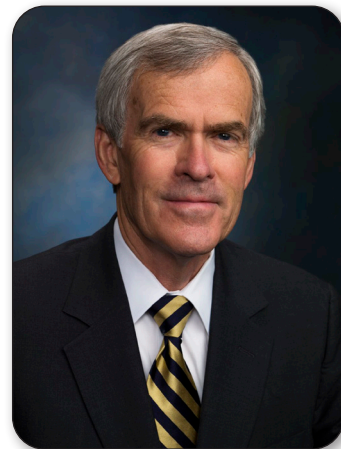


## 2016 Albert E. Utton Memorial Water Lecture: Rethinking Western Water Management

Jeff Bingaman, Former United States Senator  
from New Mexico

*Jeff Bingaman was born on October 3, 1943. He grew up in the southwestern New Mexico community of Silver City. His father was a chemistry professor and chair of the science department at Western New Mexico University. His mother taught in the public schools. After graduating from Western (now Silver) High School in 1961, Jeff attended Harvard University and earned a Bachelor of Arts degree in government in 1965. He then entered Stanford Law School where he met, and later married, fellow law student Anne Kovacovich. Upon earning his law degree from Stanford in 1968, Jeff and Anne returned to New Mexico. They have one son, John.*



*After law school Jeff spent one year as an assistant attorney general and eight years in private law practice in Santa Fe. Jeff was elected Attorney General of New Mexico in 1978 and served four years in that position. In 1982 he was elected to the United States Senate. He was re-elected to a fifth term in the Senate in 2006. At the end of that term he chose not to seek re-election and completed his service in the Senate on January 3, 2013. At the time of his retirement from the Senate he was Chairman of the Energy and Natural Resources Committee. He also served on the Finance Committee, the Health, Education, Labor and Pensions Committee and the Joint Economic Committee.*

*In April of 2013 he began a year as a Distinguished Fellow with the Steyer-Taylor Center for Energy Policy and Finance at Stanford Law School. In the fall of 2015 he taught a seminar on national policy and the Congress in the Honors College at the University of New Mexico.*

First, I want to thank Cathy Ortega Klett and Sam Fernald and the Water Resources Institute for inviting me to speak at the conference this year. I would also like to acknowledge some of the people who gave me information I could use in this talk: John Fleck; former New Mexico State Engineer John D'Antonio; Beth Bardwell of the Audubon Society; and Peter Davies and the team at Sandia National Labs who work on water security issues. I also want to acknowledge New Mexico First and the very good work they did with their Town Hall on water issues in 2014.

I will use my few minutes today to discuss three questions:

- 1) What are our water policy objectives in the West?
- 2) How well are our current laws and policies designed to achieve those objectives?
- 3) How can we do better?

Obviously, before we can judge the laws and policies in place, we need to settle on what those laws and policies are intended to achieve. Here is a list of five objectives I believe most people would believe are reasonable objectives for us to pursue:

- 1) Ensure an adequate supply of water for current and future needs;
- 2) Ensure that our uses of water are sustainable;
- 3) Protect valid existing water rights;
- 4) Ensure our uses of water are consistent with protecting the environment; and
- 5) Facilitate the use of water for highest value purposes.

I'll discuss each of these objective briefly.

### First Objective

#### Ensure an adequate supply of water for current and future needs

If we want to have an adequate supply of water, we need to have a clear idea both about our current and future needs and also about what we can expect as far as future supply is concerned. And you can't make projections about future supply without coming to terms with the issue of climate change. The IPCC (Intergovernmental Panel on Climate Change) projections for the Southwest are a cause for concern. They project hotter weather, less precipitation, less snowpack, and a general trend toward a more arid landscape. For the Rio

Grande the projections are for the average annual flow in 2100 to be half of what it was in 1950. For the Gila River, right after this lunch, Professor David Gutzler from the University of New Mexico will talk about what can be expected.

I believe that most of us expect demand for water to remain high in the Southwest in the coming decades. At the same time, most of us anticipate less supply to meet that expected demand. The question is how to accommodate that reality.

Some of the problem can be solved by more attention to conservation. There is a general recognition of the need to conserve water, but in the category of water usage for irrigated agriculture, it seems to me in many places we lack the incentives for serious efforts at conservation. It also seems clear that as a practical matter, we do not have in place the mechanisms for effectively monitoring water usage.

There are also some possibilities for finding new sources of usable water (for example, from brackish water sources or from water reuse), but it is hard to see how those sources can be substantial enough to offset expected reductions in supply.

### **Second Objective**

#### **Ensure that our uses of water are sustainable**

Historically we have not worried that much about sustainability. In his new book, John Fleck does a good job of describing ways in which current laws and policies in western states are focused primarily on regulating the appropriation of water and protecting valid existing rights. Historically there has been less concern about such problems as sustainable use of water, maintaining instream flows, and the problem of depletion of groundwater aquifers.

When you look up the definition of “sustainable,” the dictionary says “able to be maintained at a certain rate or level.” A threshold question is “What time period are we talking about?” Do we want to be able to maintain indefinitely the current rate at which we use water? Or just for 100 years? Or just for 50 years?

If our objective is to maintain our current level of water use for a long time, then we obviously need to focus on how that supply of water is being replenished. We all know that surface water is replenished with precipitation. However, when it

comes to groundwater, a more careful analysis is required. Some of our groundwater aquifers are replenished from surface water, but many are not replenished in any kind of reasonable time period.

It is hard to argue that the depletion of groundwater is sustainable if the groundwater comes from aquifers that are not being significantly recharged. The Ogallala Aquifer, which underlies much of eastern New Mexico, is the world’s largest groundwater basin, and it is being depleted much more rapidly than it is being replenished. Everyone is aware that the use of groundwater from the Ogallala Aquifer for large-scale irrigation is not sustainable. I think it is fair to say that our laws, policies, and practices, and the laws, policies, and practices of other states that depend on the Ogallala Aquifer, have shown themselves to be totally inadequate to deal with this issue.

### **Third Objective**

#### **Protect valid existing water rights**

Our efforts at managing water in the West have focused substantially on how to determine the extent and the priority of water rights. No one questions that valid existing water rights should be protected. But we have had substantial difficulty in our efforts to use the courts to determine what those rights are. I believe I am right that there are now twelve active adjudications in the state: half in federal courts and half in state courts. And the adjudication of rights in the Middle Rio Grande has not even begun.

The present system of adjudicating rights in our courts has created long-term uncertainty about what rights are valid. We all know the old legal maxim—“Justice delayed is justice denied.” For many of those who hold water rights—justice has certainly been delayed. I believe that later in the conference you will get an update on the current status of the numerous pending adjudications in the state.

### **Fourth Objective**

#### **Ensure that our uses of water are consistent with protecting the environment**

There are many subjects related to this overall objective. I will just mention two of these. First is the need to ensure that water is kept free from contamination and used responsibly. Produced water from oil and gas operations is a case in point that requires strict regulation.

Another obvious priority needs to be maintaining wet rivers and maintaining and restoring habitat. In his new book, *Water is for Fighting Over: and Other Myths about Water in the West*, John Fleck talks about how, in connection with Colorado River water, we have built a “vast institutional and legal apparatus to manage the water’s distribution.” It seems to me that we have our own major institutional and legal apparatus right here in our own state as well. A major challenge is to be sure that it does not create barriers to achieving this objective.

#### **Fifth and Final Objective Facilitate the use of water for the highest value purposes**

Eighty percent of the water put to beneficial use by humans in the West is used in agriculture. And a substantial portion of that goes to growing alfalfa. John Fleck makes the point in his book that “alfalfa in particular and pasture crops in general are the West’s lowest value major crop.” Is there a demand for some of that water elsewhere? If there is a demand, how do we facilitate the use of some of that water for higher value purposes?

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So if that is a reasonable listing of water policy objectives, I would conclude that we have built a set of laws, policies, and administrative practices over many decades—many of which are not that well designed to help us achieve our objectives. We need more flexibility in the systems we use to manage water. As John Fleck put it in his talk, “We need to increase our adaptive capacity.”

Adjudications can and should continue, but while those adjudications grind on, the gap between the demand for, and the supply of, water here in New Mexico and the West, will continue to grow. To meet that challenge we need to pursue alternative ways to administer and manage water.

There is some good news in all of this. Fortunately there are some models we can look at for simpler and quicker ways to meet our objectives. These are ways to administer water that sidestep much of the legal and institutional apparatus that now exists. Here are six such models, all of which have promise for helping us meet our objectives.

#### **Shortage Sharing Agreements**

For students of history who have looked at New Mexico acequias—the idea of water sharing agreements is an old idea. Each year the mayordomo of the acequia works out with the acequia members how the water available that year is to be allocated depending on the plans of each member. Although not often thought of as such, that is a shortage sharing agreement.

We also have other examples of shortage sharing agreements that have worked well in our state. In San Juan County, beginning in about 2003, the power plants and the farmers entered into an agreement to share the available water in a way that is generally considered to have been a success.

#### **The Strategic Water Reserve**

Another positive step we have taken in New Mexico has been the creation of the Strategic Water Reserve. The Reserve gives the New Mexico Interstate Stream Commission (NMISC) a management tool for the state to acquire senior water rights and water from water rights owners using leased, purchased or donated water, water rights, and storage rights. The Reserve can be used for two purposes:

- 1) To comply with interstate river compacts; and
- 2) To assist the state and water users in efforts to benefit threatened and endangered species.

The NMISC has focused on using water rights previously acquired for the Reserve to offset depletions resulting from habitat restoration projects throughout New Mexico.

#### **State Approved Water Conservation Plans**

Beginning in 2009, the State Engineer began approving plans to allow water rights holders to leave water in stream as part of a State Engineer approved water conservation plan. Under this program, water right owners may enroll in a State Engineer approved water conservation plan allowing them to fallow acreage and not divert from a stream or well. This strategy can result in increased river flows while protecting the owners from forfeiture or abandonment of their water rights. This statutory program is a unique tool in New Mexico’s efforts to maintain instream flow in our rivers.

### **Active Water Resource Management Initiative**

I believe John D'Antonio spoke at your conference about this a few years ago. There was a legal challenge to the State Engineer's authority to proceed with this initiative, but in November 2012, the NM Supreme Court upheld the Engineer's authority to proceed. What are now needed are basin-specific rules to establish a path forward for voluntary short-term transfers of water to be used for a higher value use.

### **The Audubon Initiative**

In the case of San Juan/Chama water coming into the Rio Grande, we have seen a successful initiative this year by the Audubon Society. The Middle Rio Grande Conservancy District has allowed four Pueblos plus the Las Campanas Resort to forego voluntarily the use of 800 acre-feet of water in order to maintain the flow of the Rio Grande for a distance south of Albuquerque. The purpose is to increase vital streamflow needed by fish and wildlife in stretches of the river vulnerable to drying out during the late summer months. This collaboration was estimated to increase flow in the river channel for a 35-mile stretch for nearly 24 days.

### **Proposal for Native Water Leasing in the Middle Rio Grande**

Last week I spoke to Commissioner Estevan Lopez about the efforts the Bureau of Reclamation is making to facilitate the voluntary use of native water for environmental purposes in the Middle Rio Grande Basin. At the urging of our two Senators, Reclamation is working to put in place a pilot program for accomplishing this. This is not yet a done deal, but it is a very promising proposal. This is being developed as a pilot program to aid in habitat restoration along the Rio Grande. The participants are the Bureau of Reclamation, New Mexico Office of the State Engineer, and the Middle Rio Grande Conservancy District. The hope is that this can become an ongoing program and mechanism for using native water for environmental purposes.

### **Conclusion**

If the objectives I have mentioned are the right objectives, then it seems to me we can do a better job than we have in aligning our laws and policies and practices to achieve them. The six examples of alternative ways to administer and manage water in our state show that it can be done. I hope we will take these examples and build on them in the coming years.