

**Transformational Solutions for Water in the West  
Albuquerque, NM**

**Senator Tom Udall (D-NM)**

I am very excited to see Sandia stepping up and playing a key role responding to one of the most important challenges facing New Mexico and the West—water scarcity.

Today's meeting is about 10 miles from the Rio Grande, that vital river, sustaining life in this part of the world for well over 1,000 years.

The long-term mean flow for the river at this time of year is over 600 cubic feet per second. And now? Just over 100 cubic feet per second. Of course it could be worse – and it has been worse.

Here's a picture taken when I was in Southern New Mexico in April of this year at the Rio Grande. Or as some are calling it these days, the Rio Sand. That's some dry New Mexico humor for you.

The reason for today's meeting is sobering. Our water supply and our consumption is out of balance, even with ongoing efforts at conservation. Many water professionals who are here today know this in very technical and precise terms. Farmers know this in very real and personal terms.

I believe New Mexicans also have a growing sense of this reality. We have the responsibility to help communicate what we know, what we don't know and work for collaborative solutions.

Today's meeting stresses a crucial point. We have to think outside the box. Solutions need to be "transformative."

We know this drought is the worst since at least the 1950s. We don't know how long it will last, but history shows it could be a very long time.

Our part of the world has run the gamut from relatively wet times to relentless drought. According to research, the last 100 years or so has been relatively wet. That's our baseline. Then we have to talk about climate change.

Climate scientists tell us that rising global average temperatures do not "cause" specific droughts or specific catastrophic fires—like the recent ones in New Mexico, Arizona and California. But as James Hansen says, climate change is "loading the dice" for more extreme events. That's a gamble we can't afford — it's bad for the environment, bad for the economy and bad for communities.

A Sandia study estimated the economic impacts state-by-state looking at the expected impacts of climate on water supplies. The total costs of climate change due to water supply impacts are staggering. They are estimated at \$1 trillion dollars for the nation as a whole over the next 40 years. The total cost to New Mexico would be over \$25 billion dollars.

A recent Los Alamos study was equally alarming. Looking at the effects of climate change on Northern New Mexico's forests, it found that they could be nearly all gone in 50 years. That's a major impact on our water supplies as well.

These are big concerns, big challenges. So last year, I teamed up with the New Mexico State University and the Water Resources Research Institute to co-host a water conference in Las Cruces. We listened to experts with different perspectives. We heard from all the living former New Mexico state engineers and from folks in the community.

Earlier this year, we released a white paper on what we had learned. That paper is available on my website. I would like to flag a couple of the most interesting points.

- First, water information is lacking—especially with groundwater. Even worse, water information is at risk of being lost. Federal funding cuts are putting America’s streamgauge network at risk. In response, I am making basic water information and science a priority in my role on the Senate Appropriations Committee.

- Second, there is great untapped potential for water conservation. But a key question often goes unasked — and unanswered — is: where do the water savings go? If they go to allow more water use elsewhere, then we haven’t conserved water. And in fact have made the system even less resilient to future shortages.

- This last point raises hard questions: what are the water resource limits to growth in the West? How do we make our communities resilient? What are the transformative solutions? Research—including from institutions like our national labs—is necessary on this point.

- Finally, when people see a big problem, they want a big solution. The history of the West is marked by massive federal water investments: the Hoover Dam and Lake Mead, the Rio Grande Project. Most observers think this era is over. The financial and environmental obstacles are too great. We can’t count on a pipeline from the Mississippi River. We have to be more creative.

Last week, America marked the 50th anniversary of the March on Washington, led by Dr. Martin Luther King. In his famous speech 50 years ago, he spoke of “the fierce urgency of Now.” He also warned against the “tranquilizing drug of gradualism.” That’s how I feel about water in the West. The danger is clear, and we have to act to protect our way of life in the West.

I’m hopeful about everyone here’s work. I’m doing all I can in my position, but elected leaders are going to need your help. In Dr. King’s time, the United States Congress was not known for embracing the fierce urgency of Now.

Today, we still have that problem. But here are some things I am working on – where we are seeing some movement. The Senate Energy and Water Appropriations bill for next year includes important language for a new water acquisition program on the Rio Grande. This was inspired by the water conference and the White Paper.

The goal is to build a long-term water supply and to ensure we have a living river that can meet the requirements of the Endangered Species Act but avoid draconian regulatory actions. The provision calls for sensible efforts, including water metering for irrigators on the Middle Rio Grande, a geographic database of water rights, identifying willing sellers or leasers and a pilot acquisition program through the Bureau of Reclamation. These issues are easy to start conflict, but I am encouraged by the cooperation.

- Federal agencies are moving towards this kind of program even though changing bureaucratic direction is hard.

- The Middle Rio Grande Conservancy District is voluntarily doing the right thing, working collaboratively.

- And environmental groups are working on outreach and solution—not just litigation. We're going to have to see a lot more of this.

Next week, the Senate plans to debate energy efficiency legislation. It is a modest, but valuable bipartisan bill. I am proposing an amendment that addresses the energy-water connection.

Treating water is an expensive and energy intensive process. EPA estimates that 14 percent of all treated water is lost to leaks – wasted water, wasted money and wasted energy.

One of the ideas explored in our White Paper was “smart water” infrastructure, systems and sensors that will be able to determine drops in water pressure, that can identify leaks and breaks immediately, or even before they occur, investments that save utilities—and water users like you and me— both water and money – and reduce emissions from wasted energy.

It's a modest bill, so it's a modest amendment: \$15 million dollars to jump start pilot projects to lower the costs of innovation and implementation nationwide.

We have an impressive and growing number of allies in this effort. We're working with the major water utility associations, with the US Council of Mayors, with DOE and EPA and companies like GE, Intel, IBM and American Water.

We're going to cover some of these issues in more depth. How much water do we have, the energy-water connection and the federal role in water management. But that is enough from me. I am most excited to be here and learn from you. I am happy to do some Q and A, but feel free to offer suggestions, ideas or comments as well. Following that, I am also really looking forward to moderating the next session. Thank you and I look forward to the discussion.