

Water Resources Committee Newsletter

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MESSAGE FROM THE CHAIR

David R.E. Aladjem

Welcome to the May 2009 issue of the Water Resources Committee Newsletter!

This issue of the newsletter reflects the diversity of water resources law and policy in the United States and—increasingly—across the globe. Our feature article this month—which received “Best Paper” honors at the February 2009 Annual Water Law Conference—is by Amy Beatie on the subject of water trusts in the Western United States. For those who are not familiar with water trusts, they are nonprofit corporations that seek to use the market system to acquire water rights needed to serve public values, most notably instream flows. Water trusts offer an important “third way” between top-down regulation and the free market. Because water trusts have great flexibility, they can (and do) adapt to a variety of different circumstances across the West. By implementing the prior appropriation system in a way that promotes creativity and innovation, water trusts can serve as a major tool for water resource managers as we confront climate change.

Our other articles reflect the diversity of the water resources practice. From Utah, the article by Dale Gardiner and Michael Keller discusses the way in which “public trust” values such as recreational use of waterways are now being impressed upon what were thought to be private property rights to a stream. From

Michigan, Scott Hubbard describes the way that state law (joined with the Great Lakes Compact) has begun to address water withdrawals that would cause an “adverse resource impact” and thus interfere with the long-term sustainability of the Great Lakes. From California, Kevin Haroff describes the recent Biological Opinion for delta smelt and the way that it has impacted water exports from the Sacramento/San Joaquin Delta while Christian Marsh describes the recent decision in *Casitas Municipal Water District v. United States*, which found a physical taking in a requirement for the diversion of water to support a fish ladder. For a global perspective, Stephen Draper thoughtfully considers different models of public versus private allocation of water resources with references to different state regimes (e.g., the California Water Bank or the Colorado-BigThompson project) and different national regimes (e.g., Chile and Australia).

Taken together, the articles in this issue of the newsletter illustrate variations on the theme of adaptations to climate change. Each of these articles reflects developing needs/concerns with water resources allocation and many of them describe ways to address those evolving needs in a manner that meets the local demands for water resources. The diversity of approaches doesn’t, in my view, reflect an inability of our profession to address these issues; instead, it illustrates the creativity and innovation that we will collectively need as we deal with an ever-changing natural and regulatory environment.

Cheers and enjoy!

Water Resources Committee Newsletter
Vol. 11, No. 3, May 2009
Jeff B. Kray, Marten Law Group PLLC,
Editor

In this issue:

Message from the Chair
David R.E. Aladjem 1

RiverBank: Water Trusts in the Western
 United States
Amy W. Beatie..... 2

“Our Water, Your Land”: Public Access
 over Privately Owned Beds of
 Non-navigable Waters—The Utah Supreme
 Court’s Decision in *Conatser v. Johnson*
Dale F. Gardiner and
H. Michael Keller 15

Delta Smelt Biological Opinion Sets the
 Stage for the Latest Skirmish in
 California’s Water Wars
Kevin T. Haroff 17

Michigan’s Revised Water Withdrawal
 and Anti-Diversion Legislation
Scott D. Hubbard 21

Water: Private or Public Resource?
Stephen E. Draper 26

Court Denies Rehearing in *Casitas*—
 The Government May Be Liable for
 Diversion of Water for Fish
Christian L. Marsh 35

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**RIVERBANK: WATER TRUSTS IN THE
 WESTERN UNITED STATES**

Amy W. Beatie
Executive Director, Colorado Water Trust
Denver, Colorado

Winner – “Best Paper” Award
27th Annual Water Law Conference
Hotel Del Coronado, San Diego, California
Feb. 18-20, 2009

I. Introduction

It was a crisp fall day and I was heading over Cochetopa Pass from Saguache, Colorado to Gunnison, Colorado. I made the left-hand turn at the “Old Agency” sign, nosed my car south along the dirt road, and stopped. I opened my car door and stepped out, grasshoppers clack-clacking everywhere. I was in a high mountain valley—cattle country—overlooking a wide swath of land irrigated by a few ditches that pull water from a twisting, turning, tightly winding creek well-protected by willows, alders, and brush. And I was on private property.

I was also in the middle of a Colorado Division of Wildlife fishing easement covering approximately eight miles of three tributaries, all of which support wild trout. If you fish and you haven’t been to this area of Colorado, you are missing out. You are also missing out on a microcosmic example of a macrocosmic Colorado water challenge: the competition between consumptive water uses like irrigation and nonconsumptive uses like instream flows.

The State of Colorado has clearly recognized the importance of instream water uses in addition to more traditional water uses. The placement of an instream flow program in the hands of the Colorado Water Conservation Board (“CWCB”) in 1973 was its clearest pronouncement.¹ Yet, the commitment to instream flows is young, as are many of the water rights that the CWCB has secured to protect Colorado’s streamflows.² As a result, more work to balance consumptive uses like irrigation and the needs of aquatic ecosystems must occur. This sentiment—

heard around the West a bit louder and more often lately—has fueled the rate at which water trusts are springing up in many prior appropriation states. Most—if not all—water trusts have been formed to protect and enhance streamflows by using market-based, voluntary, cooperative transactions that put older, more defensible, more reliable water rights back into streams for the benefit of aquatic ecosystems, the flora and fauna that depend on them, and the people who enjoy them.

The topic of this twenty-seventh meeting of the American Bar Association’s water group, *Change in the Midst of Constants: Adapting Water Law to Meet New Demands*, is particularly apropos when discussing the water trust movement. It is a movement premised on the notion that the tools necessary to improve streamflows already exist in the western state-by-state water allocation systems, that “change”—one from an outdated maximizing-diversions paradigm to a newer one of maximum use that includes instream uses such as recreation, piscatorial, and aesthetic uses—can be achieved within the “constants” of western water law.

This paper begins with a description of water trusts generally. It then describes in detail Colorado’s instream flow program, a discussion that necessarily includes a description of the CWCB and the role the Colorado Water Trust (“CWT”) plays in the context of the state’s instream flow program. It then examines the challenges and opportunities facing the effort to improve instream flows statewide. The paper concludes with the idea that, while using water transactions to improve Western streamflows is not a panacea to solving the tension between diversions and aquatic ecosystem needs, working to create an active instream flow transaction market is a step in the right direction—and an important one.

II. What is a Water Trust?

For well over a century, the prior appropriation doctrine has determined how water is allocated in the Western states.³ Based on the principle of “first in time, first in right,” prior appropriation allows the first person who puts water to a beneficial use a right to

continue that use without interference from those who began using water later.⁴ The doctrine historically (and arguably, so some say) required that to obtain a defensible water right, one had to remove water from the stream system through a diversion.⁵ Primarily during the summer peak growing season, but also at other times of year, these legal water withdrawals stress the flow levels in stretches of many Western streams and rivers, forcing them to run critically low—and indeed sometimes dry—imperiling aquatic ecosystems.⁶

To mitigate these effects, every Western state maintains some form of instream flow program, a program that entitles water that remains in rivers to the same attributes of a diversionary water right, namely a defined volume, a place of use, a season of use, and a defensible priority.⁷ Some instream flow programs are nascent, some more established, but all seem to be ever-evolving.⁸

In addition to instream flow programs, the use of permanent sales or acquisitions,⁹ leases,¹⁰ soft-management solutions,¹¹ structural solutions,¹² and other incentive-based approaches to streamflow enhancement are improving the way streamflows are protected and improved in Western states. These efforts—the everything-but-new-instream-flow-appropriation efforts—are being pursued by water trusts throughout the West.

Water trusts, generally nonprofit organizations recognized as public charities under Section 501(c)(3) of the Internal Revenue Code, have been formed to help restore flows for existing habitat while working with water users to maximize the benefits of their water portfolios. They do this by encouraging voluntary, market-based transactions to put more senior, more defensible, more reliable water back in stressed segments of rivers while offering at the same time an alternative to selling water to, say, municipalities or local development. Although some water trust work requires working within a state’s instream flow program, some does not.¹³ As described above, the tools used are as various as the location of each water right deal.

When considering water trust tools, one would be remiss in failing to mention that water trusts have drawn heavily from the institutional model of the private land conservation movement.¹⁴ Given that, their work is often described in shorthand as using tools that mirror the tools used in land conservation. But this description is, perhaps, too blunt an instrument to do the trick. A discussion about water trusts will wander into land conservation territory, to be sure, but only for a brief moment before moving into and spending most of its time lingering on points pertaining to the intricacies of Western water law and instream flow protection. The reason? The “constants” of Western water law have no analogue in land conservation except for the very obvious: a Western water right, like land, is real property.¹⁵

Different systems govern the use and allocation of land and water. Practical considerations are at play here as well.¹⁶ To add to the complexity, state-specific water laws and instream flow laws are the major determinants of what a water trust will look like and the programs each will pursue.¹⁷ Thus, even from water trust to water trust, the deals they pursue can and do look rather different.

There is also an element of perception at play here. As Dan Tarlock has noted, “instream flow protection rests on the twin bases of public acceptance and economic rationality.”¹⁸ This idea as it relates to the work of water trusts is best encapsulated in the following quotation from John Wilson, a rancher in Oregon:

*When it comes to water challenges . . . , one thing most folks can agree on is that we'd like to solve them ourselves. I think one of the best ways to make sure water gets where it needs to go is to use the free enterprise system to give property owners some choices. That's what I like about the Columbia Basin Water Transaction Program.*¹⁹

Mr. Wilson has it right on a number of levels. First, he has recognized that balancing consumptive and non-consumptive uses is a challenge, and one that is being

taken on state by state. Development of traditional water rights (i.e., rights that divert water from the stream system for consumptive uses) typically came at the expense of healthy streamflows. Over the years, however, people in the West have come to recognize the social, economic, and environmental importance of healthy streamflows. Accordingly, diverters, especially those drying up stream segments, are seeing a lot more pressure to mitigate the damage local aquatic ecosystems suffer as a result of their diversions. Although their diversions are lawful, the consequences to an ecosystem can be dire. Therein lies the challenge that water trusts aim to address every day: how can the needs of both the diverter and the aquatic ecosystem be met?

Second, he recognizes what most people who work at water trusts learn almost immediately: people prefer using free-market solutions to solve environmental issues. The top-down, mandated approach is often seen as offensive; you've probably heard it characterized as failing to recognize the extent to which people believe they are entitled to exercise—i.e., trampling on—their private property rights. Where a river system suffers from low flows and local water users' diversions are receiving attention, it becomes clear time and time again that people would rather work on a solution over which they have control as opposed to one that is mandated or imposed.

Lastly, Mr. Wilson has observed that a water transaction program (he refers to the Columbia Basin Water Transaction Program) offers a free-market choice to repairing streamflows. Because water trusts do indeed offer a voluntary solution and a financial benefit—a solution to which many water users are responsive—they are being formed all over the West.

The first to form was the Oregon Water Trust, which began operations in 1994.²⁰ The Washington Water Trust began operations in 1998.²¹ The Colorado Water Trust and the Montana Water Trust followed, in 2001²² and in 2002,²³ respectively. There are also a number of other water trusts with jurisdictions ranging from the very local to regional, and other organizations whose mission and programs are not tailored exclusively to transacting water deals for streamflow

enhancement but who nonetheless work on water transactions as part of their watershed programs.²⁴

III. How Water Trusts Work: A Focus on Colorado's Instream Flow Program, the CWCB, and CWT

Many water trusts must work in collaboration with a state administrative agency. In some cases, the water acquired by a water trust may *only* be held by a state agency if it is to be used for instream flows. For example, as mentioned previously, Colorado's instream flow program is housed within a state agency, the CWCB. There are a number of different sections within the CWCB to manage its various programs.²⁵ The instream flow program is managed by the CWCB's Stream and Lake Protection Section. The Stream and Lake Protection Section's mission is "to correlate the activities of mankind with reasonable preservation of the natural environment" and "to preserve or improve the natural environment to a reasonable degree."²⁶ To accomplish the Stream and Lake Protection Section's mission, the CWCB adds water to the instream flow program in two ways. The first is through appropriating new water rights for particular stretches of river.²⁷ Currently, the instream flow program stewards more than 1,400 appropriations protecting nearly 9,000 river miles.²⁸ This is an incredible network of protected streams and rivers. But the CWCB's instream flow appropriations are quite junior. Remember that it was not until 1973 that the Colorado legislature created the instream flow program. As a result, the CWCB's instream flow appropriations are young, with priorities that date only from 1973 to the present. Often when a new, junior water right is obtained, regardless of its decreed use, it may have water available to it only infrequently and in inconsistent amounts. Because the CWCB's appropriated water rights are often quite junior, they cannot prevent the de-watering of stream reaches by senior water rights located above or in the instream flow reach; they can only protect conditions from worsening.²⁹

Of course protection from further decreases in flow for an already stressed segment of river has its benefits, but if *improving* streamflows is part of the

plan, another tool must be used. The second arrow in the CWCB's quiver is the acquisitions program.³⁰ Acquisitions are an important mechanism by which the CWCB preserves or improves streamflows in critical areas of the state. It has at least two benefits that are not available to the appropriations program. First, the acquisitions program matches willing sellers (or lessors) with a willing buyer (or lessee). As a result, it represents a market-based approach to protection of streamflows. Second, it provides the CWCB with access to senior water rights.

Under the acquisition program, the CWCB can acquire water, water rights, or interests in water to preserve or improve the natural environment to a reasonable degree.³¹ It can acquire absolute direct flow or storage rights on either permanent or temporary bases.³² To determine whether to accept an offered water right, the CWCB evaluates proposed water acquisitions using a public process and established criteria.³³ Among the information it must consider, the CWCB must quantify the amount of water necessary to preserve or improve the natural environment.³⁴ It works closely with the Colorado Division of Wildlife to conduct these analyses.³⁵ Once it has determined to accept a water right into the instream flow program, under almost all circumstances, the CWCB must apply to water court to obtain a decreed right to use the water right for instream flow purposes.³⁶ The water court ensures that no injury will result to other water users from the change.³⁷

In addition to obtaining fee simple title to a water right, the CWCB has other options for putting acquired water in the instream flow program. Two common ones are temporary in nature. The first option is the negotiation of a loan under section 37-83-105, C.R.S. (2008) (a "3-in-10 loan"). Water rights placed in 3-in-10 loan may only be used for a period of 120 days in a given year, and only for three (3) years of use over a ten (10) year period.³⁸ A 3-in-10 loan may be used on any stream where the CWCB currently holds an appropriated instream flow right, and in an amount up to the decreed amount of the instream flow.³⁹ One of its most flexible attributes is that a 3-in-10 loan does not require a water court change case; the State and Division Engineers can approve the use of a 3-in-10

loan quickly as long as there will be no injury to other water rights.⁴⁰ The 3-in-10 loan is ideal for use in emergency circumstances such as drought.

The CWCB may also enter into long-term leases. These leases are controlled by section 37-92-102(3), C.R.S. (2008) (“HB 1280 lease”). Although long-term leases are not new to the instream flow program, the Colorado legislature recently established protections for a lessor with the passage of House Bill 08-1280 during the 2008 legislative session. The same process used to determine whether to accept fee simple title to a water right for instream flow purposes is used to evaluate water proposed for use under an HB 1280 lease,⁴¹ in addition to a few additional considerations.⁴² For all HB 1280 leases, the CWCB must file a change of water right application or other application with the water court to obtain a decreed right to use the leased water for ISF purposes.⁴³

Of the CWCB’s two instream flow arrows in its proverbial quiver (appropriations and acquisitions), the acquisitions program is the less utilized.⁴⁴ There seem to be several reasons for this. Running an acquisition from start to finish is a more time-consuming process than the initiation of an appropriation. Among other time-consuming efforts, it requires identifying willing sellers in areas identified as critical stream reaches, conducting an engineering analysis to determine the utility and health of the water right for sale, conducting a title analysis, allowing for the time to negotiate and execute the acquisition, preparing for the CWCB’s acceptance process, and running a water rights change application through water court. The CWCB has lacked adequate staff time to target, negotiate, and process transactions. However, although institutional capacity is a factor that contributes to the lack of acquisitions conducted by the CWCB, by far the biggest hurdle is funding. The acquisition program requires money for acquisitions which, until 2008, the CWCB did not have. Until 2008, it relied on donations.

Given the difference in use between the appropriation program and the acquisition program, the institutional and funding issues faced by the CWCB, and the utility of putting solid, senior water rights in the instream flow program, the Colorado Water Trust was formed to

hammer out instream flow acquisitions for the CWCB.⁴⁵ In essence, CWT works as a broker of water rights for the CWCB. The relationship between the CWCB and CWT can broadly be described as collaborative governance. CWT relies on and works within the state’s program, and the state gains benefits from the work CWT does in the form of increased acquisitions. CWT targets (or responds to offers of) water, negotiates the deals, processes the instream flow water right transactions, raises the funds, puts together an acquisition package, and then contributes the water to the instream flow program.

IV. Challenges and Opportunities in Colorado

The Western states, with unique approaches to the prior appropriation doctrine, present their own, discrete opportunities and challenges for water trusts. This section focuses on Colorado and the challenges and opportunities that affect the efficacy of a working water trust in the state.

A. Opportunities

There are a number of opportunities that are improving the ability to find and acquire water rights for instream flows. These opportunities range from legal to technical to practical to political opportunities.

1. House Bill 08-1280

House Bill 08-1280 (“HB 1280”) provided two significant new protections for those who enter into long-term leases of water for instream flow purposes with the CWCB. In Colorado, a change of water right almost always requires an analysis of the historical consumptive use.⁴⁶ If a water right is not used for a consumptive purpose in a given year, it receives no credit for consumption and a zero is factored into an analysis of annual diversions for each year the water right is not used consumptively. Rather than penalizing a water user by factoring zeroes into a consumptive use analysis for the time the water right spends in the instream flow program under an instream flow lease (a non-consumptive use), HB 1280 fixes the historical consumptive use at the time the lessor *places* the water right in the instream flow program.⁴⁷ This protection removed the single biggest reason why

water users were reluctant to lease water to the instream flow program.

Second, HB 1280 removed abandonment concerns.⁴⁸ Many see this as less consequential than the removal of the historical consumptive use penalty because, under an HB 1280 lease, instream flows must be added as a beneficial use in a change of water rights case in water court. Abandonment occurs only when a water user fails to use his or her water right for its decreed purpose for the statutory period.⁴⁹ With instream flow added as a beneficial use in water court, an abandonment argument would fail. Although a sleeves-from-the-vest-concession to those who requested it, this provision's inclusion in the statute will prevent an avenue of challenge to use of a water right temporarily in the instream flow program.

The passage of HB 1280 has generated a significant amount of interest in instream flow leasing. The new protections help preserve the value of the water right for the lessor, yet still allow the CWCB to pursue terminable uses of water for instream flow purposes. The end result is greater flexibility for all, and improvement of the instream flow program. Everybody wins.

2. Money: Species Conservation Trust Fund and Construction Fund Instream Flow Acquisition Funds

The 2008 legislative session secured two different pots of funds for the CWCB's instream flow acquisition program for the first time in the program's history. The first pot, contained in House Bill 08-1346 (the annual "projects bill" for the CWCB), was an appropriation from the Severance Tax Trust Fund Perpetual Base Account in the amount of \$1 million. This money is specifically earmarked for instream flow acquisitions.⁵⁰ The second, Senate Bill 08-168, allocated \$500,000 from the Species Conservation Trust Fund for instream flow acquisitions.⁵¹ This new infusion of \$1.5 million will serve as the heart of the acquisitions program and can ensure its success. With it, the CWCB's instream flow program has become a concrete option for those wanting to place their water rights in a conservation program, keep them in their local communities, and obtain compensation. The

decision to allocate the requested money to instream flow acquisitions when that money could have been used in other programs, *e.g.*, for construction projects, showed a commitment to the vitality of the instream flow program never before seen in the history of the program.

3. Changing Use of Western Lands

The changing use of land in the West is also creating opportunities for instream flow water rights acquisitions. The modern population explosion in the West reflects a sustained passion for living in this landscape at the same time it changes that very landscape.⁵² What were formerly working farms and ranches are now exurbs, suburbs, and ranchettes.⁵³ With the decline in the agricultural economy and children no longer interested in running family farm and ranch lands, one of the most common questions farmers and ranchers are now asking themselves is what to do with their land and water. A growing conservation ethic in the West has led to the increase in land conservation; water is finally catching up and becoming part of the conversation. When there is pressure on a farm or ranch to sell to developers, in Colorado, there are viable alternatives. The alternatives allow for maintaining the historical use of the land and water and making some money at the same time: the placement of all or part of the land in a conservation easement, tying some or all of the water to the land through that process, or selling some or all of the water for use in the instream flow program.

4. Other Opportunities

These are only a few of the opportunities available to those conducting water transactions to improve streamflows. Others include the exemption for municipalities from the strict application of the anti-speculation doctrine.⁵⁴ The exemption allows a municipality or other water provider to obtain more water than it currently needs. This translates to a surplus that can be placed in a lease for use in the instream flow program. CWT has in fact been contacted by several municipal water suppliers about putting excess water into a HB 1280 lease. These discussions are ongoing.

In general, each opportunity is derived from an increasing conservation/green ethic that is spreading throughout the West. These opportunities have not yet translated into water flooding into Colorado's instream flow programs, but they have certainly increased the opportunities available to put together creative packages and have diversified the options for improving the state's streamflows. Still, though, there are challenges.

B. Challenges

While instream flow water right markets are emerging all over the West, they are in their relative infancy. Thus, they face several challenges, ranging from the difficulty in finding available water to lack of information to lack of standardization in negotiations.

1. Lack of Information

Lack of information is one problem common across all water markets. First of all, finding water for sale is often hard. CWT has been working on water transaction since 2001 and water is certainly available to acquire, but it has been hard to target a stream reach and find readily available water. CWT has found that the "low-hanging fruit" is the most available. For example, water rights that are close to being abandoned are offered fairly regularly. High-volume, senior water in critically water-short stream reaches is hard to find, and harder to afford.

Limited market information to assist in determining price adds to the challenge. For example, CWT is working on a transaction in which an appraisal was necessary because the parties were wildly apart on pricing. Part of the problem was the lack of comparable sales and the difficulty in extrapolating certain comparables to the transaction being pursued. The low end of the comparables for this transaction was water available by contract from a reservoir. Water can be leased from this reservoir for a renewable term for about \$110 per year per acre-foot. Assuming a thirty-year term for repayment, and an interest rate of 5.5%, the present value of annual payments for this water is approximately \$1,566 per acre-foot. In the appraisal at the other end of the

spectrum was water that was acquired for \$15,000.00 per acre-foot of firm yield. When you begin talking about the amount of water we were negotiating (about 100 acre-feet), the range of pricing was from \$150,660 to \$1.5 million. Assumed in this scenario, too, is that a temporary water contract can even be used as a comparable for an outright sale. And yet such contracts are available, are often used in lieu of outright acquisitions, and can oftentimes *be* (read: completely occupy) the market. Ultimately, markets may not yet be sufficiently developed for fair market value to be determined if the transaction so requires. This makes negotiations tricky.

2. Contract Terms: What's Fair?

Another reason water rights deals for instream flows can be challenging is that there are no set standards for the terms of the transfer. The terms are negotiated among the parties. As a result, there are limitless permutations and combinations of contract terms, some that make little difference to the transaction, and others with very real consequences. Take, for example, a deal in which the price of the sale is based on the water right prior to a water court change application, a take-it-or-leave-it proposition where the buyer bears all the risk of the change case but can also gain a benefit if more water is available to change than was initially thought. Then examine the alternative: a transaction where the price is dependent upon how much water is ultimately decreed after a change application is prosecuted. For a water trust, one of the benefits is that it looks and feels just like any other water user except that end use of the water is instream flows. Negotiations occur in the same way as negotiations from one traditional water user to another. The problem, however, is that often with a water trust, public funds are used and risk taking is not part of the model. That can complicate the process.

3. Complexity of the Transactions

As with any water right transfer, instream flow water rights acquisitions require complex analyses to determine: (1) the exact identity of the water right to be transferred, (2) title to the water right, (3) the current validity of the water right from a use perspective,

(4) how the water right has been administered, and (5) possible restraints on change.⁵⁵ Unlike a more typical water rights transfer, however, an analysis of the suitability of the water right for instream flow purposes must also be conducted. If there is an existing instream flow on the reach where the acquired water is to be used, the priority date of the instream flow appropriation, the location of the instream flow reach, the amount decreed, the type of natural environment preserved, the water availability to the instream flow, whether there are multiple flow periods or a terminus at a headgate, and whether the decreed amount for the instream flow is already adequate or has been reduced from original biological recommendation based upon a water availability analysis all must be considered to determine the suitability of the acquired water. The offered water right must also be examined for its potential use (i.e., how it will benefit the existing instream flow). Will it firm up the physical supply? Improve the existing instream flow's priority? Increase the level of protection?

Another challenge is the complexity of the process to change a water right to instream flow use. Every water acquisition for instream flow purposes must have the imprimatur of the CWCB in addition to a change of water rights decree that adds instream flow as a beneficial use or permanently changes the use of the water to instream flow. The CWCB has its own rules, required investigations, and procedures for the acceptance of a water right for instream flow. This preliminary process is time-consuming and, if pursued by an individual, could be quite costly and overwhelming.

The next step is water court. With the exception of a 3-in-10 loan, any water use, including HB 1280 leases, must go through water court. The very fact that a water right must go through water court is a significant transaction-inhibitor. Going to water court is perceived, fairly or not, as a complicated, expensive, uncertain, and even risky process. If an entire water right is the subject of a transaction, the fact that it must go through water court may not matter so much. But in the case of partial rights, the entire water right is opened to scrutiny and a standard is set for future changes of the balance of the water right retained by the seller. A number of deals CWT spent time

negotiating have been unsuccessful once the interested seller learned that water court would be part of the process. The risk of water court scrutiny in addition to the cost of water court can complicate the process of convincing a possible seller to part with his or her water rights.

4. Dry-up

In Colorado, as previously explained, a change of water rights cannot injure other water users. One way to prevent injury is to distill the water right to its historical consumptive use and allow only the historical consumptive use to be changed. That way, a water user cannot expand his or her previous use to the detriment of other water users in the system. Typically, with irrigation rights, a change of water right will require the dry-up of irrigated land. CWT has found that many people do not understand this concept. They believe that their flow rate will form the basis of a transaction.

Take, for example, the following scenario recently encountered by CWT. In the fall of 2007, CWT was contacted by a watershed advocate about talking to a family that was interested in selling one of their water rights. The water right for sale was decreed to a senior priority ditch that diverts from a severely water-short section of river on the Western slope of Colorado. The initial idea was that the landowners would sell half of the 9.6 c.f.s. water right to us. They irrigated about 260 acres with the water right and the 9.6 c.f.s. was far more water than they could use on the land the particular ditch services. Therein was the problem. The sellers were under the impression that they could sell 4.8 c.f.s. to CWT and not change their irrigation practices at all. CWT had a very difficult time explaining the no-injury rule to them, including why dry-up was necessary. In the end, they did not want to conduct the transaction.

5. Overcoming the Mythology

Part of the problem is a mythology about water rights that people have come to believe, a mythology that is the result of a synergistic effect of two separate beliefs: (1) that a water user can get something for nothing (in the transaction above, obtaining money for selling a

water right that would not affect one acre of historical practices); and (2) that a water right is *the* most valuable asset a person owns. That may be true if the water is used in a way that maximizes the historical consumptive use, is very senior, and is in a local market that justifies a high price tag, but it is not so for every locality or every right. The process of disabusing people of the notion, long-held in the family, that their great-great-grandfather's 9.6 c.f.s. water right is worth millions of dollars can be hard, especially when one is the opposing party to a transaction.

6. Other Challenges

These are only some of the challenges faced by those who conduct water transactions to improve streamflows. Others include the difficulty in convincing the seller to obtain a lawyer to help with the transaction if looks as though it will be complicated or if the seller is having trouble understanding the consequences of the deal; financing transactions; financing an organization's day-to-day operations; and the time and resources involved in investigating every lead.

V. Conclusion

Notwithstanding the obstacles and challenges facing the development of an instream flow water market, you now have information to share with your water clients about new options available for diversifying and maximizing the use of their water portfolios: selling or leasing water for instream flows. These options, while functioning clearly within the prior appropriation system, have the added benefits of: (1) improving local watersheds; (2) keeping water in local communities and within families; (3) maximizing the use of valuable, senior water rights; (4) allowing adaptation to changing circumstances; and (5) in many cases, generating additional income for water users.

Some may believe that the idea that water trusts are satisfied with the prior appropriation system is an overstatement. Perhaps water trusts are simply operating within the existing system—within the “constants” of Western water law—because it is practical and effective even if not ideal. There may also be those who believe that the water trust movement

can be a powerful part of the solution to balance the playing field, that it can “be the change.” Whatever a person's beliefs, water transactions to improve streamflows are likely to neither solve all of the West's streamflow problems nor fit the needs of every water user. But, as economically rational, equitable, environmentally sound, and sustainable as instream flow water transactions are, they represent a step—and a pretty good one—in the right direction.

Endnotes

¹ See generally § 37-92-102(3) & -102(4), C.R.S. (2008) (setting out the parameters of Colorado's instream flow program).

² Jerd Smith, *State's Money in the Banks*, ROCKY MOUNTAIN NEWS, Sept. 15, 2008, at 5.

³ JAMES N. CORBRIDGE & TERESA A. RICE, VRANESH'S COLORADO WATER LAW at 3-7 (Rev. Ed. 1999) (describing the settlement of the West, the development of prior appropriation as the local custom for water allocation, and the formal adoption of the system in each of the seventeen mainland Western states).

⁴ See *id.* at 7.

⁵ Take, for example, recent and protracted litigation in Colorado over kayak courses (now called Recreational In-Channel Diversions or RICDs), which pushed the debate in Colorado regarding diversions and instream water use to its height. Those who opposed the idea that water rights that remained in the stream to be used for playboating in kayak parks (and other instream benefits) could constitute a defensible water right argued, among a litany of other arguments, that one was required to physically remove water from the stream in order to have a lawful water right. They argued that removal of water from its source as a requirement for a water right was a principle embedded in the prior appropriation doctrine. See Glenn E. Porzak et al., *Recreation Water Rights: “The Inside Story”*, 10 U. DENV. WATER L. REV. 209, 216 (2007) (discussing the opposition to Recreational In-Channel Diversions in the application for water rights of the City of Golden, Colorado in Case No. 98CW448 (Colo. Dist. Ct., Water Div. 1)).

⁶ For an example of a diversion structure that dries up a river in Colorado, see the photograph of the San Miguel River in Colorado at <http://www.coloradowatertrust.org/physical-solutions/detail/ccc-ditch/>.

⁷ See, e.g., 1967 Minimum Water Flows and Levels Act, WASH. REV. CODE § 90.22.010 (2008) (“Establishment of minimum water flows or levels—Authorized—Purposes. The

department of ecology may establish minimum water flows or levels for streams, lakes or other public waters for the purposes of protecting fish, game, birds or other wildlife resources, or recreational or aesthetic values of said public waters whenever it appears to be in the public interest to establish the same. In addition, the department of ecology shall, when requested by the department of fish and wildlife to protect fish, game or other wildlife resources under the jurisdiction of the requesting state agency, or if the department of ecology finds it necessary to preserve water quality, establish such minimum flows or levels as are required to protect the resource or preserve the water quality described in the request or determination. Any request submitted by the department of fish and wildlife shall include a statement setting forth the need for establishing a minimum flow or level. When the department acts to preserve water quality, it shall include a similar statement with the proposed rule filed with the code reviser. This section shall not apply to waters artificially stored in reservoirs, provided that in the granting of storage permits by the department of ecology in the future, full recognition shall be given to downstream minimum flows, if any there may be, which have theretofore been established hereunder.”); § 37-92-102(3), C.R.S. (2008) (stating that “[f]urther recognizing the need to correlate the activities of mankind with some reasonable preservation of the natural environment, the Colorado water conservation board is hereby vested with the exclusive authority, on behalf of the people of the state of Colorado, to appropriate in a manner consistent with sections 5 and 6 of article XVI of the state constitution, such waters of natural streams and lakes as the board determines may be required for minimum stream flows or for natural surface water levels or volumes for natural lakes to preserve the natural environment to a reasonable degree”).

⁸ For some indication of the range of ages of different Western states’ programs, it is helpful to note that an instream flow program was adopted in Washington as early as 1971, *see* <http://www.ecy.wa.gov/programs/wr/instream-flows/isfrul.html>, but in Texas not until 2001. *See* <http://www.twdb.state.tx.us/InstreamFlows/index.html>.

⁹ A sale is a permanent transfer of a water right for change to instream flow use. In Colorado, it requires separation of the water from the land and acceptance of the water by the CWCB. We at CWT can put together funding packages to buy the water, conduct any necessary engineering and other investigations including investigations into title, and will conduct the transaction with the CWCB. In some cases, we will also participate in a water court application to change the use of the acquired water to instream flows.

¹⁰ In Colorado, there are two options for leasing water to the CWCB. These are described in more detail *infra* Part IV. of this paper.

¹¹ These include alternatives such as changes in points of diversion, changes in source (e.g., a surface diversion to a well), and exchanges. Other approaches include innovative agricultural technology and retimed storage releases or changes in reservoir management that can provide additional flows. In Colorado, these types of arrangements may have to go through water court, depending upon the plan.

¹² Water-short stream reaches can also benefit from physical solutions such as headgate and delivery-system upgrades and outlet structure and spillway renovation. These solutions may make more water available downstream.

¹³ In Colorado, the use of acquired and leased water for instream flows must occur within the confines of Colorado’s instream flow program. As described above, the CWCB is the only entity in Colorado that may hold water rights for instream flows. § 37-92-102(3), C.R.S. (2008) (stating that “[i]n the adjudication of water rights pursuant to this article and other applicable law, no other person or entity shall be granted a decree adjudicating a right to water or interests in water for instream flows in a stream channel between specific points, or for natural surface water levels or volumes for natural lakes, for any purpose whatsoever”). On the other hand, soft-management solutions, structural solutions, and other incentive-based approaches may not need to involve the instream flow program. Sometimes, a joint approach is warranted. The facts of each deal will determine whether the instream flow program must be used.

¹⁴ Mary Ann King, *Getting Our Feet Wet: An Introduction to Water Trusts*, 28 HARVARD ENVTL LAW REV. 495, 507-511 (2004). The very success of land trusts encouraged the effort to apply the same kind of transaction- and incentive-based programs to water. Even more intriguing is the cross-pollination that is now occurring between land trusts and water trusts.

¹⁵ Tom Huhnle, *Note: The Federal Income Tax Implications of Water Transfers*, 47 STAN. L. REV. 533 (1995).

¹⁶ For example, land deals do not lend themselves neatly to temporary conservation arrangements. But temporary protection, or even intermittent protection, works well in the water context. Sometimes, water is needed in a particular system only in dry years. A dry-year lease arrangement is possible. Leasing in general is popular given the flexibility it provides. *See infra* Part IV. of this paper.

¹⁷ *See* King, *supra* n. 14 at 505-506.

¹⁸ A. Dan Tarlock & Doris K. Nagel, FUTURE ISSUES IN INSTREAM FLOW PROTECTION IN THE WEST 137 (Lawrence J. MacDonnell, Teresa A. Rice, & Steven Shupe eds., 1989).

¹⁹ John Wilson, Wilson Cattle Company, as quoted at <http://www.cbwtp.org/about.htm>.

²⁰ Janet C. Neuman, *The Good, The Bad, and The Ugly: The First Ten Years of the Oregon Water Trust*, 83 NEB. L. REV. 432, 433 (2004). The Oregon Water Trust merged with Oregon Trout this summer. See Memorandum from Joe Whitworth, Executive Director, Oregon Trout and Lynn Youngbar, Interim Executive Director, Oregon Water Trust to Oregon Water Trust & Oregon Trout supporters, members, and partners (re: Upcoming Merger of Oregon Water Trust and Oregon Trout) (June 24, 2008) (available at <http://www.owt.org/Merger%20Announcement.pdf>).

²¹ <http://www.thewatertrust.org/>.

²² <http://www.coloradowatertrust.org/about/>.

²³ <http://www.montanawatertrust.org/about-us/aboutus.html>.

²⁴ See, e.g., the Columbia Basin Water Transactions Program, <http://cbwtp.org/jsp/cbwtp/program.jsp>; the Trans-Pecos Water Trust, <http://www.transpecoswatertrust.com/index.html>; the Deschutes River Conservancy, <http://www.deschutesriver.org/>; the Scott Water Trust, <http://scottwatertrust.org/index.html>; Friends of the Teton River, <http://www.tetonwater.org/>; the Klamath Basin Rangeland Trust, <http://www.kbrt.org/>; The Nature Conservancy, <http://www.nature.org/initiatives/freshwater/>; and Trout Unlimited, <http://www.tu.org/site/c.kkLRJ7MSKtH/b.3022897/k.BF82/Home.htm>.

²⁵ The CWCB is home to the Water Supply Protection section, “responsible for helping to maintain the State’s ability to utilize and develop its entitlements under interstate compacts and equitable apportionment decrees in accordance with state water law,” see <http://cwcb.state.co.us/WaterSupply/>; the Watershed Protection & Flood Mitigation, “directed to prevent flood damages, review and approve floodplain designations prior to adoption by local governmental entities, and provide local jurisdictions with technical assistance and floodplain information,” see <http://cwcb.state.co.us/atershedProtectionFloodMitigation/>; the Water Supply Planning & Finance section, “responsible for managing the Water Project Loan Program and the Non-Reimbursable Project Investments Program,” see <http://cwcb.state.co.us/Finance/>; the Office of Water Conservation & Drought Planning, which promotes “water use efficiency while providing public information and technical and financial assistance for water conservation planning” and “drought planning by encouraging and assisting communities to prepare and implement drought mitigation plans and by monitoring drought impacts and informing the public, media, and state officials,” see <http://cwcb.state.co.us/Conservation/>; Intrastate Water Management & Development section, which “focuses on helping prepare for and meet Colorado’s future water supply needs,” see <http://cwcb.state.co.us/IWMD/>; and the Stream and Lake Protection section, which “manages and administers the state’s Instream Flow Program” and is “responsible for the appropriation, acquisition and protection of instream flow

and natural lake level water rights to preserve and improve the natural environment to a reasonable degree.” See <http://cwcb.state.co.us/StreamAndLake/>. With programs that encourage maximizing the use of the state’s water and provide financing for water construction projects housed within the same agency as a program intended to improve streamflows, there can be mission conflicts.

²⁶ See *supra* n. 25.

²⁷ See *supra* n. 7.

²⁸ See CWCB Stream and Lake Protection Section, TABULATION OF INSTREAM FLOW AND NATURAL LAKE LEVEL WATER RIGHTS at 1 (January 2007).

²⁹ When water is available to newer, junior water rights, water is generally available to most water rights in the system and, as a result, to the stream system itself. For all water rights in the West, the times of plenty are not the times of crisis. The times of crisis are the shortages. Added to that challenge are stream reaches where the CWCB could not satisfy one of the elements of a new water right appropriation: water availability. On those reaches, it cannot appropriate a water right at all.

³⁰ See § 37-92-102(3), C.R.S. (2008) (stating that the CWCB “also may acquire, by grant, purchase, donation, bequest, devise, lease, exchange, or other contractual agreement, from or with any person, including any governmental entity, such water, water rights, or interests in water in such amount as the board determines is appropriate for stream flows or for natural surface water levels or volumes for natural lakes to preserve or improve the natural environment to a reasonable degree”).

³¹ *Id.*

³² See § 37-92-102(3), C.R.S. (2008) (“The board also may acquire, by grant, purchase, donation, bequest, devise, lease, exchange, or other contractual agreement, from or with any person, including any governmental entity, such water, water rights, or interests in water in such amount as the board determines is appropriate for stream flows or for natural surface water levels or volumes for natural lakes to preserve or improve the natural environment to a reasonable degree.”). It is prohibited from acquiring conditional water rights. § 37-92-102(3)(c.5), C.R.S. (2008) (stating that “as to any application filed by the board on or after July 1, 1994, the board may not acquire conditional water rights or change conditional water rights to instream flow uses”).

³³ See generally § 37-92-102(3), C.R.S. (2008). See also 2 COLO. CODE REGS. 408-2 (“ISF Acquisition Rules”). These rules are being revised and a formal rulemaking hearing to consider the revisions is scheduled to occur at the CWCB meeting on January 27, 2009. The revisions incorporate

statutory changes in the program made under House Bill 08-1280 and accommodate the funding the CWCB now has available to its acquisition program, discussed in more detail *infra* Part IV. of this paper. Under both the existing and proposed revised rules, the CWCB must consider certain factors in evaluating a proposed acquisition, including:

(1) the reach of the stream where acquired water will be used; (2) the historical use and return flow patterns; (3) the natural flow regime; (4) the location of other water rights within and near the reach; (5) the potential for material injury to existing decreed water rights; (6) the natural environment that may be preserved or improved by proposed acquisition; (7) the effect of proposed acquisition on interstate compacts and maximum utilization of the waters of state; (8) whether the water will be available for subsequent use downstream; and (9) costs associated with transaction.

³⁴ § 37-92-102(3)(c), C.R.S. (2008) (“Before initiating a water rights filing, the board shall determine that the natural environment will be preserved to a reasonable degree by the water available for the appropriation to be made; that there is a natural environment that can be preserved the board’s water right, if granted; and that such environment can exist without material injury to water rights.”).

³⁵ See § 37-92-102(3), C.R.S. (2008) (“Prior to the initiation of any such appropriation or acquisition, the board shall request recommendations from the division of wildlife and the division of parks and outdoor recreation.”).

³⁶ 2 COLO. CODE REGS. 408-2 (ISF Acquisition Rule 6I).

³⁷ In Colorado, all changes of water rights must meet the elements of what is called the “no-injury” rule. See *Handy Ditch v. Loudon Irrigating Canal Co.*, 27 Colo. 515, 518, 62 P. 847, 848 (1900). In *Handy*, the Colorado Supreme Court clearly articulated the no-injury rule, stating:

The general rule is that an appropriator of water for any beneficial purpose may change the place of diversion at his pleasure, provided the rights of others are not injuriously affected. . . . [This rule] is peculiarly applicable to subsequent appropriators The rights of a prior appropriator, as against a subsequent appropriator who changed the place of diversion, are already sufficiently safeguarded by the fundamental doctrine of so-called irrigation law: He who is first in time is first in right. A subsequent appropriator has a vested right, as against his senior, to insist upon the stream continuance of the conditions that existed at the time he made his appropriation.

Id.

³⁸ See § 37-83-105(2)(a) (stating that “[a] water right owner may loan water to the Colorado water conservation board for use as instream flows pursuant to a decreed instream flow

water right held by the board for a period not to exceed one hundred twenty days”); see also § 37-83-105(2)(a)(IV) (stating that a 3-in-10 loan “shall not be exercised for more than three years in a ten-year period, for which only a single approval by the state engineer is required”).

³⁹ See § 37-83-105(2)(a) (stating that “[a] water right owner may loan water to the Colorado water conservation board for use as instream flows pursuant to a decreed instream flow water right held by the board for a period not to exceed one hundred twenty days”) (emphasis added).

⁴⁰ See § 37-83-105(2)(a)(III), -105(2)(a)(V), & -105(2)(b). The approval process requires the filing of a request for approval with Division Engineer. Written notice of the proposed loan is sent to all parties that have indicated they would like to be notified of such requests. The process includes time for the filing of a protest, and instructions for the circumstances under which Division Engineer can approve.

⁴¹ See *supra* n. 35.

⁴² § 37-92-102(3). To use water under an HB 1280 lease, the CWCB must maintain records of how much water the CWCB uses under the contract each year it is in effect and must install any measuring device(s) deemed necessary by the Division Engineer to administer the lease of water and to measure and record how much water flows out of the reach after use by the Board under the lease.

⁴³ *Id.*

⁴⁴ Since 1973, the CWCB has completed a few more than twenty water rights acquisitions, see <http://cwcb.state.co.us/StreamAndLake/WaterAcquisitions/>, as compared to over 1,400 appropriations. See *supra* n. 29.

⁴⁵ CWT actually has three different program areas it pursues in order to further its mission to protect and enhance streamflows in Colorado. Working in coordination with the agricultural community and other water users, governmental entities, land trusts, watershed groups and other non-profit conservation organizations, CWT pursues and supports the following program areas: (1) conducting water rights acquisitions; (2) implementing physical, structural, and management solutions to improve streamflows; and (3) providing technical support for land trusts with water issues that often arise in connection with their land conservation activities.

⁴⁶ A change of water right must be approved if it “will not injuriously affect the owner of or person entitled to use water under a vested water right or decreed conditional water right.” § 37-92-305 (3) (2008). A change of water rights does not cause injury if the change of water rights decree maintains the same stream conditions that existed at the time

a junior appropriation commenced. *City of Thornton v. Bijou Irrigation Co.*, 926 P.2d 1, 80 (Colo. 1996). The historical use limitation reflects the hard-and-fast rule that application of water to the decreed beneficial use is required to perfect a water right. *Weibert v. Rothe Bros.*, 200 Colo. 310, 317-18, 618 P.2d 1367, 1372 (1980). If the amount used is less than the decreed amount, only the amount used ripens into a water right and is available to change.

⁴⁷ § 37-92-102(3), C.R.S. (2008).

⁴⁸ *Id.*

⁴⁹ See CORBRIDGE & RICE, *supra* n. 3, at 252-57.

⁵⁰ See § 37-60-123.7, C.R.S. (2008). These funds are available to pay for the costs of acquiring water, water rights, and interests in water for instream flow use. The primary priority for expenditures of these funds shall be the costs of water right acquisitions for existing or new instream flows. They may be used in limited circumstances for the costs of water acquisitions to (1) preserve the natural environment of species that have been listed as threatened or endangered under state or federal law, or are candidate species or likely to become candidate species; (2) support wild and scenic alternative management plans; or (3) provide federal regulatory certainty. *Id.*

⁵¹ Senate Bill 08-168 was the annual appropriation to the Species Conservation Trust Fund, a fund designed to permit water development to continue by mitigating endangered species and habitat issues. The bill included \$500,000 for instream flow acquisitions.

⁵² William R. Travis et al., *Western Futures: A Look into the Patterns of Land Use and Future Development in the American West* at 3, CENTER OF THE AMERICAN WEST (Report from the Center #6, 2005).

⁵³ *Id.*

⁵⁴ Under the express terms of Colorado water law, an appropriation is speculative “if the purported appropriator of record does not have either a legally vested interest or a reasonable expectation of procuring such interest in the lands and facilities to be served by such appropriation *unless such appropriator is a governmental agency or an agent in fact for the persons proposed to be benefitted by such appropriation.*” See § 37-92-103(3)(a)(I), C.R.S. (2008) (emphasis added). This is sometimes called the Great and Growing Cities Doctrine.

⁵⁵ Amy W. Beatie and Arthur R. Kleven, *The Devil in the Details: Water Rights and Title Insurance*, 7 U. DENV. WATER L. REV. 381, 383 (2004).

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**“OUR WATER, YOUR LAND”:
PUBLIC ACCESS OVER PRIVATELY
OWNED BEDS OF NON-NAVIGABLE
WATERS—THE UTAH SUPREME COURT’S
DECISION IN *CONATSER V. JOHNSON***

**Dale F. Gardiner
H. Michael Keller
VanCott, Bagley, Cornwall & McCarthy
Salt Lake City, Utah**

To the surprise of Utah farmers and property owners and to the delight of fishermen and recreationalists, the Utah Supreme Court ruled last summer in *Conatser v. Johnson*, 2008 UT 48, 193 P.3d 897 that the public’s easement in Utah waters applies to the privately owned beds underlying non-navigable waters. Navigable waters (for purposes of determining the title to the bed of such waters) include water courses which have the capacity to be used for commerce in the water’s natural state without the aid of artificial means. *Monroe v. State*, 175 P.2d 759, 761 (Utah 1946). If the waters were navigable when Utah was admitted to the Union in 1896, the state owns the underlying water bed. If not, the property owner does. *Id.* at 760.

The *Conatser* decision is particularly interesting, because, unlike some Western states (see, e.g., IDAHO CODE § 36-1601), Utah has no statute explicitly providing a public right to recreational use of the state’s waters. The Utah Supreme Court has now defined that right judicially, and competing stakeholders are evaluating whether and how to preempt, modify, or solidify the decision legislatively. Efforts to repeal or modify the decision in the recent general session of the Utah Legislature were unsuccessful, and the issue has been referred to interim study for future consideration.

The dispute between the Conatsers and the Johnsons came to a head in June 2000, when the Conatsers, as they had on prior occasions, launched their rubber raft from a point of public access into the Weber River, a popular and readily accessible Utah trout stream, and began floating and fishing the river. They floated over private property owned by the Johnsons and came into occasional contact with the bed of the river on the Johnsons’ property. In addition to touching the bed of

the river with the bottom of the raft, the paddles, and fishing tackle, Kevin Conatser occasionally got out of the raft and walked alongside it to fish. He also moved fencing the Johnsons had strung across the river. As they had done on prior occasions, the Johnsons ordered the Conatsers off the river and told them to pick up their raft and carry it out along a parallel railroad easement. The Conatsers refused and continued floating down the river. When they exited at a public access point, the Morgan County Deputy Sheriff cited them for criminal trespass.

After the Morgan County Justice Court found the Conatsers guilty of criminal trespass, they appealed their conviction and in the meantime filed a civil action against the Johnsons in state district court seeking a judicial declaration of their recreational rights to use the Weber River where it crossed private land. Although prosecutors dismissed the criminal trespass charge based on uncertainty regarding the Conatsers’ status as trespassers, the civil suit proceeded and resulted in a decision that the Conatsers’ right to touch the river bed was only incidental to their right to float upon the river and did not allow them to wade or walk along the river except as necessary to continue floating. Conatsers appealed, contending their right as members of the public to access waters of the state of Utah included the right to walk on the bed of the Weber River and wade in its waters, even where the bed was privately owned.

The Utah Supreme Court ruled the public’s easement in non-navigable state waters includes not only the right to recreate on the water over private property, but also to touch the water’s bed while utilizing the water for lawful recreational activities. The easement includes “the right to float, hunt, fish *and participate in all lawful activities that utilize State waters*,” 2008 UT ¶ 23 and 25 (emphasis added). Swimming and wading were singled out by the court as examples of lawful activities. *Id.*

Moreover, the court found the public’s use of a privately owned river bed is not a taking of property without just compensation because the public easement always existed. The *Conatser* court explained:

Touching a water's bed in association with other easement rights is merely part of the existing burden—it is not an additional burden and thus is not more injurious to landowners. *Conatser*, 194 P.3d at 902, 903.

The court also stated that the public's perpetual easement comes with four limitations to protect a landowner's interests. First, the public may engage only in lawful recreational activities. Second, those actions must utilize the water. When utilizing the waters is not the purpose, the activity is beyond the scope of the easement. Third, the public must act reasonably in touching the river bed. Lastly, the public recreational use may not cause unnecessary injury to the landowner. *Conatser*, 194 P.3d at 903.

From what legal foundation did this always existing recreational easement arise? The *Conatser* court began by citing from Utah's Water and Irrigation Code: "[a]ll waters in this state, whether above or under the ground are hereby declared to be the property of the public, subject to all existing rights to the use thereof." See, UTAH CODE ANN. §73-1-1. Consequently, when this statute was adopted in 1933, Utah waters, for the most part, became public. See, e.g., *Adams v. Portage Irrigation Reservoir & Power co.*, 72 P.2d 648, 652 (Utah 1937). The *Conatser* court declared:

Under this doctrine of public ownership, the public . . . has an easement over the water regardless of who owns the water beneath. In granting the public this easement, state policy recognizes an interest of the public in the use of State waters for recreational purposes. *Conatser*, 194 P.3d at 900.

The court relied substantially on its earlier decision in *J.J.N.P. Co. v. State*, 655 P.2d 1133 (Utah 1982), regarding the extent of the public's recreational rights to the waters of a natural lake surrounded entirely by private land. The *J.J.N.P.* court had reasoned that because UTAH CODE ANN. §§ 73-3-8 and 73-3-29 require the State Engineer to consider recreational uses when considering an application to appropriate water, or to relocate a stream, there must be a recreational use easement over the water regardless of who owns the bed beneath the water. *J.J.N.P.*, 655 P.2d at 1133.

The easement recognized in *J.J.N.P.* provided the public the right to float leisure craft, hunt, fish, and participate in any lawful activity when utilizing that water. *Id.* at 1137. In *J.J.N.P.*, however, the court explicitly declined to determine whether the public had any easement in the beds of streams or lakes. The *Conatser* court substantially expanded the public rights recognized in *J.J.N.P.* by explicitly holding "the public has the right to touch privately owned beds of state waters in ways incidental to all recreational rights provided for in the easement." 194 P.3d at 901-02.

Previously, the statutory declaration in UTAH CODE ANN. § 73-1-1 that waters within Utah were public waters had not been understood to mean that any individual, group, or governmental entity necessarily had a right to a particularized recreational or other use of the water. Utah is water appropriation state, and, therefore, the right to use water in Utah flows not from the declaration that the waters are public, but instead, from appropriating the water and putting it to a beneficial use authorized by the statute. Utah courts have repeatedly declared that "Beneficial use is the basis, the measure and the limit of all rights to use of public water." See, e.g., *Gossner v. Utah Power & Light*, 612 P.2d 337 (Utah 1987). In Utah, the state regulates the use of the water, in effect, as trustee for the benefit of the people, *Tanner v. Bacon*, 136 P.2d 957, 966-967 (Utah 1943) (Larson, J. concurring). Technically, there is no "ownership" of public water, as only the right to use water can be subject to ownership. *In re Uintah Basin*, 2006 UT 19, 133 P.3d 410.

Interestingly, in Utah, recreational in-stream flow water rights may only be acquired by the State Division of Wildlife Resources or the Division of Parks and Recreation. See UTAH CODE ANN. § 73-3-3(11). Further, before granting an application to appropriate water, or to relocate a stream, the State Engineer must determine whether the application will "unreasonably affect public recreation, or the natural stream environment." UTAH CODE ANN. §§ 73-3-8(1) and 73-3-29(4). Utah's water statute, however, says nothing explicit about any public easement for recreational activities in waters or on their underlying beds.

In *Conatser*, the Utah Supreme Court ruled that because Utah's water code requires the State Engineer to consider whether an application to appropriate water or relocate a stream unreasonably affects public recreation, there must exist a public easement for recreation not only for activities upon the water but also for all lawful activities that utilize the water. *Conatser*, 194 P.3d at 901. The court then reasoned that because an easement holder also enjoys the privilege to do such acts as are necessary to enjoy the easement, the public's recreational easement for utilizing Utah waters includes the right to touch the river bed in a reasonable manner. In summary, the easement provides the public the right in Utah to touch privately owned beds of state waters in ways incidental to utilizing the waters for floating, hunting, fishing, wading, swimming, and all other lawful recreational activities, so long as they do so reasonably and cause no unnecessary injury to the landowner. *Id.* at 902.

DELTA SMELT BIOLOGICAL OPINION SETS THE STAGE FOR THE LATEST SKIRMISH IN CALIFORNIA'S WATER WARS

Kevin T. Haroff
Shook Hardy & Bacon LLP
San Francisco, California

On Dec. 15, 2008, the United States Fish and Wildlife Service (USFWS or Service) issued the latest in a series of biological opinions designed to enhance protection of the delta smelt (*Hypomesus transpacificus*), a small pelagic fish that is endemic to the San Francisco Bay and Sacramento-San Joaquin River Delta (the Bay-Delta, or Delta). The delta smelt was listed as threatened under the federal Endangered Species Act (ESA) in 1993. *See* 58 Fed. Reg. 12,854 (Mar. 5, 1993). The December 2008 biological opinion (2008 Opinion) specifically concerns alleged impacts on the species of an Operations Criteria and Plan (Operations Plan) developed to help manage the export of Delta water supplies by the California State Water Project (SWP) and the federal Central Valley Project (CVP).

The 2008 Opinion was promptly challenged in federal court by various entities representing the interests of water supply agencies throughout the State of California. *See San Luis & Delta-Mendota Water Authority v. Salazar*, Case No. 1:09-cv-00407-OWW-DLB (E.D. Cal. filed Mar. 3, 2009); *State Water Contractors v. Salazar*, Case No. 1:09-cv-00422-OWW-GSA (E.D. Cal. filed Mar. 4, 2009); *Coalition for a Sustainable Delta and Kern County Water Agency v. U.S. Fish and Wildlife Service*, Case No. ____ (E.D. Cal. filed Mar. 12, 2009). The plaintiffs in these actions contend that implementation of the 2008 Opinion will further constrain federal and state governments' ability to meet California's water supply needs at a time when drought conditions already have reduced supplies to the state's agricultural industry and large urban population. The Bay-Delta is the single largest source of California's water supplies—approximately two-thirds of all Californians, or an estimated 23 million people, obtain at least some of their water from the Delta. In order to help protect the delta smelt against potential impacts from CVP and

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SWP water export operations, the 2008 Opinion could require the imposition of significant restrictions on the quantity of Delta water exports available to help respond to the state's overall water supply demands.

The 2008 Opinion and resulting litigation are just the latest manifestations of a long history of conflict between those seeking to use the ESA to preserve the Delta's unique natural resources and ecosystems and those working to ensure a safe and reliable water supply for one of the largest and most dynamic economies in the world today. As its history shows, that conflict is not likely to be resolved easily or at any time in the near future.

Background

The 1993 delta smelt listings were among developments leading to two of the most important achievements for California water policy in the last two decades. The first was the signing of the June 1994 State-Federal Framework Agreement. This agreement laid the foundation for a cooperative, coordinated program supported by the federal Bureau of Reclamation, the California Department of Water Resources (DWR), and other state and federal agencies (later known as the CalFed program), and established to address the Delta's long-term water quality and ecosystem problems. The second major achievement was the December 1994 Bay-Delta Accord, formally known as the "Principles for Agreement on Bay-Delta Standards Between the State and Federal Governments."

The Bay-Delta Accord brought together urban, agricultural, and environmental interests around a consensus on setting new Bay-Delta water quality standards (including flow requirements for the Sacramento and San Joaquin Rivers), coordinating the operations in the SWP and the CVP to help achieve those standards, and developing new long-term approaches (so-called "Category III" projects) to address a variety of fish and wildlife, water supply, and water quality issues involving the Bay-Delta. Among other things, the Bay-Delta Accord was intended to reduce uncertainties in how the ESA would be applied going forward as a tool for managing Bay-Delta water

resources. Instead of focusing on individual species (like the delta smelt), the accord provided for an integrated ecosystem approach to management of the Bay-Delta that would allow for protection of species without impairing seasonal water supply allocations.

In May 1995, the California State Water Resources Control Board (State Board) adopted a final Water Quality Control Plan for the Bay-Delta (1995 Bay-Delta Plan). The 1995 Bay-Delta Plan incorporated the basic standards and strategies laid out in the 1994 Bay-Delta Accord; however, the State Board looked to other stakeholders to help develop necessary mechanisms for implementing the plan. Bay-Delta water users negotiated agreements with upstream diverters to share responsibility for assuring the continued, stable provision of water supply to the Delta. In addition, the State Board initiated one of the longest and most complicated water rights proceedings in state history to modify previously issued permits (principally held by the CVP and the SWP) for the long-term appropriation of water from the Delta and to manage that resource in a reliable and environmentally sensitive way.

The State Board's water rights proceeding resulted in the adoption of Water Rights Decision 1641 (D-1641) on Dec. 29, 1999 (revised on March 15, 2000). *See State Water Resources Control Bd. Cases*, 136 Cal. App. 4th 674 (3d Dist. Ct. App. 2006) (substantially upholding the validity of D-1641 under the California Environmental Quality Act and other provisions of state law). D-1641 incorporated a number of constraints on CVP and SWP operations that were intended specifically to protect fisheries, including the delta smelt. Despite implementation of these constraints and other actions to enhance environmental conditions in the Delta, the delta smelt continued to experience significant population declines.

The 2004/2005 Opinions

On March 31, 1994, the USFWS completed a review of the listing status of the species under the ESA, concluded that the fish continued to face a "high degree of threat," and decided to keep the delta smelt listed as threatened. *See Findings of Fact and Conclusions of*

Law re Interim Remedies re: Delta Smelt ESA Remand and Reconsultation, *Natural Resources Defense Council v. Kempthorne*, No. 1:05-cv-1207 OWW GSA (E.D. Cal. Dec. 14, 2007) (*Kempthorne Findings of Fact*) at 4. The USFWS issued its original biological opinion for the CVP and SWP Operations Plan on July 30, 2004 (2004 Opinion) and an amended opinion on Feb. 16, 2005 (2005 Opinion). *Kempthorne Findings of Fact* at 3. Notwithstanding its decision to retain the delta smelt's status as threatened, both opinions included a finding of "no jeopardy" to the fish or its critical habitat. *Id.* at 4. Specifically, the opinions both concluded the combined operations of the SWP and the CVP did not jeopardize the smelt's survival or cause adverse habitat modification.

The 2004 and 2005 Opinions and their conclusions regarding the effect of CVP and SWP operations on the delta smelt were challenged in an action brought by a coalition of environmental organizations in the federal district court for the Eastern District of California. In a May 25, 2007, memorandum decision, the court held that the 2005 Opinion was "unlawful and inadequate," in part because a delta smelt risk assessment matrix (DSRAM) did not provide "a reasonable degree of certainty" that measures would be implemented to mitigate adverse impacts from project operations. *Kempthorne Findings of Fact* at 2. The court also found that take limits established by the 2005 Opinion were not sufficient to protect the smelt in the absence of further restrictions on CVP and SWP operations and that the opinion failed to adequately consider impacts to the smelt's critical habitat. *Id.* Finally, the court found that the opinion's no jeopardy finding was "arbitrary, capricious, and without rational connection to the status of the species." *Id.* Because of concerns that doing so would terminate the delivery of water to the service areas of the CVP and the SWP, the court declined to vacate the 2005 Opinion altogether; however, the court did order the parties to propose interim remedies modifying CVP and SWP operations to protect the smelt until remand of the opinion could be completed. *Id.* at 3.

On Dec. 14, 2007, the federal court issued an interim remedial order enjoining the state and federal governments to monitor the presence of smelt in the

Delta and modify CVP and SWP operations when triggering events occurred signaling the potential for significant adverse impacts to the fish. See Interim Remedial Order Following Summary Judgment and Evidentiary Hearing, *Natural Resources Defense Council v. Kempthorne*, No. 1:05-cv-1207 OWW GSA (E.D. Cal. Dec. 14, 2007) (*Kempthorne Interim Order*). The interim order significantly reduced the amount of CVP and SWP water deliveries to urban and agricultural users throughout California. According to the State Water Contractors, the December 2007 order reduced SWP exports during the 2007-2008 water year by approximately 500 thousand acre-feet (TAF)—total reductions of SWP and CVP exports, combined, were about 700 TAF. *State Water Contractors v. Salazar*, Complaint at 6.

In addition to imposing operational constraints on the CVP and SWP, the December 2007 order directed the USFWS to complete a new biological opinion for the delta smelt by Sept. 15, 2008 (*Kempthorne Interim Order* at 2), a deadline that the court subsequently extended. A draft opinion was completed on Nov. 21, 2008, and the final 2008 Opinion was issued shortly thereafter.

The 2008 Biological Opinion

The 2008 Opinion substantially reverses the Service's prior position on the impacts of CVP and SWP operations on the delta smelt and concludes that those operations, conducted under the terms of the present Operations Plan, will jeopardize the continued existence of the delta smelt. 2008 Opinion at 276. The opinion recognizes that "[o]ther baseline stressors," such as contaminants, microcystis, aquatic macrophytes, and invasive species, will continue to adversely affect the smelt; however, it asserts that "[a]vailable information is inconclusive regarding the extent, magnitude and pathways by which delta smelt may be affected by these stressors independent of CVP/SWP operations." *Id.* at 277. The opinion then concludes that the effects of the [Operations Plan], taken together with cumulative effects, are likely to appreciably reduce the likelihood of both the survival and recovery of delta smelt in the wild by reducing its reproduction, abundance, and distribution. *Id.* at 278.

In addition to the new finding of jeopardy, the 2008 Opinion concludes that “the coordinated operations of the CVP and SWP, as proposed, are likely to adversely modify delta smelt critical habitat.” 2008 Opinion at 278. The opinion asserts that the past and present operations of the CVP/SWP have degraded various habitat elements (in particular water, river flows, and salinity) “to the extent that their co-occurrence at the appropriate places and times is insufficient to support successful delta smelt recruitment at levels that will provide for the species’ [sic] conservation.” *Id.* On the basis of these findings, the opinion “concludes that implementation of the [Operations Plan] is likely to prevent delta smelt critical habitat from serving its intended conservation role.” *Id.* at 279.

In accordance with regulations implementing section 7 of the ESA (50 C.F.R. sec. 402.02), the 2008 Opinion describes what the USFWS contends is a “reasonable and prudent alternative” (RPA) to continued CVP/SWP operations under the Operations Plan. The proposed alternative includes five components: (1) actions intended to “increase the suitability of spawning habitat for delta smelt by decreasing the amount of Delta habitat affected by the projects’ export pumping plants’ operations prior to, and during, the critical [delta smelt] spawning period, (2) actions intended to “improve flow conditions in the Central and South Delta,” by reducing water exports “so that larval and juvenile delta smelt can successfully rear in the Central Delta and move downstream when appropriate,” (3) requirements for the CVP and SWP to provide sufficient Delta outflow to maintain salinity levels in the system to improve Fall habitat, (4) actions intended to supplement habitat benefits resulting from flow actions included in components 1-3, including implementation of a “program to create or restore a minimum of 8,000 acres of intertidal and associated subtidal habitat,” and (5) monitoring and reporting requirements. 2008 Opinion at 280-285.

Critics of the 2008 Opinion have complained that it is legally and scientifically deficient in a variety of ways. Among other things, critics claim that the opinion fails to rely on the best scientific and commercial information available, as required by section 7(a) (2) of the ESA, in ensuring that federal agency actions do not

jeopardize the continued existence of any endangered species. They also claim that the opinion contains no findings or analysis of whether the proposed RPA can be implemented in a manner consistent with the intended purpose CVP and SWP operations, i.e., to provide a critical source of water supply for much of the State of California. Finally, they argue that the opinion fails to comply with the environmental review requirements of the National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA). These claims are all being made in the several actions that now have been filed to challenge the 2008 Opinion in the same federal district court that invalidated the 2005 Opinion a little more than one year ago. Whether those claims are likely to succeed in that context remains to be seen.

What’s Next?

Sorting out the legal challenges to the 2008 Opinion invariably will take some time. Meanwhile, however, the opinion already has begun to have an impact on CVP and SWP operations. Preliminary assessments suggest that the 2009 water year may be the third consecutive critically dry year for the State of California, and the governor has declared California to be in a state of emergency as a result of continuing drought conditions. On Feb. 10, 2009, the USFWS provided notice that initiation of component 2 of the RPA in the opinion had been triggered, although it noted that no changes in CVP/SWP operations were needed for now; however, if drought conditions continue, operational modifications further restricting Bay-Delta water exports may become inevitable.

In all events, the longstanding conflict between the ESA and California’s needs for a reliable water supply in the Bay-Delta is not going away. In October 2008, the so-called “Delta Vision” Blue Ribbon Task Force (Task Force), established by Gov. Schwarzenegger’s Executive Order S-17-2006 in 2006, issued a Strategic Plan for sustaining the Bay-Delta in future decades while ensuring reliable water supplies for a growing California population. Among the recommendations made in the Strategic Plan were to develop and adopt new management policies by the State Board and other agencies supporting increased diversions from the Delta during wet periods and revising Delta flow and outflow standards by 2012.

See Delta Vision Strategic Plan, Executive Summary. Given the contentious nature of Bay-Delta water politics, that and other recommendations made by the Task Force may be difficult to achieve in the time frame outlined in the Strategic Plan. But given the importance of this resource to the state's economy and well-being, development of a new and comprehensive program for better managing the Bay-Delta would be well worth the effort.

MICHIGAN'S REVISED WATER WITHDRAWAL AND ANTI-DIVERSION LEGISLATION

Scott D. Hubbard
Warner Norcross & Judd LLP
Grand Rapids, Michigan

Recent legislation in Michigan amends and expands a system of registration, reporting, and permitting for certain large quantity withdrawals of surface water or groundwater. The legislation also bans “diversions” of water out of the Great Lakes Basin (Basin), and establishes a unique system for identifying and protecting against “adverse resource impacts” that might result from a large-scale withdrawal. The new legislation completes the legal infrastructure for Michigan’s implementation of the Great Lakes—St. Lawrence River Basin Water Resources Compact among the eight Great Lakes states. This article presents an overview of the 2008 legislation and the legal and policy underpinnings of the amended water withdrawal program.

Background

The Great Lakes contain 6 quadrillion gallons of water—enough to inundate the lower forty-eight states under 9 feet of water. The lakes cover 94,250 square miles and boast 10,500 miles of coastline. Collectively, the Great Lakes comprise over one-fifth of the fresh surface water in the world. These resources support a multitude of recreational, agricultural, and industrial uses, as well as providing drinking water for a substantial proportion of the populations residing near the lakes.

From time to time there have been “diversions” of water out of the Basin. The best known diversion is the City of Chicago’s century-old engineered reversal of flow in the Chicago River, which diverts about 2 billion gallons per day (gpd) from Lake Michigan and ultimately into to the Mississippi River Basin. Although some express concern at the notion of Lake Michigan’s losing as much as 3,200 cubic feet of water per *second*, around the clock and throughout the year, the Great Lakes collectively receive nearly twice that amount coming into the Basin from Canadian rivers.

In the past couple of decades there have been proposals for new diversions of Great Lakes water for a variety of purposes. In 1991, the town of Lowell, Indiana, was denied in its bid to divert water from Lake Michigan to replace a municipal water supply that had been lost as the result of groundwater contamination in the municipal well field. More expansive and even fanciful diversions have been discussed from time to time, including proposals to ship water in tankers to Asia, diversion to maintain shipping channels in the Mississippi River, irrigation of agricultural fields in the Plains states, where depletion of the Ogallala Aquifer threatens water supplies, and even to water golf courses prudently (or not) constructed in the desert Southwest. Proposals designed to respond to climate change concerns introduce another layer of uncertainty and underscore the need for reliable protection of Great Lakes waters.

In Michigan, four sectors of Michigan’s economy (irrigation, self-supplied industrial use, public water supplies, and energy) pump 10.6 *trillion* gallons of surface water or groundwater every day. As the only state lying entirely within the Basin, Michigan arguably has more at stake than any other state in ensuring the long-term environmental integrity of the Great Lakes system, and in establishing and enforcing effective controls over uses and potential diversions from the lakes. At the same time, as Michigan’s economy has come under intense stress (even before the onset of the current recession), it is important that any new regulatory constraints on water usage be carefully weighed against potential negative economic consequences.

Legal Framework

Concern about the use and diversion of water in and from the Great Lakes Basin is not a new issue. One hundred years ago, the International Joint Commission was formed to deal with cross-border water disputes between the United States and Canada. Michigan's newly amended water use legislation has its roots in the Great Lakes Charter of 1985 (Charter). The Charter is an agreement among the eight Great Lakes states and the Canadian provinces of Ontario and Quebec to cooperate in the management of the waters of the Great Lakes Basin. It established a general policy disfavoring diversions and consumptive uses of Great Lakes waters that would cause "significant adverse impact." The Charter called for a Basin-wide regulatory program that would include registration requirements for withdrawals of more than 100,000 gpd and permitting requirements for withdrawals greater than 2 million gpd. The Charter is not directly enforceable, but requires implementing legislation by participating states and provinces.

In 1986, Congress enacted the Federal Water Resources Development Act (WRDA) to further the Charter's goal of limiting diversions. WRDA prohibits diversion of Great Lakes water outside the Basin without the unanimous consent of the governors of all eight Great Lakes states—thus giving each governor effective veto power over any proposed diversion. (It was Gov. Engler of Michigan who exercised this "veto" to defeat the diversion proposal from Lowell, Indiana, mentioned previously.) While WRDA afforded a certain level of comfort, some observers have questioned whether such a broad diversion ban might constitute an impermissible burden on interstate commerce, and therefore vulnerable to challenge. In 1990, Michigan enacted legislation broadly prohibiting diversion of waters of the Great Lakes within Michigan to areas outside the Great Lakes Basin. The statute did not define the "diversion" that was to be prohibited, and its enforceability is therefore suspect. The 1990 legislation did establish a reporting program for certain facilities having the capacity to withdraw more than 100,000 gpd. That reporting program has been continued in the new legislation. In 2001, the Charter was amended by an "Annex"—

an agreement to protect, restore, and improve the lakes. The Annex called for the establishment of a regional authority to approve large-scale water withdrawals and related activities. At the heart of the Annex was a call for the states and provinces to establish consistent standards for use of waters of the Basin. A full exposition of the background, development, and terms of what became known as "Annex 2001" is beyond the scope of this article. However, the principal results of the Annex were (A) a proposed Great Lakes—St. Lawrence River Basin Water Resources Compact (Compact) and (B) a proposed Great Lakes Sustainable Water Resources Agreement (Agreement). The Compact is an agreement among the eight Great Lakes states that provides for implementation of the goals set forth in the Annex, as developed in extensive negotiations among a broad array of stakeholders and stakeholder groups. Once adopted by all eight Great Lakes states, ratified by the Michigan legislature, approved by the U.S. Congress, and signed by the president, the Compact has the force of law. By contrast, the Agreement is a non-binding, good faith agreement among the eight Great Lakes states and Ontario and Quebec provinces that outlines the parties' respective commitments pursuant to the Charter, as updated and amended by the Annex.

In 2005, after nearly five years of negotiation, the governors of the eight Great Lakes states reached consensus on the Compact. In addition, in 2005 the eight Great Lakes governors and the premiers of Ontario and Quebec provinces signed the non-binding Agreement. Since 2005, all eight Great Lakes states' legislatures have ratified the Compact and adopted implementing legislation. The Compact was approved by a joint resolution of Congress last summer. The joint resolution was signed by President Bush on Oct. 3, 2008.

Michigan Legislation

In 1994, Michigan's environmental statutes were compiled into a code known as the Michigan Natural Resources and Environmental Protection Act (NREPA), MCL § 324.101 *et seq.* Within NREPA, individual statutes are labeled as "Parts." Thus, for

example, the former Michigan Water Resources Commission Act, Michigan’s primary water protection statute, is now referred to as Part 31 of NREPA. At the time of the adoption of the code, the 1990 anti-diversion statute referred to above was codified as Part 327 of NREPA, and commonly referred to as Part 327.

Part 327 was initially amended in February 2006 to establish new requirements for persons proposing to make “large quantity withdrawals” of surface water or groundwater—each of which constitutes “waters of the state” within the meaning of the statute. A companion provision of the code, Part 328, also was amended in 2006 to include certain related provisions. The 2006 legislation was enacted in anticipation of the Compact as that document was then in the negotiation process. Following execution of the final Compact, and its subsequent ratification by the Michigan legislature (the Compact itself is codified as Part 342 of NREPA), approval by Congress, and signature by the president, certain further amendments were necessary in order to conform Part 327 with the final Compact. This article describes the principal provisions of Part 327 as amended in 2008 to conform with the Compact. Part 327 provides for the following:

1. Requires registration and annual reporting by the owner of real property who intends to develop capacity on that property to make a new or increased “large quantity withdrawal,” defined as a withdrawal of more than 100,000 gpd on average in any “consecutive 30-day period” to supply a common distribution system. The term “consecutive 30-day period” is presumably intended to mean a period of 30 consecutive days. The registration expires after 18 months unless the person actually develops the registered withdrawal capacity within that time—thus there is only a limited opportunity to “reserve” withdrawal capacity through registration. Persons who were already reporting under Part 327 before the 2008 amendment (because they had capacity to withdraw 100,000 gpd) are deemed to be registrants and do not need to re-register unless they develop new or increased withdrawal capacity of more than 100,000 gpd. Exceptions to

the registration requirement are provided for community water supply systems, test wells, and certain other users. Farms are not exempt from the registration and reporting requirements, but make their submissions to the Michigan Department of Agriculture instead of the Michigan Department of Environmental Quality (MDEQ).

2. Prohibits new or increased large quantity withdrawals that would cause an adverse resource impact, or ARI.
3. Requires permitting for any proposed new or increased withdrawal of 2 million gpd from the Great Lakes or any other waters of the state, and for any intra-Basin transfer of more than 100,000 gpd. In addition, permitting is required for certain proposed large quantity withdrawals of more than 1 million gallons of water where the MDEQ has determined the existence of certain risks to fish populations.
4. Prohibits diversion of waters out of the Great Lakes Basin. This prohibition does not bar “consumptive use” of water that is incorporated into products or that is lost to evaporation or other uses such that it cannot be returned to the Basin.

The following is a general overview of some key provisions of the amended legislation. Each of the various requirements and components of this complex program is subject to exclusions, exceptions, and conditions that are not addressed in this article. The statute, the Compact, and the voluminous associated materials should be consulted for guidance on any specific issue.

Baseline Capacity. The reference point for evaluating a proposed “increase” in withdrawal capacity is “baseline capacity.” With certain exceptions, including community water supplies, and quarries and mines, baseline capacity generally means the system capacity used or developed to make a water withdrawal as of Feb. 28, 2006. A water withdrawal made by means of a person’s “baseline capacity” is not subject to permitting, nor is it subject to the statutory prohibition on causing “adverse resource impact,” or ARI. A

proposal to develop “increased” capacity of more than 100,000 gpd above the applicable baseline capacity is subject to registration as explained above.

Adverse Resource Impact and the Water Withdrawal Assessment Tool. A new or increased large quantity withdrawal must not result in an ARI. For withdrawals made prior to Feb. 1, 2009, the statute defines ARI as “decreasing the flow of a river or stream by part of the index flow such that the river’s ability to support characteristic fish populations is functionally impaired. “Index flow” is defined as the 50 percent exceedance flow for the lowest summer flow month—i.e., flow that is exceeded half of the time in the lowest flow month for that stream. However, the statute does not define “functional impairment.”

Beginning Feb. 1, 2009, ARI in rivers and streams is to be determined by means of a “water withdrawal assessment tool.” The assessment tool is a model developed over the past two years by the Michigan Groundwater Advisory Council and the MDEQ in collaboration with the United States Geological Survey, Michigan State University, and the Michigan Department of Natural Resources. The tool is an innovative and sophisticated process that is used to calculate the anticipated effect of stream flow reductions on fish populations. The tool projects the impact of a proposed withdrawal on thriving fish populations and characteristic fish populations in eleven separate categories of rivers and streams (large, small, cold water, warm water, etc.). The tool is accessed online at <http://www.michigan.gov/deq> and must be performed by anyone proposing a new or increased large quantity withdrawal.

The tool will classify the anticipated impact of a proposed withdrawal in one of four “zones” defined in the model. Depending on the “zone” predicated by the model, the user may be authorized to proceed to register and develop the withdrawal capacity and commence the withdrawal without further review (Zones A and B), or may be subject to site-specific review by the MDEQ (Zone C or D). If the assessment tool determines that a proposed withdrawal is a Zone A or Zone B withdrawal, there is a rebuttable presumption that the withdrawal will not

cause ARI in violation of the statute. Where the tool flags a proposed withdrawal as Zone C or Zone D, the proponent may not proceed to develop capacity without approval from the MDEQ following a site-specific review. (Persons proposing to develop capacity for a large quantity withdrawal may elect to request MDEQ site-specific review regardless of the answer provided by the assessment tool.) In conducting a site-specific review of a proposed discharge, the MDEQ must consider the cumulative impact of multiple withdrawals affecting the same reach of the subject stream or river.

The tool does not apply to withdrawals from lakes or ponds. Rather, a proposed large quantity withdrawal from a lake or pond is governed by a narrative standard. Here, ARI is defined as decreasing the level of a lake or pond with a surface of five acres or more through a direct withdrawal in a manner that would impair or destroy the lake or pond or the uses made of the lake or pond, including the ability of the lake or pond to support characteristic fish populations, or such that the lake’s ability to support characteristic fish populations is functionally impaired.

Permitting. A proposal to develop new or increased withdrawal capacity of more than 2 million gpd is subject to a permitting procedure under which the MDEQ must determine that the withdrawal will not result in individual or cumulative ARI. Permitting is also required for a proposal to develop withdrawal capacity that will result in an intra-Basin transfer of more than 100,000 gpd, and for a proposal to develop withdrawal capacity of more than 1 million gpd where a site-specific review by the MDEQ has determined that the withdrawal is a “Zone C” withdrawal.

Withdrawal permit applications are subject to a 45-day public comment period. The MDEQ must make a decision whether to grant or deny a permit within 120 days of receiving an administratively complete application. The statute requires the MDEQ to issue a withdrawal permit (other than for an intra-Basin transfer above 100,000 gpd) if the MDEQ makes certain findings, including (A) that all water withdrawn, less any consumptive use, is returned to the source watershed, (B) there will be no individual or cumulative

ARIs, (C) the proposed use is “reasonable” under Michigan common law, and (D) the applicant certifies compliance with water conservation measures. The MDEQ is required to develop a generic set of water conservation measures, and industry sectors are encouraged to develop sector-specific conservation measures for adoption by applicants within the corresponding industries. An applicant may also develop conservation measures specific to that withdrawal.

The statute provides certain exemptions from the permitting requirement, including seasonal withdrawals of not more than 2 million gpd, average in any “consecutive 90-day period,” unless the withdrawal results in a “diversion.” The term “consecutive 90-day period” is presumably intended to mean a period of 90 consecutive days.

Diversion. Diversion of water out of the Great Lakes Basin is prohibited, except for diversions existing on Sept. 30, 1985. However, the prohibited “diversion” does not include “consumptive use.” The statute defines consumptive use as “that portion of water withdrawn or withheld from the Great Lakes basin and assumed to be lost or otherwise not returned to the Great Lakes basin due to evaporation, incorporation into products or agricultural products, use as part of the packaging of products or agricultural products, or other processes.” The consumptive use exception to the prohibition on diversion takes in water contained in fruits and vegetables, beverages, juices, sauces and other food products, and innumerable pharmaceutical, maintenance, cleaning, painting, and other household and industrial products that are manufactured or processed in Michigan and distributed in commerce nationally and internationally.

Significantly, consumptive use also includes the withdrawal and packaging, in Michigan, of waters of the Basin in a container of 5.7 gallons (20 liters) or less that is bottled drinking water as defined by federal law. Thus the manufacture and distribution of bottled water, a processed product, is a consumptive use and not a diversion. The withdrawal of more than 200,000 gpd of water for the production of bottled drinking water requires a permit from the MDEQ pursuant to Michigan’s Safe Drinking Water Act.

Part 327 provides that if the prohibition on diversion set forth in the statute is determined to be invalid, the waters of the state (limited to territorial waters of Michigan) shall not be diverted “unless authorized by law.” The statute then sets forth a variety of criteria that are to be considered by the legislature in determining whether to grant legislative approval for a diversion. Another provision of Part 327 requires the governor to establish a public comment period and to notify the appropriate legislative committees with regard to a proposed diversion. The aim of these provisions appears to be avoiding, or at least moderating, conflict with the Compact, which does allow for diversion from the Basin under certain circumstances. In the same vein, Part 327 provides that if the regional body implementing the Compact seeks to amend the standard of review for withdrawals, the change is not effective in Michigan without specific authorization by Michigan legislature.

Preservation of Existing Law. Part 327 as amended states that it shall not be construed to affect, alter, or interfere with common law water rights or property rights or limit, waive, cede, or grant any rights or interest that the state possesses as sovereign for the people, waters, or natural resources of the state. This provision preserves the doctrine of “reasonable use” that governs use of groundwater in Michigan. Among the more hotly contested issues in the development of the legislation was a proposal by certain groups to extend the public trust doctrine to non-navigable waters and groundwater in the state. The legislature declined to reallocate public and private water rights as part of its implementation of the Compact.

The legislation does not authorize the MDEQ to promulgate rules under Part 327. It also prohibits local governments from regulating large quantity withdrawals.

If it ever comes to the point of threatening “water wars,” this legislation and the Compact will play a key role in preserving and protecting the Great Lakes.

WATER: PRIVATE OR PUBLIC RESOURCE?

Stephen E. Draper
The Draper Water Policy and Law Group
Atlanta, Georgia

Water, not unlike religion and ideology, has the power to move millions of people. Since the very birth of human civilization, people have moved to settle close to water. People move when there is too little of it; people move when there is too much of it. People move on it. People write and sing and dance and dream about it. People fight over it. And everybody, everywhere and every day, needs it. We need water for drinking, for cooking, for washing, for food, for industry, for energy, for transport, for rituals, for fun, for life. And it is not only we humans who need it; all life is dependent upon water for its very survival.

Mikhail Gorbachev, *Civilization Magazine*,
Oct/Nov. 2000

Next to the air we breathe, water is the most critical element to human survival. Water is essential for economic growth and prosperity and for a continually improving lifestyle. For those living on the margins, having only a small amount of potable water is the difference between life and death.

Water is essential to our way of life: economic growth and prosperity, agriculture, and improved quality of life. Sufficient quality water is needed for adequate public health and prosperity of humans as well as the aquatic ecosystem. Every level of the food chain, from bacteria and algae to humans and other mammals, requires quality water on a regular and sustained basis.

The demands for adequate supplies of quality water continue to grow at an accelerating pace while the supply of source water remains essentially constant, at least on a global basis. Water scarcity, once confined to specific arid regions, has become the norm throughout the world.

The reasons for water scarcity are many and vary according to the climate and geography. In some areas,

water scarcity can be attributed primarily to an arid climate and the lack of sufficient rainfall. In other areas, even where sufficient source water is available, water scarcity may still emerge for a variety of reasons including, many assert, misguided government water policies, ineffective public management or inequitable distribution, or allocation, of the right to withdraw and use the waters in our rivers, streams, and aquifers. Discounting the effects of global climate change, this issue of water allocation mismanagement is considered by many as the single most important issue for society in this century.

The effectiveness of the allocation management system depends, in the final analysis, on the state and/or national laws that provide the foundation for the creation of water rights. Therefore, lawyers and politicians will determine the effectiveness and equitability, the untended and unintended consequences, of the different mechanisms, or strategies, of water allocation and management.

The Spectrum of Water Allocation Strategies

Mechanisms for water allocation exist across a wide spectrum of strategies. At one end of the spectrum is unconditional *public allocation* in which water is allocated solely according to the rules and administration of the government alone. At the other end of the spectrum is unregulated, free market *private allocation* (or *tradable property rights in water*) in which water that has been partitioned into packets of exclusive, secure, well-defined, non-attenuated, transferable and enforceable private property rights which may be bought and sold in private water markets by contract similar to other natural resources like oil or gold.

Along this spectrum between these two poles lie various forms of *public-private allocation*. A strategy of *public-private allocation* that is near the *public allocation* pole is the original California Water Bank, to whom the holders of water rights might sell those rights at an administratively set price to the State of California who may sell them again at an administratively set price to buyers selected on the

basis of criteria other than willingness to pay. A *public-private allocation* strategy closer to the *private allocation* pole is the Colorado-Big Thompson project in which water allocation rights may be traded in private transactions between and among water users within a specific hydrogeographical area. In this case a public institution, the Northern Colorado Water Conservancy District sets the terms of the transactions; transactions are finalized only upon district approval.

Public Allocation

Under a system of public allocation, a governmental agency controls, regulates, and administers the allocation of source water according to the laws and state regulation. Public allocation can promote equity objectives and enable decision-makers to deal with some of the unusual aspects of water resources. The public sector can fund large-scale water development that is generally too expensive for the private sector. Public allocation can protect the poor and sustain environmental needs. The case for public allocation is particularly strong in allocation across political boundaries and reallocation of water rights since the state is often the only institution that includes all users of water resources, and has jurisdiction over all sectors of water use. The World Bank has noted the following advantages of public allocation.

Capital requirements and economies of scale.

Large, lumpy capital requirements and economies of scale in water infrastructure tend to create natural monopolies, warranting regulation to prevent overpricing. Moreover, many water investments produce joint products, such as recreation, electric power, flood control, and irrigation, which make pricing and allocation decisions difficult.

Extended duration of capital recovery. The large size and extremely long time horizons of some investments, given underdeveloped capital markets and the potential for political interference in many water infrastructure investments, reduce incentives for private investments in the sector.

Interdependent nature of diversified water uses.
The uses of water within a river basin or aquifer

are interdependent. Withdrawals in one part of the basin reduce the availability of water for other users, groundwater pumping by one user may lower the water table and increase pumping costs for all users, and pollution by one user affects others in the basin, especially those located downstream. These interdependencies suggest that having all users agree to the rules of the game—or lacking that, imposing government regulations, taxes, or both—could improve the social value of water resources.

Public versus private goods. Certain aspects of water activities, such as the control of floods and waterborne diseases, are (local) public goods, which cannot easily be charged for on the basis of individual use. In such cases, public initiative may be required to ensure that levels of investment are appropriate.

Essential obligations of government. Water resources are often developed because of their strategic importance for national security and for regional development. Governments thus typically maintain ownership of water thoroughfares, providing services such as the coast guard and traffic regulation. Some regions are subject to periodic droughts. Because water is essential to sustaining life, governments may take control of water.

Private Allocation

Under a system of private allocation, source water is privately owned and allocation is determined by private transaction within a free market between or among holders of tradable water rights. A key argument underlying privatization is the benefits of a free market, a system that has been shown historically produce efficient allocation and distribution of quality products. A number of authors have suggested that a free market in water would be not different from international trade in other necessities of life such as food, medicines, and sanitary articles.

However, a well-functioning free market in water must meet the same conditions that any free market must meet to function effectively and equitably. Such

conditions have a number of requirements, including the following:

Private Property Rights. Exclusive, secure, well-defined, non-attenuated, transferable, and enforceable private property rights must exist.

Transparency. There must be an absence of collusion or market power among buyers or sellers.

Externalities. There should also be no unpaid-for benefits, known as positive externalities, or uncompensated costs, known as negative externalities. An example of a positive externality is the benefits that derive to all persons using a public waterway that is cleaned and maintained by a volunteer adopt-a-stream organization. The costs and harms deriving from water pollution are an example of negative externalities.

Transaction costs, such as legal fees or regulatory requirements, do not, however, inhibit mutually satisfactory transactions. Each transaction in a competitive free market operates under the motivation to maximize profits, in which demand and supply forces will determine the quantities to be traded and the unit price for the commodity. Water, acting as any other commodity, will move from low value uses to highest value uses. Therefore, free market allocation becomes considered economically efficient from both an individual and social point of view.

Public-Private Allocation

Under a system of public-private allocation the elements of both private and public allocation may be used. The intent is to grasp the virtues of the marketplace while minimizing the negative issues that may arise. The question is how much government involvement should be imposed on private transactions or, conversely, how much private involvement may be allowed within a public administration of water allocation.

Public-private partnerships can take a number of forms, from assigning operation and maintenance to

farmer organizations or water districts, user charges, to volumetric or quasi-volumetric pricing at the farm level, to intersector permit transfer laws and regulations. A number of combinations of public-private responsibilities, authorities, rights, and privileges are possible. The California Water Bank and the Colorado-Big Thompson examples have been mentioned.

At one end of the spectrum, Canada has introduced “realistic water pricing” to encourage efficiency through improved technology, and lead to water conservation and reduced pressures for costly system expansion. Pricing of water is exercised mainly by provincial and local governments although the federal government exercises the policy in its own areas of jurisdiction. It is Canadian policy to “promote the use of market and market-type forces and beneficiary pays policies to achieve the most efficient long-range use of water resources, and participate with other levels of government in meeting its responsibility in a manner that recognizes the social, economic and environmental value of freshwater resources to Canadians.”

At the other end of the spectrum, Chile is often introduced as a model of a free market trade in water property rights that produces two significant benefits to water management: legal security and increased capacity for water reallocation. Water rights reform is considered an innovative legal and institutional development since it provides secure transferable water rights expressed in volume. The legal security of these rights has encouraged private investment in water use, for both agricultural and non-agricultural uses. The increased capacity for reallocation of water resources to higher-value uses in certain areas and under certain circumstances has developed from the ability to buy and sell water rights.

At the other end of the spectrum, the Australian experience with permit trading is instructive. The rules for permit trading in ten different river basins are different and are structured to accommodate both interbasin transfer and transfer of rights across political boundaries under restricted circumstances. The rules for interbasin transfer limit such transfers to adjacent basins whose outflows are physically interconnected so

as to make downstream water flows unchanged. The rules for transfers across political boundaries are more restrictive in nature. These rules are subject to such things as stream carrying capacities, water resource availability, water quality, environmental constraints, and socio-economic considerations. Each transfer is subject to local regional approval, and broad Statewide rules (such as the requirement to develop property management plans in certain circumstances). Preliminary findings indicate water trading offers substantial potential benefits to individual water users and the New South Wales economy.

In Mexico, water users can exchange nontradable water rights for tradable, sellable “concessions,” which are essentially allowances to use an allotted share of water. The concessions have a maturity of 30 years, and can be bought or sold freely as long as transactions do not negatively impact the water rights of others.

Analyzing the Choices for Water Allocation

A number of authors have suggested that water can be managed in a more productive and efficient manner when treated as a “tradable standardized commodity” rather than as a product of engineering or an integral part of nature. Private water rights trading supported by a number of individuals and institutions which trade in water is no different from trade in other necessities of life such as food, medicines, and sanitary articles. It is an issue of economics and a dramatic modification of the public allocation system.

The Case for Water as a Private Resource

Water has an economic value in all its competing uses and should be recognized as an economic good.

Guiding Principle No.4. International Conference on Water and the Environment (ICWE), Dublin, Ireland, 26-31 January 1992

The Dublin statement that water is an economic good prompted the World Bank, among others, to propose the privatization of source water; that nations and states introduce tradable property rights to water in

order to “increase the productivity of water use, improve operations and maintenance, stimulate private investment and economic growth, reduce water conflicts, rationalize ongoing and future irrigation development, and free up government resources for activities that have a public good content or positive externalities.” The argument for privately tradable water rights is based on the neoclassical economic theories for the allocation of scarce resources.

The question is whether the advantages and disadvantages of private allocation outweigh on balance the advantages and disadvantages of public allocation, or whether some form of public-private allocation can maximize the benefits of each and minimize their disadvantages.

Water markets have been defined as “a market-based allocation of water . . . referred to as an exchange of water-use rights, compared to a temporary exchange of a given quantity of water between neighboring users.” A number of potential benefits have been attributed to private markets for water rights. Under most instances regarding the management of scarce resources, a market-based system is more responsive than a centralized system of management. In the case of water, ownership of water rights itself, rather than just the right to use water, provides security of water rights tenure to water users. If well-defined rights are established, water users can invest in water-saving technology knowing that they will benefit from the investment. For the irrigated agricultural users who use more water than any other water users, allocation of water through tradable rights will provide maximum flexibility in responding to changes in crop prices and water values as demand patterns and comparative advantage change and crop diversification proceeds.

The World Bank has outlined similar benefits when tradable property rights to water are introduced. First, a program of tradable rights to water improves productivity by creating a built-in incentive to conserve water and use it more productively. Second, tradable water rights can transfer water to higher-value uses in a way that is cheaper and fairer than other alternatives. Finally, in addition to stimulating growth directly by improving the productivity of water, tradable property

rights to water encourage investment and growth in activities that require assured supplies of large quantities of water.

Advocates claim that markets avoid the “Tragedy of the Commons” by assigning higher prices to relatively scarce commodities, and thus, encourage people to find ways of economizing on scarce resources. Tradable property rights to water would provide incentives to both farm and non-farm permit holders to sacrifice (or trade) all or part of their right to use water, so it may be used for higher valued applications. Efficiency of the resource would be enhanced because, under a public allocation system, often the price that water users pay does not reflect the water’s opportunity cost nor its scarcity value. If water prices reflected these costs, users would have increased incentives for efficient use and conservation. Essentially, the transfer of water rights from lower to higher best use can be accomplished most efficiently and effectively by private, free-market mechanisms.

Advocates for private tradable water rights provide examples of how successful market institutions have been in reallocating water, leading to the conclusion that they can provide flexibility, encourage conservation, and help prevent negative economic consequences stemming from water scarcity. It is claimed that a review of water markets in the western U.S. provides evidence of how successful market institutions have been in re-allocating significant quantities of water.

The proposal to privatize the water allocation process must be framed within the context of the appropriate conditions of a market. A number of requirements exist for a well-functioning, competitive water market. First, exclusive, secure, well-defined, non-attenuated, transferable and enforceable private property rights should exist, with an absence of collusion or market power among buyers or sellers. There should also be the absence of unpaid-for benefits, or positive externalities, e.g., benefits that derive to all persons using a public waterway, cleaned and maintained by a volunteer adopt-a-stream organization; and uncompensated costs, or negative externalities, e.g., the costs and harms deriving from water pollution. Finally, each transaction should operate in a

competitive market under the motivation to maximize profits. Under such conditions, demand and supply forces will determine the quantities to be traded and the unit price for the commodity in this market, hence, water will act as the commodity and will move from low value to highest value uses. Therefore, market-based allocation is considered economically efficient from an individual and social point of view. If these requirements can be met, in theory, the concept of tradable rights to water might be viable.

Allied with this economic argument arguing against water allocation by the public sector is another issue regarding government subsidies, such as those provided to agriculture. Such subsidies often artificially depress the cost of water or its value to the user. The artificially low costs of water certainly lower the incentive to conserve and may result in water waste. Fragmented investment and management of existing water resources often results. A pricing structure that reduces the unit cost of water as water usage rises perpetuates inefficient use and increases the likelihood of water scarcity. This may lead to conflict between different uses and different users. Moreover, public allocation does not always support user participation, a key ingredient for efficiency.

Additionally, economists have noted a significant problem in public water allocation in the fact that there appears to be no mechanism to reallocate water from older, lower-valued uses to newer, higher-valued uses. A major tenet of any economically efficient allocation system under conditions of scarcity is that a means exists to reallocate uses with a low-valued product to uses with higher values. In the case of water allocation, public allocation is unable to reallocate water from older, lower-valued uses to newer water uses that have a higher value, higher utility, or a higher measure of efficiency, like computer chip manufacture. The newer use may be unable to obtain sufficient dependable supplies of water because older uses retain ownership of the water rights despite having a lower value or utility. It has been suggested that regulators “tend to be captured by the industries they control” because they are reliant on information provided by those same industries and that public allocation does not always support user participation.

The question of which system will more easily allow the shifting of water from lower-valued uses to higher-valued uses is clear, at least with respect to economic value. A system of tradable property rights to water and the incentives of the marketplace, which will set the price of water to its highest value, will provide the necessary motivation to move water use from lower-valued to higher-valued uses. The market place will determine the marginal utility of water at a specific time and place, leading to society's "willingness to pay" for the water. Private allocation will eliminate or minimize the misguided government water policies, ineffective public management, or inequitable distribution which causes much of the existing and potential future water scarcity. From a neoclassical economic viewpoint, the discussion should end here.

The Case for Water as a Public Resource

Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment ... Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. Effective management links land and water uses across the whole of a catchment area or groundwater aquifer.

Guiding Principle No. 1 International Conference on Water and the Environment (ICWE), Dublin, Ireland, 26-31 January 1992.

There is, however, an equally compelling argument that water allocation must remain in public hands.

First, there are two issues with respect to how "value" is defined that must be explored. Is value determined from direct output of the water use, or is the value determined from the final use? With respect to a National Academy of Science statement that "the value of water in agriculture is generally less than in industrial or municipal uses ... only the higher values water are likely to be justified economically," the Western Water Policy Review Advisory Commission responded:

Careful consideration should be given to the fact that water for agriculture while relatively

inexpensive, supports our ability to produce the food we eat at reasonably [sic] prices. Water is an input, a cost, into the production of food and fiber. Indeed, consumers in the United States spend less, as a percentage, of their per capita income on food than any other industrialized nation, and less of the less-developed nations.

While an acre-foot of water used to produce silicon chips may be of "higher" value in pure economic terms, this argument misses the point. The raw material of everything we use or consume comes from one of two sources: it is either grown or mined; and if grown, it requires water. Only in a society as affluent as ours is the value of food and commodity production as easily discounted as it is in this report.

Should the value of water be defined only in terms of its marginal utility and society's "willingness to pay?" Stakeholders for a specific water source may place different values for the same resource. To many individuals and societies, the value of water extends beyond its financial benefits, symbolizing security, opportunity, and self-determination. In areas where water scarcity is the norm, water is associated with life, power, and status. Certain water uses exist which are associated with quality-of-life issues or which have social and/or civic purposes that cannot be appropriately quantified in a valid benefit evaluation. In a manner similar to minimum flows established for environmental and ecological protection purposes, the value of water can be established by the parties within their internal political process and vested in agreement with the other parties. Proponents of public allocation recognize that there are certain important ecological, environmental, aesthetic, and spiritual benefits, as well as the benefit of human survival that should be met at prices well below the market price for water as these benefits serve the greater good for society as a whole. The obvious difficulty is quantifying the needs of public values and social equity related to "social" benefits.

It has been argued that public allocation systems do not shift water allocation to reflect higher and better uses. However, they do exist in regulated riparian rights jurisdictions. In these jurisdictions, laws and regulations

for water withdrawal permits are normally issued for specific “reasonable uses” for a specific period of time, often 20 years. Theoretically, once this time period is over, the permit conditions are reevaluated to determine if the permit should be renewed. The stakeholder groups and the permittee heavily influence this analysis and potential renewal, so the claim that public allocation does not support user participation is arguable. The exception is agricultural irrigation use, which is often either exempted from the requirement for a permit or the irrigation permit is not limited to a specific time period. Additionally, with respect to this point in favor of private allocation, the Delaware River Basin Compact, among others, provides for mechanisms to shift water from old uses to new uses.

There is also the question of “allocation equity” or the equitable, or fair, distribution of benefits from an allocation of a shared resource to various stakeholders and third parties. The 2001 International Freshwater Conference in Bonn presents the case for Public Water Allocation:

Issues of water allocation ... lead to all sorts of conflicts between major stakeholder groups: the poor need drinking water for survival and their livelihood; farmers want water for irrigation, industry for production; and the urban elites claim water for basic as well as luxury consumption. Water uses and water rights, therefore, also touch on power issues in the society, which can only effectively be negotiated by the state. ... The primary responsibility for ensuring equitable and sustainable water resources management rests with governments ... Public responsibility includes the task to set and enforce stable and transparent rules that enable all water users to gain equitable access to, and make use of, water.

Additionally, there is the issue of transparency. A public allocation system is largely transparent and its consequences can be predicted by the water laws of the legal jurisdiction and the regulations of the water agency. That is not always the case with private allocation systems. Unintended and unanticipated or

indirect consequences that are ignored may exist. Market failures occur when there are important externalities that are unaccounted for (e.g., social or environmental impacts), that go uncompensated or unpaid (e.g., positive or negative third party side-effects). The impacts can be direct, as in the case of reduced in-stream flows below the diversion point for a transfer, or secondary, as represented by job losses in an agricultural region out of which farmers may choose to transfer their water supplies. Transaction costs can severely distort the economic efficiency of private water allocation markets; even considering a market model in the absence of transaction costs does not mean that markets are essential for economic efficiency. For example, rarely can a transaction be made to change a specific water right’s time, location, or manner of use of without affecting other water users, designated as third parties. The benefit-cost of a transaction should be the basis on whether the water rights transfer should take place yet the transaction costs to third parties may not be included.

Determining the transaction costs to third parties is, however, problematic. While it is easy enough for someone to own and manage water unilaterally in relatively small amounts (for example, bottled water), withdrawing water on a large scale significantly affects many others, making it difficult to procure the consent of all. Unless the agreement of all affected parties is obtained, third parties may be effectively deprived of their right to use the water without consent. Wealth is transferred from those who formerly used water to those who thereafter would use water. Typically those who lose out are small users without capital resources or alternative sources of water supply. Allowing such uncompensated transactions results in the transfer of wealth from the general public to the privileged few. Yet, if the rights of third parties are protected, transaction costs with respect to all but the smallest water bodies may quickly make the water right transfer prohibitive.

In any large and complex hydrologic system, the difficulty and expense of transaction costs prevents markets from developing unless the law chooses to disregard the externalities. However, usually the law protects against externalities by the rule, found in nearly

all legal systems, that one cannot alter the time, place, or manner in which one uses water without the consent of other affected water rights' holders.

The difficulty involving third party effects is compounded if one considers more than simply effect on other holders of water rights. Changes in the location or manner of use affect all businesses depending on the original location and manner of use. Consider agricultural use: the farmer engaged in irrigated agriculture supports a variety of businesses and industries that provide the farmer his seed, farm equipment, and other daily or seasonal needs. Both a permanent and a seasonal labor market develop to support the farmer. When the farmer's water withdrawal permit is transferred to another location or manner of use, say to municipal water supply, an entire business community begins to be adversely affected. Consider the tax base of counties that lose water, e.g., the values for agricultural land with a water withdrawal permit in Georgia are almost double those for land without a permit. As permits are sold across county lines, the losing county can suffer substantial loss in their tax base. Loss of the tax base could have substantial effect on the county's ability to provide effective public health and safety programs, as well as quality education.

Although this would not be an issue if only a few farmers in the county choose to trade their water withdrawal, as more farmers see the financial wisdom of trading their permit, the drain on the county mounts up. Is there a limit and who decides when it is reached? What percentage of irrigated land can be taken out of production before the drain on the county is too great? How does the law determine which farmer can trade and which cannot? These are serious problems that have a significant economic impact.

Moreover, small farms wishing to expand their farming operations will have to pay a high price for permits or water, weakening their profit margin. Small businesses or municipalities will have to compete to purchase expensive water withdrawal permits or expensive water. These problems demonstrate the need to consider *social equity* in any transaction to trade water rights. These effects can be greatly reduced,

however, if the transfer is restricted to the consumptive portion of the water withdrawal.

The potential for ownership of water rights to be accumulated by wealthy and powerful interests have a significant impact on social and economic equity. The concern has been raised that that a lack of competition could result in excess (or monopoly) profits to individuals who choose to market water. While monopolies or oligarchies would be difficult to achieve with large numbers of transactions, two market conditions may lend themselves to their formation. One occurs when new non-consumptive rights are assigned. The second condition is when large volumes of new water rights, consumptive or non-consumptive, are awarded to private entities while privatizing large hydraulic projects. Tradable property rights to water in Chile are a case in point.

A final unintended consequence may arise as a consequence of global climate change, as predicted by the Intergovernmental Panel on Climate Change (IPCC). The IPCC has concluded that warming of the climate system is undeniable. The impacts on water resources will be substantial. River flow may not be as dependable as historically experienced, consequently disrupting, for example, the consistent delivery of urban water supplies or the availability of cooling water for the power industry. Even in those areas where precipitation is predicted to increase, much of the increase may occur in high-intensity events. Consequently, flood and drought cycles will increase in frequency.

These predictions are significant for water allocation. There will be increased uncertainty about the reliability of source water resources at the time and quantity that they are needed by the various demands. Vulnerable industries will have an especially difficult time coping with cycles of flood-level flows and drought-level flows. Should tradable property rights to water be adopted, climate change will increase conflict between various holders of the "exclusive, secure, well-defined, non-attenuated, transferable and enforceable private property rights" because there will be no underlying resource to support these private property rights.

Such a series of conflicts on a comparatively minor scale is occurring now with respect to the 1922 Colorado River water allocation, which was based on the 30-years hydrological record available at that time. Later research, based on an analysis of tree rings, determined that the amounts of water used in the allocation were abnormally high, resulting in over-allocation of the water source. There exist within the structure of public allocation means to deal with this issue. Under a private allocation system, responding to the issue would be more difficult and possibly require the government to either ask voluntary “retirement” of certain private property rights in water at some cost or seize the property rights under eminent domain.

A Public-Private Partnership System of Water Allocation

The major drawback for choosing the public water allocation process is the loss of important virtues of the market place. A public allocation system tends to devalue water and the inherent political nature of government tends to inhibit the movement of water from lower valued to higher valued uses by favoring “grandfathered” users and granting of subsidies to specific favored uses.

Private allocation systems, on the other hand, use the powers of the marketplace to stabilize the value of water at a realistic level, increase the productivity of water use, and stimulate private investment and economic growth.

However, a private allocation system has significant disabilities. It is difficult, by its very nature, for a program of tradable property rights to water to reduce certain intrinsic values of water to a “willingness to pay.” Such intrinsic values include certain important ecological, environmental, aesthetic, and spiritual benefits, as well as the benefit of human and ecosystem survival. As with most economic transactions, transactions in water rights tend to stress short-term returns. Long-term benefits or benefits that may accrue to the society as a whole are rarely considered. The effects of a transaction between willing buyer and willing seller will simply not consider the effect on third parties or others unless there is public pressure to do

so. Allocation equity will simply not be considered except by the most altruistic. A private allocation system will impede basin-wide planning and management by public institutions as well as environmental and ecological protection needed to sustain public health. Other disabilities have been noted.

The choice is not, however, between public allocation on the one hand and private allocation on the other. A myriad of potential water allocation systems exist in the spectrum between these two poles and the logical choice in a form of public-private allocation that retains the best of both systems. Two such systems have been discussed, the California Water Bank and the Colorado-Big Thompson project. Others exist. It may be that optimum public-private allocation systems are site-specific, depending upon the political, economic, and social fabric of each particular hydrogeographical circumstance. In any event, however, all public-private water allocation systems must involve government oversight and controls to minimize the following issues.

Unless the water right transfer causes no change to the time, location, and quantity of the return flow after water use, significant negative effects may be experienced by one or more of the following: (1) third parties, defined as other water users not party to the transaction, (2) commercial activities whose success may be directly or indirectly to the existing water use, (3) local governments that may rely on the tax revenues generated by water-related commercial activities within their jurisdiction, (4) water-dependent environmental networks and ecosystems. Strict oversight by public institutions or hydro-regional cooperatives must exist to insure that either these effects have been marginalized or appropriate compensation provided.

River basin and watershed planning and management has been acknowledged as one of the most important techniques to be used in managing water. If the available source water can be arbitrarily reduced because of unknown or uncontrolled private transactions, effective river basin and watershed planning and management is difficult at best, impossible at worst. Strict oversight by public institutions or hydro-regional cooperatives must exist in order to

ensure that transfers of water rights do not significantly impair existing or future river basin and watershed planning and management.

A significant issue exists in legalizing the private transfer of water rights without significant legal safeguards that limit the exposure of water rights to being classified as a tradable commodity under one or more international trade agreements. This may result in the loss of substantive authority and control of water rights by local, state, and possibly national governments. The water allocation system must allow significant government oversight that limits transfers according to their non-economic impact, such as human and aquatic ecosystem sustainability.

Responding to the risks created by climate change and the need to allocate increasingly scarce source water requires a systemic, unbiased view of source water that appears to conflict with the prevailing view of the economic marketplace, that the sum of individual private transactions will maximize the use of scarce resources. Therefore, the water allocation system must allow for significant adaptability and change without an enormous cost to government and society.



Please contact Stephen Draper for additional references relied on in this article.

COURT DENIES REHEARING IN CASITAS—THE GOVERNMENT MAY BE LIABLE FOR DIVERSION OF WATER FOR FISH

Christian L. Marsh
Briscoe Ivester & Bazel LLP

On Feb. 17, 2009, the United States Court of Appeals for the Federal Circuit, in a per curiam order, denied petitions for rehearing and rehearing en banc and therefore let stand a September 2008 ruling that the federal government, by requiring the Casitas Municipal Water District (Casitas) to divert water to support fish passage along the Ventura River, took “physical possession of the water” and may have thus effected a “taking” of that water for public use under the Fifth Amendment to the U.S. Constitution. *Casitas Municipal Water District v. United States*, 543 F.3d 1276 (Fed. Cir. 2008), *rehearing den’d per curiam*, 556 F.3d 1329 (Fed. Cir. 2009). In this, the most recent takings decision to address water rights, the court held that the reductions in Casitas’ water deliveries must be evaluated under the “per se” rules assigned to “physical takings,” and not the “multi-factor balancing” that normally applies to “regulatory takings,” to determine whether Casitas is due compensation from the federal government.

The Fifth Amendment proclaims, “nor shall private property be taken for public use, without just compensation.” The Fifth Amendment has been applied to require just compensation for a categorical “physical taking” when the government takes physical possession of an interest in property or a property owner is forced, through government action, to submit to a permanent physical occupation. *Tahoe-Sierra Preservation Council v. Tahoe Regional Planning Agency*, 535 U.S. 302, 322-323. The Fifth Amendment has also been extended to require just compensation when government regulations limit the “use”—as opposed to the physical possession—of property. Not all government regulation is so limited; such “regulatory takings” apply when government regulation of private property “goes too far.” *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992). Unlike physical takings, categorical rules



**Water Resources
Committee Newsletter**

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governing regulatory takings are generally disfavored. *Tahoe-Sierra* at 326. Instead, regulatory takings more typically involve “essentially ad hoc, factual inquiries, . . . designed to allow careful examination and weighing of all the relevant circumstances.” *Id.* at 322, 326-327 (internal citations and quotations omitted). As the majority pointed out in *Tahoe-Sierra*, “This longstanding distinction between acquisitions of property for public use, on the one hand, and regulations prohibiting private uses, on the other, makes it inappropriate to treat cases involving physical takings as controlling precedents for the evaluation of a claim that there has been a ‘regulatory taking,’ and vice versa.” *Id.* at 323-324.

In the realm of water rights, however, regulatory takings cases are seldom brought and rarely successful. The few water rights cases that have succeeded have relied primarily on the Supreme Court’s physical takings jurisprudence, and involve the government’s outright transfer of water from one water user to another. *See, e.g., International Paper Company v. United States*, 282 U.S. 399 (1931) (water for electrical power “requisitioned” by the federal government under the National Defense Act for use by other industries for war purposes); *United States v. Gerlach Live Stock Co.*, 339 U.S. 725 (1950) (water impoundment took water from downstream riparian owners for a new federal reclamation project); *Dugan v. Rank*, 372 U.S. 609 (1963) (riparian water rights physically appropriated by the federal government for storage in a federal dam project). That changed when the Federal Court of Claims ruled in 2001 that a taking had occurred when restrictions imposed on operations of the Central Valley Project (CVP) and State Water Project (SWP) to protect salmon and delta smelt significantly curtailed deliveries of water to state contractors during the 1992-1994 water years. *Tulare Lake Basin Water Storage Dist. v. United States*, 49 Fed. Cl. 313 (Apr. 30, 2001). Likening the reduction in water deliveries to a “physical occupation,” Judge Wiese reasoned at the time that, “In the context of water rights, a mere restriction on use—the hallmark of a regulatory action—completely eviscerates the right itself since plaintiffs’ sole entitlement is the use of the water.” Rather than face uncertain prospects on appeal, the federal government ultimately settled the case for \$16.7 million.

The *Tulare Lake* settlement did little to quell the controversy surrounding takings and water, and likely served to embolden Casitas in its efforts to secure compensation for water it was losing under similar circumstances at the Ventura River Project. Authorized by Congress in 1956, the Ventura River Project is owned by the U.S. Bureau of Reclamation (Bureau) and supplies water from the Ventura River and Coyote Creek for municipal, industrial, and irrigation uses in Ventura County. The project comprises the Casitas dam and reservoir, Robles diversion dam, Robles-Casitas canal, and other related facilities, and it is operated and maintained by Casitas under a repayment contract entered with the Bureau when the project was first authorized. Casitas holds the right to divert and store up to 107,800 acre-feet per year and to put up to 28,500 acre-feet per year to beneficial use through a license issued by the California State Water Resources Control Board.

In 1997, the National Marine Fisheries Service (NMFS) listed southern California steelhead as endangered under the federal Endangered Species Act (ESA). Casitas and the Bureau thereafter sought to construct the Robles Diversion Fish Passage Facility and obtain incidental take authorization under the ESA. NMFS issued a biological opinion on March 31, 2003, which called on the Bureau to adopt new operating criteria to augment flows for fish survival—operating criteria that placed restrictions on Casitas’ water diversions and, according to Casitas, would have required Casitas to “permanently forgo” about 3,200 acre-feet of its water right.

Perhaps buoyed by the decision in *Tulare Lake*, Casitas filed suit in the Court of Federal Claims alleging damages from the federal government for breach of contract and for a taking under the Fifth Amendment to the Constitution. Despite having sided with the water contractors in the *Tulare Lake* case, Judge Wiese denied both claims. In denying the takings claim, Judge Wiese distinguished between a physical taking—which involves a “government takeover of property”—and a regulatory taking—which is derived from “government restraints on an owner’s use of that property.” Because limits on Casitas’ diversions did not amount to a “redirection of a property’s use,” Judge Wiese held that it did not amount to a physical taking.

On appeal, the federal circuit disagreed and found that the government's exercise of control over the water amounted to a "physical appropriation," which is properly evaluated according to the "per se" rules applied to physical takings akin to the *International Paper*, *Gerlach*, and *Dugan* line of cases. *Casitas Municipal Water District v. United States*, 543 F.3d 1276 (Fed. Cir. 2008). The federal circuit reached its decision based on two key facts. First, the federal government admitted for purposes of summary judgment that "operation of the fish ladder required water." Second, the federal government admitted that the water "would have gone into the Casitas Reservoir" for use by Casitas. The diversion works for the fish ladder is located in the Robles-Casitas Canal, below Casitas' point of diversion on the Ventura River. Consequently, "the government did not merely require some water to remain in stream, but instead actively caused the physical diversion of water away from the Robles-Casitas Canal—after the water had left the Ventura River and was in the Robles-Casitas Canal—and towards the fish ladder, thus reducing Casitas' water supply." Thus, the federal circuit reversed the trial court's grant of summary judgment, and remanded the case for consideration under the "physical taking," and not the "regulatory taking," rubric.

The State of California and others filed petitions for rehearing and for rehearing en banc in December 2008, which the federal circuit subsequently denied per curiam. *Casitas Municipal Water District v. United States*, 556 F.3d 1329 (Fed. Cir. 2009). Judge Moore, the author of the panel's original Sept. 25, 2008 opinion, concurred in the denial, reasoning that because the government had "physically diverted water, or caused water to be diverted from the plaintiff's property," the court was "compelled to reach the same conclusion"—that a physical taking had occurred. *Id.* at 1331-1333. The dissent authored by Judge Gajarsa expressed a different view and asserted that the majority's opinion "impairs and frustrates the logic of the Supreme Court." Casitas' rights to use the water were "frustrated by governmental regulation," but the federal government did not "appropriate property or convey it to a third party." Consequently, the dissent urged, the limits on diversion in *Casitas* should not be analyzed as a "physical taking," but rather as a "regulatory taking."

As it stands, the *Casitas* case is now teed up for possible review by the U.S. Supreme Court. As of the writing of this article, no petition for writ of certiorari has been filed, but the time to do so is fast approaching. With the current Supreme Court, it is unclear whether any of the parties will ask the Court to review the federal circuit's decision. Future plaintiffs will likely seek to blur the factual distinctions between the *Tulare Lake* and *Casitas* cases and attempt to apply the categorical rules governing physical takings more broadly to any government regulation limiting the use of water. Indeed, another case already pending in the Federal Court of Claims, *Klamath Irrigation District v. United States*, concerns similar questions about water rights in the Klamath Basin of Oregon, and whether reductions in water deliveries due to listed species of salmon may have resulted in a compensable taking under the Fifth Amendment. If a petition for certiorari is filed in *Casitas*, the U.S. Supreme Court could take this opportunity to clarify its takings jurisprudence in the area of water rights.

Christian Marsh is a partner with the law firm of *Briscoe Ivester & Bazel, LLP*, in San Francisco, California. His practice focuses on water, endangered species, and land-use counseling and litigation.

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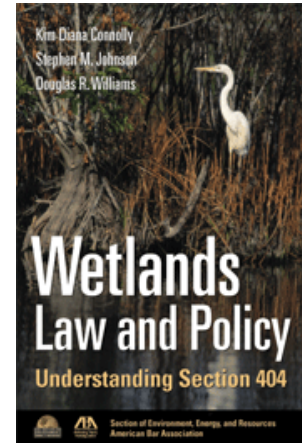
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