

Tom Turney has served as New Mexico State Engineer since 1994. A professional engineer for more than 20 years, Tom is licensed in the fields of civil, electrical and architectural engineering. He earned both bachelor's and master's degrees in civil engineering from NMSU. Tom is a native New Mexican, his grandfather having settled in Jornada, New Mexico in the 1880s. He came to the post of state engineer at a time when the role of state government in the protection of the state's water resources is critical. His goal is to develop a water resource strategy that protects existing water right holders, while at the same time addressing the growing population pressures on the state's limited water supply.



Editor's Note: The slides referred to by Mr. Turney in this paper were not available for the conference proceedings.

Water Issues Facing New Mexico

Tom Turney
Office of the State Engineer
PO Box 25102
Santa Fe, NM 87504-5102

This morning I want to present our request to the state legislature. It describes some of the issues facing the Office of the State Engineer (OSE) as well as solutions to address these issues. I'll give you a brief overview of some external and internal challenges facing the state. Then I'll talk about Active River Management, which includes three aspects: measurement, management, and markets. Also, I want to talk about the funding we will request from the state legislature, the ongoing WATERS database project, state adjudications proposed legislation, and finally, regional water planing.

For many decades the OSE has been issuing permits for water rights. However, there is more to our office than merely overseeing appropriations. It is time to become concerned about water for the state's future. Basically, we need to make the same amount of water go further. To do that requires a legal and a planning infrastructure. We must have

hydrographic surveys and adjudications completed. We must implement plans for demands to meet the available water supply. This approach requires tremendous amounts of basic hydrologic data to support our computer modeling efforts.

External threats come from our neighbor states. For example, the state of Texas, imposed "challenges" on us this summer—we don't call them problems anymore, we call them challenges—Colorado challenged us on the Costillo Creek and the La Plata River, and we underdelivered on the Pecos River. We also have challenges dealing with Arizona and California.

We have a number of issues with federal agencies. We have started to see cut-backs of water development projects and data collection, and scientific investigations. Unfunded federal mandates that include minimum flows for the Endangered Species Act continue to challenge us.

We must remind ourselves that New Mexico is a desert state and we have a finite supply of water. We are gradually reducing our groundwater supply—we are, in fact, mining our aquifers.

In the future, there is a good chance we will be faced with a reduced surface water supply. Over the last 50 years, the Rio Grande has increased its flow by 30 percent. The Pecos River has 10 percent additional flows. The San Juan River has increased by 10-15 percent during 1950-1980. The Gila River is running at 10-15 percent above average.

The Office of the State Engineer (OSE) must make the transition to become an Active River Management agency. Such an agency would manage our finite water supply in accordance with state water law. It would be responsible for delivering water to those who have water rights.

We need to investigate how to replace water in the aquifers that we are mining today.

Water markets must be developed. They are the only effective means to re-allocate water.

To demonstrate the complexity of Active River Management, I want to show a slide (*ed. note: slide not available*). Active River Management includes water development, water regulation and restoration. On the left is a bar representing what will happen in our office internally. To manage the state's water resources, we must create the necessary internal structures.

We are at an ideal time to begin Active River Management. About two years ago, the legislature initiated Performance-Based Budgeting. For the last year we have implemented this initiative. We have completed a major office reorganization. Performance-Based Budgeting requires the agency to become goal oriented. As an example of reorganization, the Hydrographic Survey Bureau used to function on its own. When the Bureau completed a hydrographic survey, it would go on and start another. There was little coordination with our Legal Division on how these completed surveys could be produced through the court. We have now physically moved the Bureau next to the Legal Division. The Hydrographic Survey Engineer is located in an office right beside the legal attorney pursuing an adjudication. Now when hydrographic staff finish a section of a survey working in consultation with the legal staff, they begin moving surveyed claims through the court system. This change is working well and is moving existing adjudications forward at a more rapid pace.

We also have established a protested Hearing Unit. I am sure some of you are involved with this unit. We have full-time hiring officers assigned to the Hearing Unit and have established an Administrative Litigation Unit to represent the Water Rights Division before the Hearing Unit.

Our WATERS database, which is a unified database designed to support all programs in the office, is being updated with information daily.

Let's talk now a bit about the three components of an Active River Management. The first includes measurement of flow diversions, groundwater levels, and the acreage of land being irrigated. After measurement, the next step is management. This includes delivering water to senior water rights holders in a priority based system. Finally, we have water markets which necessitate a willing seller and a willing buyer.

We receive lots of complaints concerning the length of time it takes to process a water transfer. The backlog is being reduced. The Hearing Unit now has 185 protested applications. This is not an unreasonable number. Currently, we have 650 unprotested applications pending. We receive about 50 new applications a month. One way of looking at this is to say we have on average a 13-month turn-around time for unprotested applications. As recently as four or five years ago, we had applications that had been sitting around for 30 years. I don't mean to imply that we have eliminated applications from years ago, but we now have a process to address applications.

One thing I worry about is increasing depletions. If we increase depletions, we jeopardize our ability to make Compact obligations. The absence of adjudications makes water transfers highly questionable.

We have recently heard a lot of discussion about water banks. Water banking should be implemented only when our house is in order. As of this morning, our house is not in order.

Concerning water rights, we must comply with our various Compacts. For example, along the Pecos River, if I don't comply with the Compact and curtail water usage, there will be serious economic damage—some have estimated in the order of \$240 million. We have already spent \$50 million addressing this issue.

Along the Rio Grande, there is a lot of development that is eroding the state's ability to meet its Compact obligations. There are delays in the completion of river projects designed to protect Compact

deliveries. There has been a lot of discussion in the press about water supplies for the City of Santa Fe. The City of Santa Fe must develop a water diversion infrastructure. In 1971, the City of Santa Fe was given a permit for 10,000 acre-feet of water with the assumption that the City would secure water rights for this amount. The City is pumping 5,000-6,000 acre-feet of water a year and has only secured about 300 acre-feet of permanent offsetting rights. Ultimately this pumping will catch up with the City. It is like selling short on the stock market. You're going to have to secure additional water rights to pay for the water pumped. We have issued a number of these types of dedication permits. We have river depletions when many existing permits are fully exercised. We are going to see river depletions because of economic development, changes in federal activities such as the Endangered Species Act as well as habitat restoration.

Active River Management will require us to basically offset these new uses. We are going to take measurements of water, both acreage and water diversions. Markets will be needed to meet the state's water demands.

We also must look at the water development projects occurring around the state. These include the cities of Santa Fe and Albuquerque, the beneficiaries of San Juan-Chama water. Incidentally, let me tell you why Santa Fe needs to get a perpetual water supply. The OSE approves all subdivisions. Recently we recommended denial of a 300-unit subdivision in Santa Fe County because of lack of a 100-year water supply, per county subdivision regulations. Unfortunately, we will have to continue to do so if subdivisions use San Juan-Chama water as their supply. The City's contract for this water expires in 2016. There is no guarantee it can be renewed.

Another concern is maintaining a water supply in the eastern part of the state. The Ogalala Aquifer is declining. To provide water, there is a project to bring a water transmission line from Ute Dam to supply the Clovis/Portales/Tucumcari area.

We have 16,000 acre-feet of water available to us as a result of the Central Arizona Project water. This water may be needed in Deming or Silver City. Recently, I heard Santa Teresa may need this water.

Santa Teresa is an interesting predicament. Water rights are going to become a major issue.

The Animas La Plata Project will provide water

for Farmington, Bloomfield, and Aztec. A water supply is necessary for the Navajo communities along the front range of the Chuska Mountains as well as the City of Gallup.

Some of the desired outcomes to do this within the office are some of our office functions. We must have a very strong data collection effort. This is essential for Active River Management. We are working with the Elephant Butte Irrigation District and the Middle Rio Grande Conservancy District to install measuring devices. Water flow devices will be installed in San Juan River within the next four years.

Concerning our water supply and well applications—the State Engineer does provide permits for new wells taking into account whether the new well will affect other wells in the area. We need to have a thorough understanding of the hydrologic system so we can approve or deny these permits. We also need to augment our data collection and to be able to analyze data.

We must develop a State Water Plan. I have requested about \$1.5 million to complete the regional water plan.

The blue bar represents the Water Administration Technical Engineering Resources System (WATERS). WATERS will ultimately include a GIS component. We hope it will help our staff as well as people outside. We now have our basic WATERS information on our web page. About a year and a half ago, we were getting 7-8 hits a day and now we are getting 70 a day. Those hits come mostly from people wanting information on domestic wells. We are requesting a little more than \$14 million over the next four years in order to put in all the files in our office into the WATERS database. We have hundreds of thousands of files. These documents are priceless. One document might be worth millions, perhaps billions of dollars. The documents must be preserved.

Water right determinations are very important. We need to continue completing hydrographic surveys, error and omission claims, adjudications, and move the adjudication process through the court. Last week we had a formal signing with Judge Conway in Federal District Court. We closed out two adjudications, one on Indian claims on the Jemez River and another on the Red River. These cases have been sitting out there for 17 years. Adjudications establish who owns the water rights and indicates the priority year, which is of absolute

importance to administering water by priority. Adjudications will allow the State Engineer to develop a plan for effective administration during a drought and it will allow us to process water right applications more effectively along with meeting Compact obligations. These adjudications are expensive but they guarantee a long-time future for the state of New Mexico.

We are requesting \$15 million over the next five years for the lower Pecos and lower Rio Grande.

Indian claims and negotiations are beginning to occur. We are making progress on Navajo claims. I'm sure you will start to see news on that within the next few months and a formal signing between the President of the Navajo Nations and the Governor of New Mexico. The state is going to have to participate financially in settlement of Indian claims. Last year the legislature set up \$2 million as a settlement fund.

The state is going to have to get involved at a very different level than it has in the past. One example is on river operations. We have an interesting working relationship with the Bureau of Reclamation. On one hand they are an adversary but even though we are adversaries, we must be partners, too. We need money for certain operations and maintenance. Senator Domenici passes this money through the Bureau of Reclamation so we must be partners.

We must comply with federal environmental laws, the Clean Water Act, the Endangered Species Act, and the National Environmental Policy Act. Every water user in the state is impacted by these laws.

We have three critical lawsuits that will shape the future of the state of New Mexico. First is the *Silvery Minnow vs. Martinez*. This suit deals with upstream reservoirs and endangered species on the Rio Grande. A second suit is one initiated by my office. It deals with the critical habitat rule promulgated by the Fish and Wildlife Service. I felt that people had the right to know where the water to satisfy the critical habitat was going to be coming from, whose water rights they are taking, and what is going to be the economic impact to the state.

Last week we had a major victory for the state on this suit. The Judge gave the Fish and Wildlife Service 120 days to prepare an Environmental Impact Statement.

On the Pecos River, we have another environmental lawsuit. The U.S. Fish and Wildlife Service has established a minimum flow. It is based upon causing rippling of the river bottom, a component the Service says is necessary for spawning of the fish.

We are requesting funds for the state to participate in defense of these lawsuits. We will hire hydrologists and biologists so we can understand what is going on.

The State for the first time has a cooperative status in preparation for an Environmental Impact Statement on the Rio Grande. This is the first time the State has ever done a joint lead. The Bureau of Reclamation did not want us to participate as a joint lead. We had to develop Congressional support to become a joint lead. The Corps of Engineers were cooperative from the beginning and were willing to let us sit at the table. If it is a highly successful process, it will have very powerful consequences for the state.

Active River Management is the Office of the State Engineer/Interstate Stream Commission answer to the complex water challenges that face New Mexico. It includes 3 Ms— measurement, management, and finally markets.

But it is not enough just to accept Active River Management as a phrase. The concept must also be embraced. Active River Management will not happen overnight. It's going to take time along with unprecedented commitment by all.

Thank you.