



**Water Conflicts in the Arid West:
The Quest for Certainty and Control**
Reed Benson
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By Jeff Nemece '09

Reed Benson discussed three major components of Western water issues: water allocation, law, and policy. Underlying the talk was the question, “Do new challenges like water scarcity call for new approaches in Western water use?” Benson’s presentation began with a map of the United States showing the dramatic differences of annual precipitation throughout the country. There is much more precipitation variability in part due to the steep orographic configuration (causing rain shadow effect) in the West compared to the East. The Southwest is also very dry. In the West, Benson said “water scarcity is what we have; water conflict is what we do.”

Benson went on to discuss the history of settling and greening the desert southwest. Water, used for the beneficial economic activities like irrigation and mining, was essential to make this a reality. The goal was to maximize use of the limited supply of water. The Western states and territories adopted a prior appropriation doctrine of water rights system based on a first come, first served basis. Compared to riparian rights in the East where everybody on a water table should own an equitable portion, the oldest users in the West would get first priority. The advantage to the system was that distant water could be diverted away from rivers which spread growth and development in the area. The rights were better defined than in the East; in other words, rather than everybody fighting over equitability, one person gets it then the next and so on. However, today with the growing population and the high demand for water, prior appropriation is a historically backward looking system. Certainty of water rights once encouraged investment and sped growth but today the archaic water rights system can’t handle the demand.

In Benson’s talk, he argued that prior appropriation is a flawed system because the natural water processes are substantially affected. There is an emphasis on squeezing out every single unit of water (many would say inefficiently) until none remains. This has greatly impacted the river systems of the West. Most river systems are fed by rapid snowmelt from the mountains. For instance, the North John Day River rises rapidly in April, May, and June and the water level subsides in later months. In order to maximize water usage, early Westerners tried to capture the greater levels of water during the spring months with the construction of dams which substantially alters river flows. The West successfully pushed for federal funding of hundreds of water projects for irrigation. The dams stored high flows for use in dry seasons. However, the Westerners didn’t consider the significant water loss due to evapotranspiration. Westerners thought they were increasing quantity and certainty of supplies through dams but in reality they were only exacerbating the loss of water. At first, the supply side “work your way out” mentality of federal projects seemed to work. Today, the West is paying for such short-sighted investments.

The federal side of government acknowledged these drawbacks before the states ever did. There was increased federal scrutiny on the large-scale water operations in the West because the

projects were federally supported to begin with. Benson spoke about how Western states, trying to maintain their control over water, fought through the 20th century to fend off threats posed by federal water legislation. For instance, these states were wary of the federal notion of interstate water laws (equitable apportionment). Many Western states felt that such a sharing system brought even less certainty to their water supply. A potential for conflict, states thought that other states would take their water (Colorado, for security, believed it had the right to take all its water within its state boundaries though the Supreme Court said no). The response to the apportionment issue was interstate agreements called compound contracts both at the state and federal level. The federal government also reserved water rights for federal and tribal lands within states. The response was that state court would always determine the details of those water rights. Further, the federal government had overlying jurisdiction to water management but the Western states in Congress helped push through a savings clause which upheld the respect for any state laws. These instances highlight battles over government jurisdiction and control. The results to the battles continued to favor Western state hegemony and water user certainty. However, the staunch anti-federalist attitude could be viewed more as stubbornness than smarts in the long run as the Western states feel scarcity of water because of overuse and improper management.

With all infighting over the rights to surface water, Benson spoke about how the Western states have now turned to maximize the use of groundwater. Accessing groundwater, which is found deep underground in saturated soil, has become much more feasible with the help of modern technology. Through the 1960s to the 1980s, groundwater intake doubled in part by tapping the massive Ogallala aquifer. Groundwater, given it's not on the surface, was thought to be "drought free." Groundwater also tended to be of good quality and it's there for the taking, just underground. It seemed easy water especially when the rights are very hard to distinguish. At face value, many continue to believe it offers consistent hope for the future of Western water.

Benson stated that even today the use of water in the West continues to fuel irrigation, the dominant factor sucking up 80% of the supply. Public supply of water is a very distant second. Groundwater use has increased substantially especially in cities. And these cities continue to grow at a rapid pace fueling the increased population of states. The top five U.S. states in percentage growth are Nevada, Arizona, Colorado, Utah, and Idaho. Combined with growing energy sector demands that also need water (i.e., cooling machinery), this presents new water challenges in the 21st century. Existing uses, especially irrigation and new demands in the domestic sector, have stretched supplies to the limit combined with severe droughts that have struck the area.

The thought is that we can rely on groundwater. Benson believes this assumption is terribly wrong. Groundwater supply is either leveling off or declining in the West. Even if it is below the surface, groundwater is not drought resistant because it's fed somehow by a hydrologic cycle. Because of over-consumption, perennial streams in Kansas, fed by the Ogallala aquifer, have decreased in flow volume by 37% from 1961-1994. Like the rapid evapotranspiration in reservoirs from massive Western dams, improper assumptions and management of groundwater only contribute to water scarcity. For instance, in Albuquerque, an underground aquifer thought to be limitless is nowhere near what was once thought. This is after the fact the city built infrastructure based on the supposed high level of water availability. Many cities have to

continue to try to use surface water from hundreds of miles away to keep up with high demand. Faced with natural reality, the West needs to get smart about their water use.

Along with population growth, climate change will be a huge threat to the waning Western water supply. It's been hotter across the west and much drier in the Southwest. Snow will shift to rain in some areas and so the spring runoff, which replenishes some supply, won't happen in many instances. It will only exacerbate shortages especially in high use seasons. Benson, along with many others, feels it may be time for new approaches in the West. Faced with substantial population growth, environmental demands (for instance, litigation over endangered species grand silvery minnow found in some depleted water sources), and climate change are now part of Western water scarcity reality.

It seems the supply side mentality is tougher than ever to support. Benson argued that the West is being forced in new directions to actively manage their water resources rather than giving out their rights under prior appropriation. The West is moving towards stronger more active management in terms of its water. Preserving state control isn't going to cut it. The West needs a forward-looking water policy. Although he didn't explicitly say it, throughout his talk Benson hinted that maybe it's time to look at the demand side of water.

Reed Benson's faculty profile: <http://lawschool.unm.edu/faculty/benson/index.php>.

Recent articles: <http://lawschool.unm.edu/faculty/benson/publications.php>.

Three most recent articles:

Dams, Duties, and Discretion: Bureau of Reclamation Water Project Operations and the Endangered Species Act, forthcoming in 33 Columbia Journal of Environmental Law 1 (2008).

Rivers to Live By: Can western water law help communities embrace their streams? 27 Journal of Land, Resources & Environmental Law 1 (2007).

Deflating the Deference Myth: National interests vs. state authority under federal laws affecting water use, 2006 Utah Law Review 242 (2006).

Additional Resources (contributed by Scott Siedor '11)

Tarlock, Dan 2001. *The Future of Prior Appropriation in the West*. Natural Resource Journal Vol 41: 1-32.

Ruhl, J. B. 2003. *Equitable Apportionment of Ecosystem Services: New Water Law for a New Water Age*. Journal of Land Use Vol 19:1: 47-56.

Henderson, Peter. *Climate Change Brings Water Scarcity to the West*.

<http://www.greenchange.org/article.php?id=4108> March 1, 2009.