riparian Doctrine essentially provides that a person owning land bordering a stream has the right to divert and use water on lands bordering the stream. All landowners bordering the stream are vested with a common ownership of the waters of the stream and in times of shortage, all riparians must share in the shortage proportionately (*Id.*).

California's gold rush and early mining industry relied on water being diverted from streams and used on non-riparian lands. The Prior Appropriation Doctrine was the legal recognition of the use of water on non-riparian lands. Under the Appropriation Doctrine, one who actually diverts and beneficially uses water obtains the continued right to do so, so long as the water is surplus to the needs of riparians and earlier appropriators. Generally, riparian rights are superior to appropriative rights. As between appropriators, the rule is "first in time, first in right." Where there is insufficient water to satisfy the needs of all appropriators on a stream, those with more senior rights are entitled to fulfill their needs before a junior appropriator is entitled to use any water (*Id.* at 101-102).

Prior to the enactment of California's Water Commission Act in 1913, one could acquire the right to divert water by simply diverting and using water (*Id.* at 102). These rights are commonly referred to as "pre-1914" rights. Today, and since 1914, anyone seeking to obtain an appropriative water right is required to file an application with what is now known as the State Water Resources Control Board. (*Id.* at p. 102; Cal. Wat. Code, §§ 1225 *et seq.*). Beneficial use of water is confirmed with a license issued by SWRCB (Cal. Wat. Code, § 1605).

In 1928, the interplay between riparian rights and appropriative rights resulted in an addition to the California Constitution regarding water rights. The Constitutional Amendment of 1928 was the result of a decision of the California Supreme Court in *Herminghaus v. Southern California Edison Co.* (1926), 200 Cal. 81, wherein the Court upheld the right of a riparian water user as against an appropriator notwithstanding the unreasonableness or wastefulness of the riparian use. The practical effect of *Herminghaus* was to require upstream appropriators to forego diversions so that a downstream riparian water right holders could have the full flow of the river to support natural flows over riparian lands (Wells

Beneficial Use

SWRCB Authority

Water Rights Breakdown

Not Unlawful Tax

Regulatory Activities Costs

Fees v. Benefits

Hutchins, *The California Law of Water Rights*, 13). Recognizing the need to put all waters of the State to reasonable and beneficial use, the people of the State of California enacted article X, section 2 of the California Constitution, which provides, in pertinent part:

"It is hereby declared that because of conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

SWRCB was created in 1967 to, among other requirements, administer the State's water right permitting system (Cal. Wat. Code, § 174). SWRCB's duties are framed not only by the Water Code, but also by the 1928 Constitutional Amendment, which is the foundation upon which modern day California water law operates.

CALIFORNIA APPELLATE COURT'S OPINION IN THE FEES CASE

The Court of Appeal's opinion begins with a general background discussion of SWRCB and its functions. The Court of Appeal (Court) noted that SWRCB has limited authority over riparian and pre-1914 water right holders, but recognized that there are substantial benefits conferred by SWRCB to protect these water rights. The Court noted that riparian and pre-1914 water rights represent 38% of water "subject to water rights" and that fully one-third of the work undertaken by SWRCB is for the protection of public trust or public interest which benefits the general public.

The Court also pointed out that post-1914 permits and licenses represent 40% of water "subject to water rights," and that publicly-held rights — including those held by CVP, the State Water Project, irrigation districts, and municipal suppliers — account for the largest quantity of post-1914 permittees and licensees. In this regard, the Court recognized that the US alone holds 22% of all "water subject to water rights" and, of this, approximately 6% are subject to CVP contracts. The Court referenced a pie-chart included in the administrative record that identifies these various percentages of water right holders (see Figure 1, Amount of Water Held by Water Rights). The pie-chart was attached as an exhibit to the opinion (see "Appendix").

Rejecting the contention that the new charges are an unlawful tax based upon the ownership of a water right, the Court characterized the water right as a usufructuary right (a right to use) and stated that the fee is associated with the use of water, not the property right interest in water. The Court noted that, although the CVP Contractors were required to pay the annual fees for the water rights held by the US, the CVP contractors have no property rights in the permits and licenses of the United States. SB 1049 specifically provides that requiring the CVP Contractors to pay the charges imposed on the US did not vest any title in the CVP Contractors. Thus, the Court concluded that the statute does not create a new tax on real property.

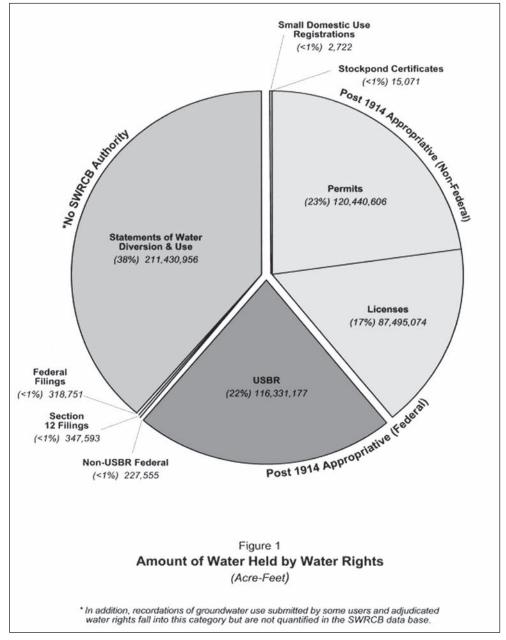
Statute Ruled Valid

In evaluating the claim that the statute creates an unconstitutional tax, the language of the statute was examined to determine whether the statute permits collection of fees that exceed the cost of the regulatory program. In particular, the Court noted that the statute specifies the activities for which SWRCB may collect fees and determined that those enumerated activities are regulatory in nature. Thus, the Court concluded that the statute only permits collection of fees to pay for the enumerated regulatory activities, and does not improperly permit the raising of general revenue. The Court noted that the statute also requires SWRCB to collect the amount specified in the Budget Act, but suggested that the statute could be implemented in a constitutional manner if the amount in the Budget Act reflected the cost of the enumerated regulatory activities. The Court found, however, that the State had failed to provide evidence to determine the amounts allocated to the enumerated regulatory functions.

The Court, therefore, concluded that the statutory scheme to collect regulatory fees for the enumerated regulatory activities of the Division of Water Rights does not create a tax, upholding the statute as valid.

Regulations Ruled Unconstitutional

Concluding that the statute itself was valid, the Court then turned to the regulations adopted by SWRCB to implement the statute and held that the regulations create an unconstitutional tax. The Court agreed with NCWA, CVPWA and the other petitioners that the regulations were defective because the fees were only imposed on post-1914 water right permit and license holders, but the benefit accrues to all water right holders (including riparian and pre-1914) and the public in general. The Court also agreed that the



State Burden

Fee Discrepancy

Limit on Fed Contractors allocation among fee payors was improper. The State had the burden to demonstrate that the challenged charges bear a "fair and reasonable relationship" to the burdens on or benefits from the regulatory program, the Court found. The State had failed to meet that burden.

In particular, the Court held that riparian and pre-1914 water right holders receive the same benefit from the regulatory program as permit and license holders, yet they do not pay a regulatory fee. "Here, the SWRCB offered no breakdown of costs or other evidence to demonstrate that the services and benefits provided to the non-paying water right holders were de minimis." (146 Cal.App.4th at 1153.) According to the Court, permit and license holders were heavily subsidizing the costs of the one-time application fees. SWRCB admitted that one-third of the Division of Water Rights' work is for the benefit of the general public (to protect the public trust and the environment). The Court found that "the [SWRCB] failed to sustain its burden to show 'the basis for determining the manner in which the costs [were] apportioned, so that charges allocated to a payor [bore] a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity." (146 Cal.App.4th at 1154 (citations omitted)).

The opinion also dealt with the charges imposed on those who contract with the federal government for water. While the Court concluded that the statute did not authorize an unlawful tax on the US, it held that a contractor could only be charged for their possessory interest in the property of the US. Thus, because contractors as a whole had a contractual right to only 6% of the water diverted under the US' water rights, the contractors could not be responsible for paying 100% of the US' share of the regulatory fee.

New Fee Schedule

Refunds

No Evidence of Costs

State Dilemma

State's Assertions

Agency Discretion

Tax Law

Statute Validity

The Remedy

The fee formulas established by SWRCB's regulations were declared unconstitutional in the opinion. The Court, however, noted the importance of SWRCB's work and, in order to avoid interruptions in that work provided that the fee schedule formulas remain as presently interpreted and implemented by SWRCB. The order to maintain the existing fee schedules will remain in effect until SWRCB adopts a new fee schedule in accordance with the Court's order. SWRCB was ordered, however, to adopt a new fee schedule within 180 days of finalization of the Court's opinion.

With respect to refunds of fees improperly assessed, the Board of Equalization collected the fees and will be responsible for providing refunds. SWRCB is responsible for determining the appropriate refund amounts. The Court ordered that, on remand, the trial court direct SWRCB to utilize the recalculated fee schedule to determine if refunds are due to persons and entities who paid annual fees. Only people who filed a petition before SWRCB for reconsideration of the FY 2003-2004 fees are eligible to claim a refund. SWRCB was ordered to provide the refund formula to the Board of Equalization for refund, with interest, within 180 days of the finality of the Court's opinion.

State's Petition for Rehearing

Shortly after the Court's opinion was released, the State filed a petition for rehearing. In that petition, the State asserted that the Court applied the wrong standard of review and, therefore, had improperly placed the burden on the State to demonstrate that the fee regulations bore a fair and reasonable relationship to the payors' burdens on, or benefits from, the regulatory program. In the course of its petition for rehearing, the State asserted that there is, in fact, no evidence available to demonstrate the cost of the regulatory activities that are enumerated in the statute — that is, the State cannot produce evidence of the cost of the regulatory program. The State asserted that the statute requires SWRCB to collect the amount set forth in the Budget Act and there is no evidence in the Budget Act, or otherwise, of the cost of the regulatory activities. The petition for rehearing was denied and the opinion in the case became final on February 16, 2007.

The State's argument in its petition for rehearing is somewhat illuminating. The argument suggests that the State may not be able to comply with the Court's order. SB 1049 requires SWRCB to set the fees so that the total amount collected equals the amount set forth in the Budget Act for the work of the Division of Water Rights. Given the Court's decision striking down many aspects of the present fee program, the State appears to have admitted that it cannot meet its burden to show that the fees collected do not exceed the reasonable costs of the regulatory services. Given this, the State's ability to develop a constitutional regulatory fee scheme within 180 days of the finality of the Court's opinion is questionable.

Petitions for Review Pending Before the California Supreme Court

All parties have all filed petitions for review before the California Supreme Court. The State urges the Supreme Court to review the case based on their contention that the Court of Appeal required them to demonstrate that the fees are reasonably related to the fee payors burdens on *and* benefits from the regulatory program, whereas the case law requires the State to demonstrate a relationship to *either* the burdens *or* the benefits of the program. The State asserts that the administrative burden of the regulatory program is primarily created by post-1914 permit and license holders, and that SWRCB spends only a minimal amount of time regulating other water right holders. The State concludes, therefore, that the fees are properly allocated to post-1914 permit and license holders based on the burdens they impose on the regulatory program.

The State's petition for review also asserts that the Court of Appeal applied the wrong standard of review and should have deferred to the State's discretion to apportion the regulatory fees. Finally, with respect to the fees imposed on federal contractors, the State argues that the Court of Appeal confused tax law with regulatory fees and applied the wrong legal test to the fees imposed on federal contractors. The State, therefore, urges the Supreme Court to reverse the Court of Appeal's decision finding that the regulations are unconstitutional.

NCWA, et al. have requested Supreme Court review of the Court of Appeal's determination that the statute is valid. NCWA, et al. assert the statute is unconstitutional because the State has essentially conceded it cannot develop a constitutional regulatory plan under the statute. The statute imposes a tax on real property in violation of Proposition 13 and also permits the unlawful imposition of a tax on the United States. NCWA, et al. also maintain that the Court of Appeal created new federal law by concluding that a regulatory fee could be passed through to federal contractors. Federal law permits pass through of taxes to federal contractors, but not regulatory fees, according to NCWA, et al. arguments.

The opposing petitions for review are currently pending before the California Supreme Court, Case No. S150518.

SWRCB's Challenge

Fee Refunds

Legislation?

CONCLUSIONS AND IMPLICATIONS – WHAT'S NEXT FOR SWRCB

The Court of Appeal's decision creates serious questions about the status of funding the activities of the Division of Water Rights. It is clear that the Court of Appeal recognized the value of SWRCB's activities. In fact, in pleadings filed in Sacramento Superior Court and in the Appellate Court, NCWA, et al. also recognized this value.

In the short term, SWRCB's challenge is to revise its regulatory structure to meet Constitutional requirements, and provide appropriate refunds to those who paid the annual fees and filed petitions for reconsideration. Given the State's assertions in its petition for rehearing, NCWA, et al. believe the State has in essence acknowledged that it cannot develop a constitutional regulatory scheme under the existing statutory scheme. The inability to develop a valid regulatory scheme under the statute suggests that the statute itself is the problem. Despite the Court of Appeal's conclusion to the contrary, the statute may, in fact, be unconstitutional. The State, however, has made clear that it does not agree with NCWA, et al.'s interpretation, and maintains that the statute meets constitutional requirements.

While this initial case challenging the fees assessed for the 2003-2004 fiscal year has been pending, separate lawsuits have been filed by NCWA, CVPWA, and other water users each year, to challenge those fees assessed in fiscal years 2004-2005, 2005-2006, and 2006-2007. Those cases were stayed in Sacramento Superior Court pending the Court of Appeals' decision in the first case. Because the fee schedules adopted for the subsequent three years are substantially the same as the fee schedule adopted for the first year, each of those three cases is expected to meet with the same result. It is expected, therefore, that the Sacramento Superior Court will invalidate the fee regulations for each of the subsequent three years and order a refund of the fees paid in each of these years — consistent with the Court of Appeals' order. Refunds of fees paid for each of these years, however, will face the same obstacles as those for the initial year.

NCWA, et al. believe SWRCB cannot comply with the Court of Appeal's order without legislative help. In its Answer to NCWA, et al.'s Petition for Review to the California Supreme Court, the State acknowledges, "If the problem were with the statute, as NCWA contends, the solution would be with the Legislature." NCWA, et al. believe the Court of Appeal's order precludes SWRCB from funding the Division of Water Rights' entire budget through fees. SWRCB, however, maintains that this is a "zero-sum game." SWRCB has implied that the regulatory fees can merely be shuffled around among the post-1914 permit and license holders, and federal contractors, to pay for the Division of Water Rights' entire budget. This fundamental disagreement about the meaning of the Court of Appeal's opinion suggests this battle is not likely to end soon. If the California Supreme Court grants review, some clarification may be provided. Without clarification, though, the parties are likely to continue the debate over how much of SWRCB's budget can be assessed in fees and to what extent the post-1914 permit and license holders can be assessed.

Alternatively, the Legislature can attempt to resolve the dispute by approving legislation that clarifies the permitted fee structure. Even before the Court of Appeal's opinion became final, at least one bill was introduced to address inadequacies in SWRCB's funding scheme. Senator Ducheny (D-San Diego) introduced Senate Bill 258 on February 14, 2007, which would require that water right fees assessed against permit and license holders be based on the amount of water actually used in the prior year. Such a fee would not address SWRCB's potential need to rely on non-fee funding for at least part of its budget and does not provide assurance that the amount of the fee will be related to the actual regulatory services. Nonetheless, the fact that the Legislature is taking another look at the statutory approach for water right fees brings some promise for the future of SWRCB's funding.

FOR ADDITIONAL INFORMATION: KRISTEN T. CASTAÑOS, 916/446-7979 or email: kcastanos@lawssd.com; Complete case available at: http://california.lp.findlaw.com/ca02 caselaw/1 2007ca.html

Kristen T. Castaños is a shareholder at Somach, Simmons & Dunn in Sacramento, California, and one of the attorneys for NCWA, CVPWA, and over 200 other petitioners in the State Water Resources Control Board fee litigation. Ms. Castaños focuses her legal practice on the areas of water, water quality, and land use, representing public agencies as well as private interests. Ms. Castaños received her J.D. from the University of California at Davis, King Hall School of Law, in 1998. Ms. Castaños is the Secretary for the California State Bar Environmental Law Section Executive Committee and is a member of the Sacramento County Bar Association Environmental Law Section.

WATER BRIEFS

ESA "TAKINGS" CASE US

WATER FOR FISH LADDER

The US Court of Federal Claims has rejected a "takings" claim asserted by the Casitas Municipal Water District in California (District) for water it was required to divert for a fish ladder to comply with the Endangered Species Act (ESA). The District sought reimbursement from the federal government for the water (3,200 acre-feet annually), which otherwise would have been used for irrigation or municipal purposes. Judge John Wiese issued a summary judgment ruling on March 29 upholding the motion filed by the US (defendant). The US successfully argued that "the takings claim plaintiff alleges cannot be regarded as a physical or per se taking but instead must be addressed as a regulatory constraint on the use of property and therefore subject to evaluation under the criteria adopted in Penn Central Transportation Co. v. New York City, 438 U.S. 104 (1978)." Slip Op. at 2.

Earlier, the court rejected the District's claim that it was entitled to contract damages for water attributable to fish habitat protection requirements imposed under ESA authority. *Casitas Mun. Water Dist. v. United States*, 72 Fed. Cl. 746 (2006). The March 29 decision involved the District's alternative contention that the action constituted a Fifth Amendment "taking" for which just compensation was due.

The facts in the case differentiate it from previous "takings" cases. The District operates the Ventura River Project (Project) on behalf of the US Bureau of Reclamation which owns and administers the Project. The District's "basic right to the use of the Project water, by contrast, is subject to a license issued to Casitas by the California State Water Resources Control Board. The license grants...the right to divert and to use water from the Ventura River and its tributary (Coyote Creek) for beneficial purposes, subject to specific quantity limitations." Slip Op. at 3.

The court's decision that the District's claim does not represent a "physical or per se taking" and instead is subject to the *Penn Central* evaluation is critical. Once a physical or per se taking is found, the question is the proper compensation for the property taken. If, however, the *Penn Central* evaluation is required (as found here), the "taking" is subject to a "multi-factor balancing test" to determine whether or not the government intrusion amounts to a "taking" that must be compensated. "This [multi-factor balancing] test, which reflects the standards set forth in Penn Central, 438 U.S. at 124, examines the challenged regulatory action in terms of three factors: (i) the extent to which the regulation interferes with investment-backed expectations; (ii) the economic impact of the regulation on the claimant; and (iii) the character of the government's action. As the Supreme Court explained in Lingle v. Chevron U.S.A., Inc., 544 U.S. 528, 540 (2005), the thrust of the Penn Central inquiry 'turns in large part, albeit not exclusively, upon the magnitude of a regulation's economic impact and the degree to which it interferes with legitimate property interests." Slip Op. at 5.

This case was decided by the same judge, Judge Weiss, who decided *Tulare Lake Basin Water Storage Dist. v. United States*, 49 Fed. Cl. 313 (2001). Following that decision, the United States settled with the plaintiffs there for \$16.7 million. The District's attorney, Roger Marzulla of Marzulla & Marzulla (Washington, D.C.) was also the attorney for the plaintiff's in both cases. Mr. Marzulla was interviewed for The Water Report following the *Tulare Lake* decision (TWR #11) and also wrote an article for The Water Report on "*Taking & Water Rights: Constitutional and Contractual Remdies for Government Takings*." (TWR #21).

For info: Casitas case available in full at: www.uscfc.uscourts.gov/2007.htm

GROUNDWATER REPORT: CONJUNCTIVE USE

Trout Unlimited (TU) released its report, "Gone to the Well Once Too Often, The Importance of Groundwater to Rivers in the West" in February 2007. Produced by TU's Western Water Project, the Report provides a good primer on groundwater use and regulation. The Report addresses the impacts on surface water flows from groundwater pumping and includes a section on "Solutions" that lists strategies to maintain a sustainable level of withdrawal.

For info: www.tu.org

MISSISSIPPI RIVER REPORT

USGS: STREAMFLOW, NUTRIENTS

The US Geological Survey (USGS) recently released a report that presents information on streamflow and nutrient delivery from the Mississippi River Basin to the northern Gulf of Mexico. Scientists have linked the delivery of nutrients and streamflow to the formation and extent of a "hypoxic zone" — i.e. a zone of waters with low dissolved oxygen that forms each summer in the northern Gulf along the Louisiana-Texas coast. The resulting lack of oxygen can cause stress or death in bottom-dwelling organisms that cannot escape to more oxygen-rich areas of the Gulf.

The Mississippi River drains about 3 million square kilometers or about 1/3 of the US land area. The Report also provides information on streamflow and nutrient delivery for 30 subbasins.

"Scientists will use this information to investigate causal linkages between the delivery of nutrients and streamflow to the northern Gulf and the magnitude and duration of the hypoxic zone," said Brent Aulenbach, a USGS scientist and lead author of the report. "Managers also will use this information to identify areas within the Mississippi River Basin that produce the highest nutrient yields, helping to guide management actions for mitigation of problems associated with excess nutrients in local receiving waters, as well as the Gulf of Mexico."

Five major subbasins have different relative contributions to nutrient delivery. For the period 1981-2005, the Upper Mississippi and Ohio/Tennessee subbasins contributed 39 and 34 percent of total nitrogen and 27 and 31 percent of total phosphorus, while comprising only 15.7 and 16.7 percent of the land area, respectively.

For info: Jennifer LaVista, USGS, 703/648-4432 or email: jlavista@usgs.gov RE: USGS Mississippi River Basin Report, website: http://toxics.usgs.gov/highlights/of-2007-1080.html RE: Additional information on nutrients in the Mississippi River Basin and Hypoxia in the Gulf of Mexico, website: http://toxics.usgs.gov/hypoxia/

The Water Report

WATER BRIEFS

CWA VIOLATION

AK

NEGOTIATED SETTLEMENT

EPA and Snug Harbor Seafood, Inc. (SHS), an Alaskan seafood processor located in Kenai, Alaska, have agreed to settle Snug Harbor's past violations of its Clean Water Act (CWA) National Pollution Discharge Elimination System (NPDES) permit. Under the terms of the settlement, Snug Harbor will pay \$8,016 in penalties and an estimated \$26,000 for an innovative pollution reduction project.

SHS, like most Alaskan seafood processors and unlike many seafood processors in the contiguous US, discharges seafood waste into nearby waterways. For SHS, those nearby waterways are the Kenai River and Cook Inlet, waters regulated under the CWA. The NPDES program limits discharges of pollution from entering waterways.

EPA and the Alaska Department of Environmental Conservation inspected SHS in 2002, and 2004, and found that SHS was not in compliance with its NPDES permit. SHS had not informed EPA about changes to its operation, failed to grind its seafood waste to 1/2 inch or smaller before discharging, and did not perform daily inspections of its operations and the surface and shoreline to ensure correct facility operation.

During negotiations, EPA agreed to give SHS credit for \$26,582 that SHS wanted to put into creating a non-profit company, named "Fish and Chips." "Fish and Chips" will annually turn wood chips and at least ten tons of fish wastes into compost and then bag the product for local retail sale.

"We are pleased that Snug Harbor is taking a leadership role by showing industry that fish wastes can be made into an environmentally beneficial product rather than pollute waterways," said Tara Martich, EPA's NPDES Compliance Officer. "EPA hopes other seafood processors follow Snug Harbor's lead, by using the 'Fish and Chips' facility, or by creating additional, innovative ways to use fish wastes."

For info: Chris Gebhardt, EPA, 206/553-0253 or email: gebhardt.chris@epa.gov

TRIBAL RELIGIOUS ISSUE AZ

SEWAGE EFFLUENT FOR SKIING

On March 12, the 9th Circuit Court of Appeals rejected an expansion proposal by Arizona Snowbowl ski area that was based in part on the use of treated sewage effluent for snowmaking. The court held, among other issues, that the use of the effluent violated the Religious Freedom Restoration Act (RFRA), 42 U.S.C. §§ 2000bb et seq. "From time immemorial, they [Tribes] have relied on the Peaks, and the purity of the Peaks' water, as an integral part of their religious beliefs. The Forest Service and the Snowbowl now propose to put treated sewage effluent on the Peaks. To get some sense of equivalence, it may be useful to imagine the effect on Christian beliefs and practices — and the imposition that Christians would experience — if the government were to require that baptisms be carried out with 'reclaimed water." Slip Op. at 2871.

For info: Case available at: http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=9th&navby=year&year=2007-3

CWA MERCURY LISTING US EPA GUIDANCE

EPA is providing a voluntary approach for listing waters impaired by mercury mainly from atmospheric sources under CWA section 303(d). HIGHLIGHTS OF THE APPROACH INCLUDE:

- A state which has in place a comprehensive mercury reduction program may separate their waters impaired by mercury primarily from atmospheric sources in a specific subcategory ("5m") of their impaired waters lists. States using this approach may also defer development of TMDLs for these waters.
- Recommended components include: having a comprehensive mercury reduction program *in place*; demonstrating progress in reducing mercury loads; identifying waters impaired by atmospheric deposition and potential contributing sources; implementing appropriate controls; and describing reduction goals and targets, implementation schedules, monitoring, and public reporting.
- Multi-state efforts are encouraged

- A state would regularly report progress in conjunction with the existing biennial 303(d) listing process.
- Use of the 5m approach will not remove the obligation to develop TMDLs if such mercury reduction programs do not result in attainment of water quality standards.

For info: Ruth Chemerys, EPA, 202/566-1216

EPA website: www.epa. gov/owow/tmdl/mercury5m/

WETLANDS PERMITS US

CORPS REVISES NATIONWIDES

The US Army Corps of Engineers (Corps) has revised and renewed the nationwide permits for regulating work in wetlands and other waters of the US under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. The new nationwide permits were published in the Federal Register on March 12 and took effect on March 19, 2007.

The Corps' nationwide permits authorize activities that are similar in nature and deemed to cause only minimal adverse environmental impacts individually or cumulatively. These activities range from work associated with aids to navigation and utility lines to Coast Guard-approved bridges and cleanup of hazardous and toxic wastes. Revision highlights include:

- All the existing permits were reissued, six new ones were added.
- One new general condition was added, one was eliminated
- Acreage limits were retained from the previous nationwide permits
- Protections for ephemeral streams

The new nationwide permits cover activities such as repairs of uplands, time-sensitive pipeline repairs, repairs to ditches and canals to control erosion, commercial aquaculture operations, reclamation of surface coal mining areas and underground coal mining

For info: David Hewitt, Army Corps, 202/761-1807 or email: David.

W.Hewitt@usace.army.mil

Corps websites: For a direct link to the Nationwide Permits as published in the Federal Register on March 12, 2007, go to: http://www.usace.army.mil/cw/cecwo/reg/nwp/nwp 2007 final.pdf

WATER BRIEFS

MONTANA V. WYOMING

INTERSTATE COMPACTS

Wyoming recently filed its brief opposing Montana's motion to the US Supreme Court (Court) regarding water allocation under the Yellowstone River Compact. Montana's motion, filed in January of 2007, requests that the Court accept Montana's Bill of Complaint dealing with water use allocations between Wyoming and Montana. The Court has exclusive and original jurisdiction of this case since it is based on the Yellowstone River Compact of 1951 (Compact). North Dakota is a named party since they are one of the parties to the Compact. Montana's complaint, however, only deals with water use in Wyoming. Montana alleged that various actions allowed by the state of Wyoming have resulted in water use in excess of Wyoming's equitable share of water from the Tongue and Powder Rivers in accordance with the Compact, causing injury to Montana water users. Montana further asserts that Wyoming is refusing to comply with Article V of the Compact, despite Montana's request that it do so.

Wyoming's response brief (WY Brief), filed in early April of 2007, makes several arguments to attempt to convince the Court not to accept jurisdiction and hear the case. The 30page brief (plus Appendices) goes into significant detail about both Wyoming's and Montana's water rights systems, and their effect on the issues in the case. That brief also contains an affidavit by Patrick Tyrrell, Wyoming's State Engineer, that provides some history leading up to the lawsuit and details concerning factual issues involved. The affidavit also sets out Tyrrell's calculations on "Wyoming's diversions from the Tongue, Powder and Little Powder Rivers as a percentage of the total divertible flow under Article V, Section C. of the Yellowstone River Compact..." (WY Brief, p. B-7).

Wyoming argues that "Montana's allegations that Wyoming has developed groundwater, sprinkler irrigation systems, new reservoirs, and new irrigated lands since 1950 are allegations of conduct that does not violate the

Yellowstone River Compact..." (WY Brief, p. 1). That brief also maintains that Montana "fails to adequately allege that its users suffered damages caused by Wyoming post-1950 uses." (WY Brief, p. 13). In particular, Wyoming finds fault with Montana's complaint where "Montana vaguely states that "[a]ll of these developments since the adoption of the Compact have the potential, in some cases the strong potential, to increase the consumption of water in Wyoming." (Mont. Br. 16) Potentials, and even strong potentials, are not the same as actual allegations of causation or damages that demonstrate serious or dignified claims." WY Brief, p. 10).

Wyoming suggests that instead of hearing the case, the Court should refer it to the Yellowstone River Compact Commission due to Montana's alleged failure to develop a factual case. "The Compact Commission is an alternative forum with adequate powers to require Wyoming and Montana to collect, correlate and present factual data about their water rights and regulatory operations, a process Wyoming has subscribed to for many years. This Court is not the proper forum for an interstate compact dispute until there is more than a theoretical disagreement." (WY Brief, p. 13).

For info: Copy of Wyoming's Brief is available by request to The Water Report: thewaterreport@hotmail.com; Yellowstone River Compact and more information are available on Montana AG's website: http://doj.mt.gov/news/releases2007/20070201.asp

SUPERFUND LIABILITIES US

LIABILITY APPORTIONMENT

On March 16, the 9th Circuit Court of Appeals hand down a decision regarding the apportionment of liability among potentially responsible parties (PRPs) in actions by federal and state governments seeking response costs under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 9675 (CERCLA). Brown & Bryant, Inc. (B&B) owned and operated a facility at which toxic chemicals were stored and distributed. Part of the land on which the chemical operation was located was owned by two railroad companies (the Railroads), and some of the chemicals used by B&B were supplied and delivered to the facility by Shell Oil Company (Shell).

In United States v. Burlington Northern & Santa Fe Railway Co., No. 03-17125, 2007 WL 777875 (9th Cir. Mar. 16, 2007), the 9th Circuit affirmed the district court's finding that Shell was liable as an "arranger" under CERCLA, $\S 9607(a)(3)$ — i.e. a person who arranged for the disposal of hazardous substances. The district court held the Railroads and Shell liable for only a minor portion of the total cleanup costs. The 9th Circuit reversed that portion of the judgment, holding that "liability under § 9607(a) may be joint and several even though the statute does not expressly so provide." Slip Op. at 3226. B&B was defunct by that time, and so could not contribute to the cleanup costs.

The decision goes into depth concerning apportionment of liability that provides guidance to PRPs faced with CERCLA costs. At page 3244 of the Slip Op. the 9th Circuit explained its view of the CERCLA process: "...CERCLA is not a statute concerned with allocation of fault. Instead, CERCLA seeks to distribute economic burdens. Joint and several liability, even for PRPs with a minor connection to the contaminated facility, is the norm, designed to assure, as far as possible, that some entity with connection to the contamination picks up the tab. Apportionment is the exception, available only in those circumstances in which adequate records were kept and the harm is meaningfully divisible." (court emphasis)

For info: Case available at: www.ca9. uscourts.gov/>>(Case NO. 03-17125; March 16, 2007)

The Water Report

CALENDAR

April 16-17

Wetlands Conference, Chicago. For info: The Seminar Group, 800/574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net/

April 17 Northwest Conference on Climate

or website: www.elecenter.com/

 \mathbf{OR}

IL

2nd National Conference on Ecosystem Restoration (NCER), Kansas City. RE: Multi-scale Ecosystem Restoration

Programs & Lessons Learned. For info: Conference website: http://conference.ifas. ufl.edu/NCER2007/

April 17

Change, Portland. For info: Holly Duncan,

Environmental Law Education Center, 503/

282-5220, email: hduncan@elecenter.com

OSU Water and Health Conference, Corvallis. Sponsored by the Institute for Water & Watersheds (IWW) at Oregon State University. RE: Global Water Issues & OSU's Outreach, Research & Education. For info: IWW website: http://water. oregonstate.edu/news/2007 water/index.

April 15

Governor's Water Summit, Burley. For info: Jon Hanian, Governor's Office, 208/ 334-2100 or website: http://gov.idaho.gov

April 17 & 19 OR
"Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment" DEQ Training Sessions, Portland (4/17) & Tigard (4/19). RE: Updates to Risk-Based Decision Making (RBDM) Spreadsheets, Generic Screening Values & Site Specific Screening Values. For info: DEQ website: www.deq.state.or.us/lq/training.htm

April 17-21

 $\mathbf{C}\mathbf{A}$

2007 Annual Meeting of the American Association of Geographers, San Francisco. RE: Land Use Impacts on Hydrology, Channel Morphology and Dynamics, and Aquatic Habitat in Mountain Watersheds, For info: John Faustini, OSU Dept. of Fisheries & Wildlife, 541/754-4581, email: faustini.john@epa.gov, or AAG website: www.aag.org/

April 19-20

DC

WA

International Conference on Climate Change Regulation and Policy, Washington, DC Speakers include Attorneys from Davis Wright Tremaine LLP - Contact DWT for Special Rate. For info: Erika Schaefer, Law Seminars Int'1, 800/ 854-8009, email: registrar@lawseminars com, or website: www.lawseminars.com

April 19-20

OR **Oregon Environmental Quality** Commission Meeting, Bend. For info: Helen Lottridge, ODEQ, 503/229-6725, or website: www.deq.state.or.us/about/eqc/ EQCagendas.htm

April 20-21

"Of Salmon, the Sound, and the Shifting Sands of Environmental Law-A National Perspective With a Look Forward at the Career of Bill Rodgers and the Power of Ideas," Conference, Seattle, University of Washington School of Law. For info: CLE office, 800/ CLE-UNIV, email: uwcle@u.washington.edu or website: www.uwcle.org/

April 23-24

TX

website: www.cle.com MO

Texas Water Law Conference, Houston.

For info: CLE Int'1, 800/873-7130 or

April 23-27

April 24 NEBC Energy Conference: Making

Renewable Energy Projects Happen, Portland. RE: Create Connections: Product and Service Providers to Potential Customers, Strengthen the Sector, & Build a Cluster Identity, Project Sophistication & Efficiency. For info: Cheryl, NEBC, 503/ 222-1963 x100, email: cherylb@oeconline. org, or website: www.nebc.org

April 25

Sustainability Using the Natural Step Framework Workshop, Portland, David Evans & Associates, 2100 SW River Parkway. Sponsored by Oregon Natural Step Network. For info: Network, 503/241-1140, email: events@ortns.org or website: www.ortns.org/events.htm

<u>Apri</u>l 25-27

Croatia

Second International European Water Association Conference: "Waters in Protected Areas," Dubrovik. RE: Water Management in National Parks, Threats to Island & Coastal Zones, Water & Wastewater Infrastructure, Conservation and Rational Use of Precious Resources, Safeguarding Ecosystems. For info: Croatian Water Pollution Control Society, +385-1-6307-677, fax +385-1-6118-570. email: hdzv@voda.hr, or website: www. hdzv.hr/about_us.htm

GA NPDES Overview Course for Permittees,

Atlanta. RE: Basic Requirements & Methods for NPDES Permits, Permit Development & Implementation. For info: Water Environment Federation website: www.wef.org

April 26-27

NV

Colorado River: Conflicts, Concerns & Challenges Conference, Las Vegas, Tuscany Suites & Casino. Sponsored by the Colorado River Commission of Nevada. For info: CRCN, 702/486,2670 or website: www.crc.nv.gov

April 26-27

Wyoming Water Law Conference, Cheyenne. For info: CLE Int'l, 800/873-7130 or website: www.cle.com

April 27

OR

Symposium: Forces Impacting Forests in Oregon, Corvallis, Oregon State University. Sponsored by the Oregon Dept. of Forestry. For info: Dan Postrel, ODF, 503/945-7420 or website: http://egov. oregon.gov/ODF/BOARD/index.shtml

April 29-May 3

2007 Ground Water Summit,

Albuquerque. RE: Groundwater Science, Technology & Policy. For info: National Ground Water Association, 800/551-7379, email: customerservice@ngwa.org, or website: www.ngwa.org

May 1-2

NM

Introduction to Environmental Regulations Conference, Chicago, IL. Water Quality Sessions include: History of the Clean Water Act: Scope of the NPDES Program; Industrial Discharge Permits; Storm Water Permits; NPDES Pre-treatment Permits; Spill Prevention Control and Countermeasures; Other Water Regulations. For info: Trinity Consultants, 800-613-4473 or website: www.trinityconsultants.com

Sixth Washington Hydrogeology Symposium, Tacoma, Greater Tacoma Convention Center. RE: Environmental Forensics, Age-Dating Groundwater, Impacts of Climate Change on Water Resources & More. For info: Kelly Newell, Washington State University, 509/ 335-4247, email: knewell@wsu.edu or website: www.ecy.wa.gov/events/hg

May 2

WA

Endocrine Disrupting Chemicals, Conference, Seattle, McCormick & Schmick's Harborside, 1200 Westlake Ave. N. For info: NEBC, 800/985-6322 or 503/ 227-6361 website: www.nebc.org/

Spring Council Meeting, Western States Water Council, Sioux Falls, Sheraton Sioux Falls Hotel, 1211 N. West Avenue. For info: Cheryl Redding, WSWC, 801/ 561-5300, email: credding@wswc.state. ut.us or website: www.westgov.org/wswc/ meetings.html

Nebraska Water Law Conference, Lincoln. For info: CLE Int'1, 800/873-7130 or website: www.cle.com

Colorado Wetlands Conference, Denver. For info: CLE Int'1, 800/873-7130 or website: www.cle.com

DC

National Clean Water Policy Forum, Washington, DC, Renaissance Washington. Sponsored by the National Association of Clean Water Agencies. For info: NACWA, 202/ 833.2672, email: info@ nacwa.org, or website: www.nacwa. org/meetings/#07winter

MT

2007 Water Summit, Dupuyer, Theodore Roosevelt Memorial Ranch. Sponsored by the Montana Department of Environmental Quality, The Boone and Crockett Club, and the Sun/Teton Watershed Groups. RE: Water Conservation & Challenges for Montana Water Supplies. For info: Ted Sedell, Montana Watercourse, 406/994-6317 or email: Edwin.sedell@montana.edu May 7-10

LA

2007 National Environmental Partnership Summit, New Orleans.

RE: Local Actions & Global Results, Practical Tools, Managing Environmental Impacts, Policy Strategies & Innovations, Measurement, Metrics & Indicators, Research & Technology, Environmental Futures Forecasting. For info: Beverly Updike, OECA's Office of Compliance, 202/564-7142, or Summit website: www. environmentalsummit.org

May 8

 \mathbf{DC}

Managing Non-Federal Mercury Supplies, EPA Public Meeting, Washington, DC. RE: EPA and Federal Partners Establishing Stakeholder Process for Better Management of Non-Federal Mercury Supplies. (See Brief, this TWR) For info: Enesta Jones, 202/564-4355 or email: iones.enesta@epa.gov: EPA Roadmap for Mercury website: www.epa.

gov/mercury/stocks/

2007 Policy Summit: Spokane Valley-Rathdrum Prairie Aquifer Study Results, Spokane Valley, Mirabeau CenterPlace. RE: Numerical Groundwater Model, Scientific Foundation for Managing SVRP Aquifer, "Water Budget" & More. For info: Jani Gilbert, Ecology, 509/ 329-3495 or website: www.ecy.wa.gov/programs/wr/ ero/svrp_summit.html; Bob Haynes, Idaho DWR, 208/762-2800

May 8-11 $\mathbf{C}\mathbf{A}$ 2007 Spring Conference & Exhibition,

Sacramento, Hyatt Regency & Sheraton Grand Hotels. Sponsored by: Association of California Water Agencies. For info: www. acwa.com//events/acwa events.asp

May 8-11

New MODFLOW Course Conference. Las Vegas. For info: National Ground Water Association, 800/551-7379, email: customerservice@ngwa.org, or website: www.ngwa.org

May 9

WA

NV

Hanford Cleanup Site Budget, Public Workshop and Public Meeting, Richland, Clarion Hotel and Conference Center, 1515 George Washington Way, Public Workshop: Noon-4:45pm; Public Meeting-5pm. RE Budgeting for: Cleanup Along Columbia River; Groundwater Cleanup; Underground Storage Tanks Waste Retrieval; Tank Waste Treatment Plant: Tank Waste Permanent Disposal Technology. (See Niles, TWR #23) For info: Karen Lutz, USDOE, 509/376-4766; Dennis Faulk, EPA, 509/ 376-8631; Nolan Curtis, WA Ecology, 509/ 372-7954

Design Your Monitoring Plan & Data Management Workshop, Dupuyer, Boone & Crockett's Theodore Roosevelt Memorial Ranch. Sponsored by the Montana Department of Environmental Quality, The Boone and Crockett Club, and the Sun/Teton Watershed Groups. For info: Ted Sedell, Montana Watercourse, 406/994-6317 or email: Edwin.sedell@montana.edu

(continued from previous page)

May 10 WA
Permitting Strategies Conference,

Seattle. For info: The Seminar Group, 800/574-4852, email: info@theseminargroup. net, or website: www.theseminargroup.net/

California Hydroelectric Projects
Conference, San Francisco. For info: The

Conference, San Francisco. For info: Tl Seminar Group, 800/574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net/

May 10 OR

Ecosystem Marketplace: New Trends in Trading, Portland, Governor Hotel, 614 SW 11th Ave. For info: NEBC, 800/ 985-6322 or 503/ 227-6361 website: www. nebc.org/

May 10-11 DC

Wetlands Law & Regulation Conference, Washington D.C., Marriott at Metro Center. Sponsored by ABA Section of Environment, Energy & Resources and Environmental Law Institute. For info: ABA website: www.ali-aba.org/aliaba/ CM094.HTM

May 10-11 NV

Law of the Colorado River Conference, Las Vegas, Flamingo. RE: Shortage Sharing & Conjunctive Management, Augmenting the River, Climate Change, ESA Scope, International Water Conflicts, Yuma Desalting Plant. For info: CLE Int'1, 800/873-7130 or website: www.cle.com

May 11

Oregon Clean Water & Stormwater Conference, Portland. For info: Holly Duncan, Environmental Law Education Center, 503/282-5220, email: hduncan@ elecenter.com or website: www.elecenter.com/ May 11 CA
Desalination Conference, Santa Barbara.

For info: The Seminar Group, 800/574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net/

May 14 NM

Water Markets Conference,

Albuquerque, Hotel Albuquerque at Old Town. RE: Basin Markets, Leasing Water for Municipal & Industrial Use, Political Perspectives & More. Sponsored by H2O Economics & John Shomaker & Assoc. For info: H2O, 505/897-5910 or website: www.shomaker.com/watermarkets.html

Iay 14-17

Joint Rio Grande Basin Initiatives Annual Conference, South Padre Island, Radisson Resort. RE: Texas & New Mexico Water Research & Extension. For info: Ellen Weichert, Texas Water Research Institute, 979/ 845-8572 or website: http:// riogrande-conference.tamu.edu/2007/

May 14-18

State Board of Control Quarterly Meeting, Cheyenne, Herschler Building, Room 1699. For info: Alan Cunningham, Administrator, 307/777-6178 or website: http://seo.state.wy.us/news.aspx

May 15-16 WA

Washington Brownfields: Community Development Opportunities, Conference, Spokane, Davenport Hotel. For info: Mike Bellamente, National Association of Development Organizations, 202/ 624-7809 or email: mbellamente@nado.org; Robin Toth at 509-742-9388 or rtoth@spokaneedc.org

May 15-16 OR

Oregon Watershed Enhancement Board (OWEB) Meeting, Salem. For info: Monte Turner, OWEB Communications Coordinator, 503/ 986-0195 or website: www.oregon.gov/OWEB May 16-18

Climate Change Workshop, Irvine, Hilton Irvine/Orange County Hotel, 18800 MacArthur Blvd. Sponsored by the Western States Water Council. For info: WSWC, 801/561-5300 or email: credding@wswc. state.ut.us

May 18-22

WA

CA

River Network's National River Rally 2007, Conference, Stevenson. RE: Citizen Involvement, Watershed Protection & Restoration. For info: River Network website: www.rivernetwork.ore/rallv/

May 20-24

NV

Native American Fish & Wildlife Society 25th Annual Conference, Reno, Silver Legacy Hotel. Sponsored by Southwest Region Native American Fish & Wildlife Society. For info: EPA website: http://epa. gov/osp/tribes/announce/event.htm

May 22-24

CO

32nd Colorado Water Workshop,

Gunnison, Western State College. RE: Watershed Look at Colorado River Controversies. For info: Peter Lavigne, 970/943-3162, email: plavigne@western. edu, or website: www.western.edu/water/datechange.html

May 23

WY

WA

Model Toxics Control Act Conference, Seattle. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars. com, or website: www.lawseminars.com

May 23-25 Greece

River Basin Management 2007
Conference, Kos. RE: Development & Application of Hydroinformatics Software Tools, Predicting Flow, Water Quality, Sediment Transport & Ecological Processes in Riverine Systems. For info: Zoey Bluff, Wessux Institute of Technology, +44
(0) 238 029 3223, fax: +44 (0) 238 029
2853, email: zbluff@wessex.ac.uk, or

website: www.wessex.ac.uk/conferences/

20070rm07/index.html

May 24

OR

Constructing with GCLs and PVC
Geomemberanes, NW Environmental
Business Council (NEBC) Technical
Workshop. Portland. RE: Construction,
Operation and Closure of Landfills,
Lagoons, Ponds, etc. Corrective Action
Activities at Closed Sites. Latest Info on
GCLs. For info: Cheryl, NEBC, 503/ 2221963 x100, email: cherylb@oeconline.org,
or website: www.nebc.or

May 24-25

ID

Water Law Conference, Boise. For info: Law Seminars Int'l, 800/854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

May 24-25

WA

Brownfields Conference, Seattle. For info: The Seminar Group, 800/574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net/

May 31

OR

Hydropower Relicensing Conference, Portland. For info: The Seminar Group, 800/574-4852, email: info@ theseminargroup.net, or website: www. theseminargroup.net/

May 31- June 1

OR

Oregon Water Resources Commission Meeting, Salem. For info: Cindy Smith, OWRD, 503/986-0876, or website: www. wrd.state.or.us/OWRD/COMMIS/calendar. shtml

June 1 OR

Willamette River Conference, Portland. For info: Holly Duncan, Environmental Law Education Center, 503/282-5220, email: hduncan@elecenter.com or website: www.elecenter.com/



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