Privatization and Control of U.S. Water Supplies

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Press releases streaming out of the World Water Forum held earlier this year in Kyoto decried the global “privatization” of water resources. Critics question whether it is prudent to entrust such a vital public resource—water—to the handful of large multinational companies that specialize in the water business. Will private companies price water out of the reach of ordinary citizens? Or decline to serve needy populations? Or simply disappear when times get tough and profits disappear, leaving the public without access to vital water supplies? And will private companies have any concern about the negative impacts of water withdrawals on the environment?

Most observers agree that the water privatization debate is a serious issue, particularly with regard to the handling of scarce water supplies in the developing world. They assume, however, that the privatization controversy has little relevance to the United States. Here, the vast majority of water supplies, and water systems, are operated by governmental or quasi-governmental entities. In addition, in most areas of the U.S., providing water is a regulated activity, with governmental authorities obtaining water supplies, water rates approved by public utility commissions, and treatment standards established in accordance with federal Safe Drinking Water Act requirements. The situation is additive—most systems are operated by quasi-governmental entities and there is another layer of governmental oversight on top of that via rate review, and so forth. The large multinational water companies (Suez; Vivendi; RWE/Thames) have had limited market penetration in the U.S. beyond buying up some smaller water companies and beginning to help operate (but typically not own) water systems under contract for a few cities.

Contrary to initial appearances, however, the U.S. water system is largely based on a privatization model. Although governmental entities are heavily involved in the water business in this country, state and federal governments rarely hold water rights. As a general matter, our legal system vests the primary control of water rights in individuals, organizations, and special use entities, and not the public at large. Water rights are broadly categorized as property rights; our legal system already has privatized much of the control of water in the United States. State and federal governments’ direct influence over water rights is limited and is typified by indirect and reactive regulatory requirements under statutes like the Clean Water Act and the Endangered Species Act or, in the case of state officials, their ability to take public interest factors into account when considering new requests for diversions.

As a result, state water officials typically do not have the authority to redirect water to the highest and best use, to reduce groundwater pumping, and unilaterally adopt new conjunctive use schemes that better balance the use of groundwater basins and surface water supplies, or to easily reduce water diversions that are destructive to fish and wildlife resources. And although some quasi-governmental authorities have primary control over important water supplies, such entities increasingly are competing against each other for access to such supplies. Irrigation districts, for example, may control large water supplies that are coveted by urban water agencies. Both are quasi-governmental entities, but they typically are driven by their local constituencies, and not by some general notion of the greater good.

The growing tensions involved in modernizing the development and management of water supplies, in the context of a legal system that gives a deep bow to private control, is defining the battleground for water policy in the United States today. Strains are becoming evident, with conflicts growing in number and intensity as private-based water rights and customs bump against competing public policy interests in more actively managing, and stretching, scarce water supplies. These conflicts are particularly evident in three key areas of water management: ag-to-urban water transfers, the regulation of groundwater use, and the dedication of water for environmental needs. Signs of these conflicts are emerging in all regions of the United States. They are particularly apparent in the fast-growing, semi-arid West, where the combination of an exploding population base and countervailing pressures to maintain and protect instream flows are stretching existing water supplies. None of these emerging conflict areas can be appreciated, however, without first acknowledging and understanding the largely privatized nature of our water rights system.
Western water law is based on the “first in time, first in right” concept. Private parties and local water users who first diverted water and put it to use typically created a vested right to continue to use such water on a priority basis. The early settlers, miners, industrialists, and farming cooperatives who showed ingenuity in making use of scarce western water supplies were rewarded with a water supply that they could call their own. Many generations later, their successors find that they have inherited a water right with enormous value.

Eastern water law, in contrast, typically is based on riparian water concepts, and relies more heavily on a shared resource concept, with landowners having a right to use the water adjacent to their lands, so long as such water remains available for others who also share the common water source.

Although the western water rights system generously rewarded early water users, most western water supplies were constrained by unreliable flows. Expensive infrastructure was needed, much of which private parties could not afford to build. At the turn of the twentieth century, President Theodore Roosevelt championed passage of the Reclamation Act of 1902 to do the job. Large dam-building and irrigation projects followed. Federally funded projects changed the western water landscape, from Hoover Dam to California’s Central Valley Project to the Central Arizona Project, and much more. Today, the Bureau of Reclamation is the largest water wholesaler in the world.

The U.S. Army Corps of Engineers undertook as large an effort as the Bureau of Reclamation, fundamentally changing how water is managed throughout the United States, from Florida’s Everglades, to our largest river systems, the Missouri and Mississippi. Today, the Corps maintains more than twelve thousand miles of inland waterways for navigation purposes and operates nearly four hundred dams and reservoirs for flood-control purposes.

The massive federal taxpayer investment in water infrastructure could have fundamentally changed ownership rights over project water and extended water rights to the taxing public, but it did not. The feds could have demanded, for example, that federal agencies, acting on behalf of the taxpayers, obtain the benefits of new water supply opportunities provided by federal investments in major water projects. Rather than seeking a quid pro quo of new, publicly controlled water rights in return for public investments, however, water rights developed under the Reclamation Act typically were acquired under state law, so as not to override the priorities of preexisting private water rights. And once constructed, the Bureau of Reclamation typically entered into water contracts with private parties (usually farmers), allowing them to have contract rights (another version of private property rights) at a small fraction of the actual cost of obtaining and delivering the water. (Contract terms typically are cost-based, with much of the federal investment being written off as serving other functions such as navigation, flood control or recreation.)

As a result, federal infrastructure investments typically have had the ironic impact of actually increasing the value of “private” water rights (i.e., owned by private parties or by quasi-governmental entities that answer to limited constituencies). Plans to construct the Hoover Dam, for example, triggered water allocations on the Colorado River and enabled the Secretary of the Interior to enter into “permanent service contracts” for the delivery of large amounts of now-reliable water supplies to nonfederal water rights holders.

While surface water supplies in the West were being carved up among private parties and collections of private parties (e.g., irrigation districts formed by farmers), many water users in the plains states and the Southwest also relied heavily on underground water supplies for irrigation and domestic use. As with surface water rights, the government typically enabled—rather than regulated—the utilization of groundwater pumping.

Under most state legal systems, overlying landowners were granted rights to pump groundwater for use on the land unless the groundwater supply was immediately adjacent to, and clearly connected with, a surface water supply. Only with the passage of time, and growing concerns of unsustainable pumping, has the legal system begun to adjust its thinking on groundwater. Arizona passed a comprehensive new groundwater code in the early 1980s, helping to stabilize that state’s then-declining groundwater tables, but other jurisdictions have been slow to enact similar, far-sighted statutory schemes. As discussed below, public water managers continue to confront significant challenges in defining the limits of private rights over groundwater supplies and in coordinating pumping patterns.

A discussion of our largely privatized water rights system would not be complete without reference to urban water users’ standing in the water rights world. Historically, urban communities in the water-scarce West had the same opportunity to obtain water rights as farming communities. For many years, however, water was not a major issue for smallish western settlements. With a few notable exceptions, western communities were content to identify and dedicate a modest water supply for their needs. Indeed, under
western water law principles, they had little choice; as a general matter, traditional water rights are based on water that can be put to beneficial use in the here and now, and not based on prospective future needs. As a result, towns and cities expressed little or no objection to the massive federal investments in new irrigation water projects, thinking that their modest needs could be met using traditional water supplies.

Today, of course, the landscape has changed and mega-cities have grown from Texas to California, outstripping the water supplies that fifty years ago seemed ample. Even those few cities that made far-sighted investments in major water supply sources, such as Los Angeles’s surreptitious purchase of the Owens Valley, and San Francisco’s development of Hetch Hetchy, find themselves increasingly strapped for reliable water supplies. Most major urban centers enter the new century having limited water rights of their own in a system that long ago divvied up existing water supplies to other parties. Western cities are facing the reality that the best water rights were sewn up early, with agricultural communities having access and control over the overwhelming majority of water supplies.

Room for the “Public Interest”? 

Of course, asserting that our nation’s water supplies are “privatized” in the fullest sense of the term is an overstatement. Substantial blocks of water are controlled by governmental entities that seek to reflect broader public interests (including environmental interests) when procuring water supplies for their constituents. Also, most state water law systems vest state officials with the right to consider the “public interest” when evaluating new requests for diversions. The public interest exception to the privatization rule has been used in some states to require that minimum flows remain in streambeds for the health of the environment. State law systems also are beginning to acknowledge that recreational interests in waterways should be recognized as a legitimate, public interest that should be taken into account when adjudicating water rights.

In addition, of course, many state water systems are premised on the notion that the sovereign ultimately “owns” water resources in a state. Private parties’ rights relate to the use—and not ownership—of water; they are “usufructuary.” And the California Supreme Court recognized the public trust doctrine in the celebrated Mono Lake case, suggesting the public interest in the integrity of a water body can trump private water interests. National Audubon Society v. Superior Court, 33 Cal. 3d 419, 658 P.2d 709 (1983).

As Reed Benson, a professor at the University of Wyoming, has commented, however, “state or public ownership of water has far more meaning on paper than in practice.” He explained: “While water in the West is nominally owned by the public, it tends not to be managed or viewed as a public resource. Water rights holders generally view the water they use as being their own, and they stress the private property nature of water rights. Water management agencies and western state legislatures generally accommodate the water users.” See R. Benson, Whose Water Is It? Private Rights and Public Authority Over Reclamation Project Water, 16 VIRGINIA E.L.J. 362, 375 (1997).

Despite the potential for state law to assert public interests over private interests in water systems, federal legislation arguably has played a predominant role in injecting additional public policy considerations into the management of water supplies. More specifically, Professor David Getches at the University of Colorado has asserted that national requirements under the Endangered Species Act and the Clean Water Act have played a central role in facilitating a policy reform agenda for water that includes “greater efficiency and conservation, conjunctive use of groundwater, protection of instream flows, more comprehensive planning, and inclusive public participation at the level closest to the resource.” Getches suggests that “[t]he most impressive innovations . . . [have been] produced by federal regulatory pressure and locally based problem-solving efforts, often supported by federal participants.” See D. Getches, The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States’ Role? 20 STAN. L. REV. 3, 5 (2000).

Regardless of whether state or federal law has been more effective in introducing new public policy considerations in state-based water systems, there is no question that, at root, most water supplies are controlled by private parties or by quasi-governmental authorities that collectively may represent a predominately private interest. One such example is irrigation districts that have, as their mission, the delivery of water supplies to private irrigators. The State of California is balkanized into more than 250 special interest water agencies, representing discrete geographic areas that represent widely varying needs and interests.

The tension between this largely privatized water system and new, pressing water policy needs is leading to serious water conflicts that are arising throughout the United States. Illustrating the emerging conflicts are the controversies associated with the push to transfer some water from ag to urban communities, the increasing efforts to rationalize and coordinate surface and groundwater supplies, and the rising demands to give the environment its due with respect to water supplies.

Ag to Urban Transfers 

For historical reasons recounted above, the U.S. water system has vested the large majority of water rights in the agricultural sector. Irrigation in the
West, for example, utilizes 80 percent to 90 percent of the total water supply in the region. From an overall water supply situation, this is good news. It suggests that relatively small transfers of water from ag to urban use can address growing urban water needs.

And if such transfers can be accompanied by the application of new conservation practices on irrigated lands, such transfers can provide a “win-win” solution for the water-constrained West. Even better, if a lively water transfer marketplace can develop, economic principles and market competition can enter the picture, enabling water supplies to move more freely to meet market needs.

Promoting market-based water transfers is a key to providing flexibility in moving water among users without upsetting the well-established legal system that governs water rights. Healthy water markets have developed in a few jurisdictions—notably, Colorado—but as a general matter, ag-to-urban transfers have been slow to catch on. It has proven difficult to implement a modern market-based transfer concept in the context of a legal system that was developed in a different era, for a different purpose. Because water rights are generally kept in “private” hands (albeit often in the hands of quasi-governmental authorities that may represent communities of farmers and other water users), and because the legal system typically did not anticipate such a transaction, or where water rights could be transferred, a host of complications have emerged, retarding the emergence of vibrant water markets.

By way of example, irrigation water rights typically are defined with reference to the amount of water that is being reasonably and beneficially applied to irrigated lands. Water that is “wasted”—that is, not reasonably and beneficially used—is not within the scope of the water right. Likewise, in some states, the water must be used for its intended purpose (here, irrigation) in order for the priority water right to continue to attach.

Thus, when an irrigation district proposes to conserve some of the water that it traditionally has utilized, and transfer it off the land to an urban user, questions may arise whether the “conserved” water that is being proposed for transfer is water that fits within the water right in the first place. Is it, instead, water that is excess to the supplies that can be reasonably and beneficially used? To complicate matters further, courts have suggested that the standard of care for reasonable and beneficial use is an evolving one; what qualified as sound water management principles a few years ago may no longer qualify today, given advances in water management expectations and approaches (e.g., drip irrigation, lined canals and water metering) and the increased scarcity and related run-up in value of water supplies.

Also, can a water right that is based on irrigation uses in a specific geographic area be transferred to a different use—an urban application—in a different location, and perhaps in a different water basin? These questions may not be easy to answer, especially where the underlying water right and legal system did not anticipate such a transaction, or where water courts are given little guidance on how to address potential environmental impacts, third-party economic impacts, or other difficult issues sometimes associated with ag-to-urban water transfers.

Then there is the question of who, exactly, owns the water and has the right to transfer it. Even if an irrigation district has the legal authority to control and transfer its water rights, what are its fiduciary responsibilities vis-à-vis the farmers who use and pay for the water? What if most of the farmers object to a proposed transfer? And if an individual farmer is employing extraordinary conservation techniques that is freeing up the water for transfer, isn’t he or she the real party in interest in the transaction?

And how should the water be priced, and to whom should the proceeds flow? When irrigators are receiving water that was heavily subsidized by governmental largess, should they benefit from the spread between their subsidized water price and an urban market price?

Virtually all of these questions are being played out, very publicly, in the proposed mega-transfer of Colorado River water between the Imperial Irrigation District (IID) and the San Diego County Water Authority (SDCWA). IID farmers pay $15 per acre-foot of water each year, while they propose to sell it to San Diego for more than $250 an acre-foot per year for a period of thirty to seventy-five years. Is this type of transfer acceptable, when IID’s water contract with the Department of the Interior spells out that the parties intended its water to be used in the Imperial Valley? Is the price spread inappropriate as a matter of public policy, given the federal subsidization of Colorado River water? If IID succeeds in conserving water, does the next highest priority water user (here, the Coachella Valley Water District), have first call on the water? Should federal or state authorities ensure that only water that is the subject of extraordinary conservation efforts be transferred, based on the fact that the water right only extends, in the first place, to water that is being

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used wisely and efficiently? Should the farmers who actually give up their water, or who undertake extraordinary conservation measures to generate water for a transfer, have first call on transfer proceeds? What about the negative impact that the transfer might have on a farm-based rural community, including the potential loss of jobs associated with, or supporting, the farming industry? How will these third-party impacts be handled? Do the holders of the water right have an obligation to the community? And what if the transfer has negative environmental ramifications (e.g., on the Salton Sea)? Who bears responsibility for those potential impacts?

There are no clear answers to any of these questions, so it is no surprise that the IID/SDCWA transfer negotiations have been difficult, despite the widely understood importance of implementing the transfer. At root, most of the complications flow directly from the essentially private nature of the IID water right, and the tension created between private interests and emerging public policy needs (here, for California to conserve its Colorado River water and transfer some of its limited water supplies to urban users). Considerable energy is being devoted to this important subject in California and other states, and new mechanisms and practices are being developed to more efficiently implement transfers among willing parties. Somewhere in the mix, however, the public interest in promoting the development of a water market on the one hand, and in addressing third-party impacts on the other hand, needs to enter the picture in an organized, thoughtful way. Otherwise, the type of bitter controversy that has been flowing from the on-again, off-again IID/SDCWA transfer will continue to be the order of the day.

While encouraging water transfers is an important mechanism for unlocking “privatized” water allocations, updating government water contracts to reflect the true value of water also has the potential to facilitate the development of water markets. Many government contracts with water customers are keyed off public investments made many decades ago. These cost-based contracts reflect significant subsidies that may have made good policy at one time, and may still be justified in some cases, but which should be revisited on a disciplined, systematic basis. Congress has made some tentative steps in that regard. The 1992 Central Valley Project Improvement Act (CVPIA), for example, mandated that the Bureau of Reclamation update its pricing structure when renewing contracts for California’s Central Valley Project. As a general matter, however, Congress and the federal water agencies have had little success in overcoming the strong interests that favor continued subsidization of federal water supplies.

**Conjunctive Management**

In addition to ag-to-urban water transfers and market pricing of water, smarter use of groundwater supplies is considered an essential tool to the better management of scarce water supplies. Currently, many underground aquifers are suffering from a “tragedy of the commons” as individual water users continue to exercise unfettered rights to pump groundwater. Even if they were to stop pumping, their neighbors would not. In the absence of a regulatory system to govern competing private pumping practices, the aquifer suffers and, ultimately, everyone loses.

In addition to the damage that can be caused by the unimpeded mining of groundwater aquifers, the upside benefits of conjunctive use are lost if groundwater and surface water supplies are not conjunctively managed. Aquifers can serve as important storage facilities for water supplies. They can be recharged during wet periods, and their use can be coordinated with surface water supplies to maximize the utilization of whichever resource (surface or groundwater) is optimal under given circumstances.

Virtually every western state has struggled with how to define the connection between a surface water right and the right to pump groundwater. Groundwater’s relationship to surface water supplies can be either direct, or obscure, depending on relevant hydrogeology. Colorado and California, for example, explicitly recognize that stream “underflows” are governed by surface water rights, but factual questions regarding the surface/groundwater interface belong to decision makers in both jurisdictions. Likewise, most progressive jurisdictions allow parties to store water in underground aquifers, but such parties may bear the (difficult) burden of showing that their recharge, storage, and withdrawal of such supplies does not negatively impact any other surface or groundwater rights holders.

Continuing conflicts between surface water users and groundwater pumpers are prompting many jurisdictions to develop new regulatory systems that will...
constrain and coordinate groundwater pumping for the benefit of the aquifer and its users. Arizona’s landmark groundwater protection legislation remains the best example. It established a regulatory system that regulates pumping rights for non-grandfathered water users and has thereby encouraged the development of conjunctive use approaches in the state. California has taken a less direct route to promoting conjunctive use management, eschewing statewide legislation in favor of the promotion of regional groundwater management plans and the adjudication of pumping rights in specific basins.

In California, money has provided the grease to make the system work. The state legislature has authorized more than $500 million between 1996 and 2000 for local agency conjunctive use assistance, and some local agencies such as Kern County Water Agency have developed highly successful—and lucrative—water banks. A privatized water system can move forward with the times, particularly when the private parties or their representatives who control water supplies or water assets see new ways to increase the economic benefits associated with their ownership right. That is what is bringing rapid improvement in conjunctive use opportunities in California.

Water for the Environment

Perhaps the largest clashes between a largely privatized U.S. water system and broader public interests are playing out in the environmental context. More clashes are sure to come as parties assert their property-based interest in water over and above newly emerging understandings of the importance of maintaining water in streams and other water bodies for the benefit of fish, wildlife, and recreational interests. Conflicts are exacerbated by the uncertainty of how public trust and public interest state water law principles, as well as federal law overlays, affect the scope of private water rights. Everyone is learning on the fly.

The conflicts that have emerged in the Klamath Basin in Oregon and California over the last couple of years provide the poster child of water rights/environmental conflicts. A severe drought hit the over-appropriated Klamath basin in 2001. Farmers had contracts with the Bureau of Reclamation for water deliveries, but competing water needs for endangered resident fish in Klamath Lake, and in migrating salmon downstream in the Klamath River, prompted the Secretary of the Interior to short the irrigators. The result has been the filing of a massive “takings” suit by the irrigators, based on an assertion that the Bureau was obligated to deliver water to the irrigators, trumping environmental needs, as defined through Biological Opinions issued under the Endangered Species Act. The following water year, Secretary Norton directed Klamath water to the irrigators, with great fanfare, only to encounter an embarrassing, massive downstream fish kill a few months later.

The case law in water use versus the environment “takings” cases is mixed, with courts typically focusing on the nature of the water right during times of drought. To date, most courts have concluded that Bureau of Reclamation contractors have no claims for compensation when they are shorted water that is needed to address drought-related environmental needs. In at least one case, however, a court has concluded that a taking had occurred. Compare Klamath Water Users Protective Association v. Patterson, 204 F.3d 1206 (9th Cir. 2000) with Tulare Lake Basin Water Storage District v. United States, 49 Fed. Cl. 313 (2001).

In most watersheds, the push and pull of water rights versus environmental needs plays out in a complex negotiation process, rather than in a courtroom. The multibillion dollar CAL-FED plan reflects a negotiated compromise that is intended to address both the needs of water users and the needs of the environment by using public money to support, among other things, the creation of a pool of “environmental water” that will be used to address environmental needs, while protecting other water supplies from further reductions. Likewise, the Everglades restoration plan represents a negotiated compromise that will address environmental needs, while also protecting private water interests. The injection of large public investments in both projects have provided a bridge to the new way of doing business. As noted above, monetary investments also provide key incentives to water transfers and the introduction of other modern water management tools, such as conjunctive use plans.

In summary, our nation’s water sources are more “privatized” than may appear at first blush. This private-based water rights system has served the country well. New strains are developing in our largely privatized system, however, as increasing demands on scarce water supplies trigger broad public policy interests in accommodating new water users, in employing more modern water management practices that require more collective cooperation among water users, and in dedicating more water for environmental needs.

Conflicts are breaking out in all of these arenas as private-based water rights holders either resist these new realities, or struggle with how to address them in a manner that is consistent with their traditional water rights. Along the way, our state-based water rights system will be stretched, and tested, in new ways. Persistence, creativity and, in some cases, strong monetary incentives, will be needed to open the door for meaningful change in a water rights system that was designed for a much different time than we live in today. 🌎