

**UNM School of Law**  
**2011 Natural Resources Speaker Series**  
**Presents**  
**Judge Matt Reynolds of the Seventh Judicial District Court**  
**On How We Can Prepare for the Great Drought of the 21<sup>st</sup> Century**  
**August 31, 2011**

**Thank you** for introducing me, and thank you all for coming. As a disclaimer, these are my personal views and thoughts. I want to thank the sponsors of this talk: the Natural Resources Program of the University of New Mexico School of Law, the Utton Transboundary Resources Center, UNM School of Law Environmental Society, and the Natural Resources Journal. I also thank the Natural Resources, Energy and Environmental Law Section of the State Bar of New Mexico for its support of this program. I want to thank in particular Susan Kelly, who has dialogued with me and others concerning the Appropriative Rights Model Water Code and the ways it can be incorporated into larger discussions regarding the western states' water laws.

**Next, I want to thank my wife Susan Reynolds and the Jornada del Muerto.**

Susan and I have been married for thirty years, and we have discussed for some time now global water issues and the challenges facing New Mexico. The impetus for this talk came three years ago from an extended stay on the Jornada del Muerto, when I drove a chuck wagon, that is, our Chevy truck, for Susan's walk from Las Cruces to Santa Fe, 309 miles in 19 days. She was acting as an unofficial ambassador to encourage children to walk outside with their families. Susan visited with hundreds of elementary school children along parts of the ancient route of El Camino Real and gave a talk to adults at the Camino Real Center. Susan's journey began at Jornada Road on the eastern edge of Las Cruces where she was handed a letter from the Mayor of Las Cruces to deliver to the Mayor of Santa Fe, the old-fashioned way: by foot. The Jornada Road

takes visitors up to the USDA Jornada Experimental Range. The USDA folks were gracious enough to let us camp there that night in our truck and to continue the walk the next day through their protected areas.

We had scouted the route for some weeks ahead of Susan's walk, but being out in the desert, with criss-crossing paths and no road signs was confusing to me. My job was to leapfrog Susan every mile or so, give her water, and let her know which trail led us to a main road towards Engle. Susan had a GPS, but the directions were not helpful out there other than the basic orientations. In my eagerness to find the way out of the USDA sanctuary and onto the right path, I lost Susan. It was a hot April afternoon and because she trusted me to get to her regularly, she had no water. For what seemed like forever, I finally found her sitting peacefully in the dirt, waiting for me. She had conserved her energy by staying still and playing with a few ants that were gathering around her. It was with great relief that I gave her water. What really struck me was how much Susan trusted me, especially since she knows how easily I can get lost on the trail. If that wasn't bad enough, the next day I lost her again and this time found her standing in a desolate spot surrounded by hundreds of tiny bones.

I became much more careful after the second time, and Susan did indeed make her backcountry journey through the Jornada and then along the Turquoise Trail to deliver the Las Cruces Mayor's letter on time as scheduled to the Mayor of Santa Fe in the Santa Fe Plaza, after a stop to give thanks at the San Miguel Mission. As Susan's support crew, I had a lot of time in the desert to think. I pondered the history and future of this enchanting state, especially about water, that precious, and sometimes disappearing, source of life.

Which brings me to the topic of this talk: How We Can Prepare for the Great Drought of the 21<sup>st</sup> Century. In the flyer advertising this program, I made a statement followed by two questions: “2011 has been historic as a year of record-breaking drought and as the centennial of the New Mexico Constitution. Is our legal framework prepared for a drought of longer duration? Is now the time for a comprehensive revision of the New Mexico Water Code, using the Appropriative Rights Model Water Code as a touchstone and the New Mexico Constitution as a foundation?”

I intend to answer these two questions in this speech, as part of my submission to you of a step-by-step approach for preparing for a long-term drought in New Mexico. I’ve divided this talk into five steps, with a caveat that these steps are primarily a way to organize my thoughts for your consideration and are certainly not meant to be exhaustive analysis of this potentially overwhelming topic. Rather, they are intended to be conversation pieces, to stimulate further discussion among us.

The five steps are these: Step One: We Watch for Danger Ahead; Step Two: We Seek Guidance from History; Step Three: We Look at the Strides We’ve Made; Step Four: We See the Big Picture; Step Five: We Find Common Ground. Each of these steps is a simple declarative statement employing a visual verb: We watch, seek, look, see and find. Verbs of sight are concrete forms describing the attainment of wisdom, which is the one quality most required of a people preparing for a great drought. Homer’s Iliad and Odyssey use a phrase for one who is wise: “He sees forward and back.” Looking forward and back, we can acquire the wisdom necessary to make the right choices for our people’s future.

**So let's take the first step: We Watch for Danger Ahead.** I do a lot of driving in my job, so highway metaphors easily come to mind. We know the signs for dangerous curves, slippery roads, and cattle, elk or deer crossings. These signs are helpful so that we can be more alert and careful in our driving. It's common sense that the first step for any disaster preparation is to recognize the threat facing us. When we don't have enough rainfall or snowmelt over the course of a season, that can be called drought. The scarcity of water impacts us severely: our water supplies, our crops, livestock, other plants and animals, our livelihoods and, in the worst-case scenario, our very lives. The Palmer Drought Severity Index lists various degrees of drought, with the worst being the exceptional drought. Nearly half our state has been in exceptional drought this summer, and the drought has been a major cause of the devastating fires across New Mexico. 2011 has set drought records for us and sister states in the southern U.S., most notably Texas, where three-fourths of the state is in exceptional drought.

Our land can bounce back fairly quickly from a short-term drought, but one that lasts several years can have much harsher consequences like the Dust Bowl of the Thirties, which lasted seven years or so and the drought in the Fifties, lasting at least five years. We haven't had lengthy droughts like these for over fifty years, but if long-term cycles can give us guidance, we're due for a major drought soon. The droughts of the 20<sup>th</sup> century were merely average in severity and length compared to New Mexico's other major droughts, which can be traced by tree rings back 2,500 years.

Something called the Great Drought of the 21<sup>st</sup> century may not happen to New Mexico. It's a term that can only be anticipated if a drought as severe as the one we are currently experiencing expands to the length of the multi-year droughts of the 1930s and

1950s. The saying “Hope for the best, but prepare for the worst” aptly describes how we should be approaching the likelihood of a long-term drought here in the Land of Enchantment.

Watching for danger ahead gives us all an opportunity to anticipate and act thoughtfully. In any task facing us, at some point we must take the knowledge available to us and act upon it, especially when a crisis looms. When it comes to a large-scale disaster facing a people, waiting until the crisis has already arrived to take concerted action may be too late, and all that remains may be panic, chaos and the resulting Draconian measures.

**Now let’s move on to Step Two: We Seek Guidance from History.** The original meaning of “history” is a Greek word for research. By researching how others have handled resource management in the past, both ancient and recent, we can recognize basic principles of what has worked for them and what may therefore work for us in preparing for long-term drought.

The longest drought in western North America lasted more than two thousand years, starting about 5500 B.C., called, among other names, the Altithermal, the Holocene Climatic Optimum, the Long Drought and the Great Drought. When this epoch was first discovered in 1948, it was thought that humans had deserted the land where it was hottest and driest, but more recently it has been recognized that some people adapted to the land. An example of this adaptation is seen at the BlackWater Draw well near Clovis, dug by resourceful people during the worst of times. So, adaptation should be recognized as an ancient principle for us to embrace, and in fact it has been recognized as a basic principle for resource managers since the 1970’s, called adaptive management.

Along with the principle of adaptation, other lessons from history can teach us how to prepare for long-term drought. In the Book of Genesis, Pharaoh dreamed of seven cows coming out of the river, fat and fine, and feeding in the meadow. Then seven other cows came out of the river, gaunt and ugly, and the skinny cows ate the fat cows. Pharaoh awoke from his nightmare and upon falling asleep again, he dreamed a second time, of seven heads of grain on one stalk, plump and good, only to be swallowed by seven thin heads of grain, blighted by the east wind. Joseph interpreted the dreams as describing one event: a seven-year drought following seven years of plenty. Through divine inspiration, Joseph proposed a plan to Pharaoh for storage of some of the grain during the good years, to be distributed to the people during the lean years. Pharaoh appointed Joseph as the chief administrator, to be in charge of collection and distribution, with every city of Egypt storing grain for later use when the drought hit. And as we know from the Bible story, the plan worked. While everywhere else there was famine, Egypt was fed and became the source of bread for its neighbors.

Two lessons we can glean from the story of Joseph and Pharaoh are first, storing up resources in the good times is necessary for survival in the bad, and second, central administration works, especially in a crisis. I'll speak more of the storage principle later in this talk, but let us focus on the principle of central administration, since it is named as one of the four hallmarks of successful water administration as described in a recent study by UNESCO (the United Nations Education, Scientific and Cultural Organization). UNESCO brought together water scientists and water lawyers, because "currently, scientists have little appreciation of what science is being used in the development of legal instruments, [and c]onversely, lawyers are poor in communicating to scientists the

gaps in technological knowledge necessary to improve legal instruments.” The series of dialogues between the scientists and the lawyers led to global research on water projects resulting in a book published in 2006, entitled *Hydrology and Water Law: Bridging the Gap*. As part of the research process, UNESCO created a program to assist scientists and stakeholders, river basin communities, water policy experts, lawyers and water resource managers to communicate better so as to create and implement robust policies and laws that encourage good water resources management. Quoting from the book’s preface, “The water policy – water law – scientific research interface is one of the ‘last frontiers’ in integrated land – water resources management.”

The UNESCO studies in the book analyzed eleven major water planning efforts in all the inhabited continents, including two programs in the United States, first, Arizona’s Upper San Pedro Basin and second, the Great Lakes region, particularly Lake Erie, and their interfaces with the neighboring countries of Mexico for the Upper San Pedro and Canada for the Lake Erie project.

The global case studies in the UNESCO book reveal four characteristics of successful water policy implementation:

- (1) Wide stakeholder consultation and continuous involvement in defining priority water issues and the scientific information and water policies and laws required to tackle these are critical elements to ensure the longevity and sustainability of integrated water resources management;
- (2) Central to the success of many integrated schemes is the collation and free sharing of (good) hydrological and other water-related data. Most progress is

made when a single authority is mandated and resourced to produce a well designed and accessible data base;

(3) Pilot schemes are a very effective way to make progress when tackling the complexity of water resource management issues across large heterogeneous areas, diverse in terms of biology and physical characteristics, as well as socio-economically;

(4) Institutional fragmentation, both scientific and operational, is a major impediment to achieving effective and integrated water resources management. Operational progress appeared to be most successful where a single (central) authority was given basin-wide responsibility for water resources that is backed by appropriate water laws and institutional arrangements.

To summarize the four points learned from the global research on implementing water initiatives: First, stakeholders must be involved continuously, from the start of the process for creating new water initiatives and thereafter, and these initiatives must be based on solid science. Second, a good data-base for water information is necessary. Third, pilot projects are effective, and fourth, central management works.

These four points make sense. It's not enough that a program is good, it must be perceived by the stakeholders as being so and accepted as such for it to work effectively. Ready access to information is key and in the case of water, knowing just where the water is, how it's being used and how much, is also critical to people having trust in what's being told to them by the ones in charge. It's also critical for the ones in charge to have complete data to make informed decisions. Pilot programs work because the waters

can be tested before jumping completely in, and adjustments can be made for corrections; adaptations can occur rather than having large projects completely rejected. And finally, central management can cut the confusion of red tape of multiple departments or programs with overlapping and sometimes conflicting jurisdictions or even worse, gaps in the system where no one takes charge of a problem that emerges on the ground.

**This brings us to Step Three: We Look at the Strides We've Made.** When my wife Susan goes on long walking adventures, she writes of how at times she stops and looks back at how far she's gone that day, either hiking a mountain trail in Costa Rica or crossing a barren plain of the Arctic Circle in Sweden. Even for those of us who aren't outdoors adventurers, it's good for us to take stock sometimes of what we've already achieved rather than just trudging forward to the next daunting task. By looking back at our accomplishments, we can be refreshed and proceed with renewed confidence that we are indeed ready to face the challenges ahead.

I want to touch briefly on a few foundational accomplishments in New Mexico water management and then illustrate recent steps we've taken for drought preparation. We as residents of the State of New Mexico can be proud that even before statehood we had enacted a territorial water code in 1907 that at the time was a modern approach to water law. A number of these statutes, which predate our constitution by several years, continued into law upon statehood in 1912 and still provide structure for our current water code, with numerous changes enacted over the years.

In 1911, our voters approved the New Mexico Constitution in accordance with the federal Enabling Act of 1910 in order to qualify us for statehood. The newly minted constitution included three provisions as the bedrock of our water law, all of which were

declaratory of the law then in existence in New Mexico, and all three provisions are still in the constitution. Article XVI, Section 1 provides: “All existing rights to the use of any waters in this state for any useful or beneficial purpose are hereby recognized and confirmed.” Article XVI, Section 2 provides: “The unappropriated water of every natural stream, perennial or torrential, within the state of New Mexico, is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right.” Article XVI, Section 3 provides: “Beneficial use shall be the basis, the measure and the limit of the right to the use of water.”

Upon statehood, New Mexico benefited from a series of storage projects, such as the U.S. Bureau of Reclamation’s Rio Grande Project, including Elephant Butte and Caballo Dams. We have concentrated for a century on maximizing New Mexico’s water capacity, with amazing legislative and engineering projects such as the San Juan-Chama Diversion, which tunnels through the Rocky Mountains to give us our share of water from the Colorado River. We’re beginning to see the fruits of the labor of our eastern New Mexico communities who persevered for decades to realize the Ute Pipeline Project for our share of water from the Canadian River. New Mexicans have very well understood the storage principle embodied in the story of Joseph and Pharaoh, that a people should store up in the good times for distribution in the bad. Thanks to the collective and diligent efforts of New Mexicans to store and divert water, we are in a much better position to face the future, even when we confront water shortages.

Not only have we stored and diverted water, we have dug underground just like our adaptable predecessors did thousands of years ago at BlackWater Draw. Without the

numerous wells throughout our state, we could not have grown tenfold from a population of under 200,000 in 1900 to over 2,000,000 today. In 1931, New Mexico's Legislature enacted underground water statutes, to fill in the gap of the original water code covering only streams. Over the decades, through these statutes and efforts by the State Engineer and court decisions, it became established law in New Mexico that the water in whichever stage of the hydrologic cycle, whether it lies under the surface or flows in a stream, is subject to the appropriative laws of this state. This singular achievement placed New Mexico in the forefront of western states for the acknowledgment of nature's laws of connectivity between surface and underground waters and the necessity for conjunctive management.

In 1999, our Legislature combined the lessons of groundwater-streamflow connectivity with the storage principle, to create the Ground Water and Storage Act, finding in Section 72-5A-1 "that

- A. conjunctive use and administration of both surface and ground waters are essential to the effective and efficient use of the state's limited water supplies; and
- B. ground water recharge, storage and recovery have the potential to:
  - (1) offer savings in the costs of capital investment, operation and maintenance and flood control and may improve water and environmental quality;
  - (2) reduce the rate at which ground water levels will decline and may prevent oversteering or dewatering aquifer systems;
  - (3) promote conservation of water within the state;
  - (4) serve the public welfare of the state; and
  - (5) may lead to more effective use of the state's water resources."

The Ground Water and Storage Act, like a number of other statutes enacted by our Legislature over the years, recognizes the scientific principles of stream and groundwater recharge. Many of us take for granted that of course science should animate our legal system concerning water, in particular the science of hydrology, an interdisciplinary natural science that deals with the transport and distribution of H<sub>2</sub>O (liquid, gas, solid) on and beneath the earth's surface and in the atmosphere.

Good science should always guide us when it comes to water law, but that is not necessarily the case in every state. Arizona still struggles with problems associated with its failure to recognize the natural principles of the hydrologic cycle between groundwater and surface water. As a result, while our neighbor is much further ahead of us in terms of stream adjudications, Arizona is nowhere near where we are in terms of groundwater determinations, which we have included in our general stream adjudications.

When the first drought of the 21<sup>st</sup> century hit New Mexico in 2002, the people of New Mexico vigorously responded. I will only touch on a few highlights, for the sake of time and my ethical constraints as a judge regarding public comment on pending or impending litigation. Each branch of government took swift measures. The Governor created the Governor's Drought Task Force, with input from leaders in the scientific community along with others involved in water management, federal, state and tribal. The State Engineer established the beginnings of a comprehensive water database, accessible on the Internet by the public. The Supreme Court named water judges for each of the thirteen judicial districts so that they would be better educated about the complex issues involved in water cases. In order to improve efficiency, the Supreme Court also established new rules for general stream adjudications and centralized, to the extent

possible, current adjudications. Even before the drought came in full force, the New Mexico Legislature in 2001 had the foresight to create the Water Project Finance Act and to create a water trust fund.

In 2006, New Mexicans took the legislative water trust fund a step further. We adopted the trust fund as a constitutional amendment by a vote of nearly two to one. Article XVI, Sec. 6 provides in part that “The ‘water trust fund’ is created in the state treasury to conserve and protect the water resources of New Mexico and to ensure that New Mexico has the water it needs for a strong and vibrant future. The purpose of the fund shall be to secure a supply of clean and safe water for New Mexico’s residents.” Pursuant to this constitutional amendment, annual distributions “shall be made to the water project fund, which shall be used only to support critically needed projects that preserve and protect New Mexico's water supply in conformity with the state water plan.” During the drought, the Legislature had expanded the Water Project Act in 2003 to include a far-reaching state water plan, which I will discuss in the next section of this talk.

A final point on this third step: Looking at the strides we’ve made in preparation for the future, including times of water shortage, should give us hope that we can overcome whatever obstacles may await us.

**We’ve now arrived at Step Four: We See the Big Picture.** Just a few miles west of our home near Hillsboro is the Black Range, where the beautiful vista of Emory Pass awaits motorists willing to take a few moments to stretch their legs. When Susan and I hiked to Emory Pass from the Kingston cemetery, we were glad to catch our breaths

upon reaching our destination. The vista seemed that much more stunning because we walked to get there.

Soaking up a vista is easy when we reach the summit; the grand perspective simply unfolds before us. Oftentimes, the difficulty lies in reaching the summit. New Mexico's history of water law and management is long and complex, but if it's viewed as a journey, the drought that began in 2002 helped our Legislature take the last few steps necessary to describe the vista of New Mexico's water plan for the future. Enacted in 2003, Section 72-14-3.1 sets forth directives for a state water plan, as part of the Interstate Stream Commission Act, originally enacted in 1935. After stating the legislative intent and the plan's purpose in the first two paragraphs, the Legislature, in paragraph C of the statute, directs the Interstate Stream Commission to work with the Office of the State Engineer and other government agencies to develop a comprehensive, coordinated state water plan.

While I summarize the legislative mandates for the state water plan, imagine that we are on a mountaintop, looking at various points of interest towards the horizon. Pursuant to the statute, the state water plan is to identify common objectives, establishing a clear vision for active management; create an inventory of the quantity and quality of the state's water resources, population projections and other water resource demands under a range of conditions; establish water budgets; develop water conservation strategies and policies; maximize beneficial use through reuse and recycling via conjunctive management; create a drought management plan designed to address drought emergencies; promote strategies for prevention of drought-related emergencies in the future and coordinate drought planning statewide; recognize the relationship between

water availability and land-use decisions; promote restoration focusing on protecting the water supply, improving water quality and complying with the federal Endangered Species Act; consider water rights transfer policies that balance the need to protect the customs, culture, environment and economic health and stability of the state's diverse communities while providing for timely and efficient transfers of water between uses to meet both short-term shortages and long-term economic development needs; promote strategies and mechanisms for achieving coordination with all levels of government; integrate regional water plans and plans of water supply purveyors into the state water plan as appropriate; identify water-related infrastructure and management investment needs and opportunities; promote collaboration with and strategic focusing of the research and development of the state's national laboratories and research institutions to address the state's water challenges and to bring to the state demonstration projects in desalination, conservation, watershed restoration, weather modification and other technological approaches to enhancing water supply and management.

Just like a mountain-top view, the plan's breadth is breathtaking. But there's even more to see. In paragraph D of the statute, the Legislature "[r]ecognizes that complete water rights adjudication, measurement, well inventories and adequate databases are essential elements of an effective water management plan, and further recogniz[es] that completion of these work elements will require substantial time and resources until such time as these elements are complete;" therefore, the water plan shall include work plans and strategies for meeting those challenges.

Paragraph E of the statute calls for the Interstate Stream Commission and the Office of the State Engineer to “consult directly with the governments of Indian nations, tribes and pueblos to formulate a statement of policy and process to guide:

- (1) coordination or integration of the water plans of Indian nations, tribes and pueblos located wholly or partially within New Mexico with the state water plan; and
- (2) final adjudication or settlement of all water rights claims by Indian nations, tribes and pueblos located wholly or partially within New Mexico.”

Finally, along with a few other provisions, the water plan requires public participation and public input to be integrated throughout the planning process. “The interstate stream commission shall convene water planners and stakeholders from diverse constituencies to advise it and the office of the state engineer on the state water plan.” After adoption by the Interstate Stream Commission, the state water plan shall be presented to the Legislative Interim Committee on Water and Natural Resources. The plan shall be reviewed regularly and amended in response to changing conditions. Pursuant to the legislative directive, a state water plan was implemented in 2003 and was reviewed and updated five years later, with other updates and public outreach having taken place since.

As dramatic and encompassing as the state water plan is and as important as it is to a comprehensive approach to preparing for a lengthy drought, it is not alone the big picture that I am talking about here as the fourth step of our preparation. It’s certainly a major part of the big picture, and without it, we would not be nearly prepared if and when catastrophe strikes. The water plan is forward-looking, including preparations for the

possibility of long-term drought I described in Step One: We Watch for Danger Ahead. Steps Two and Three look back to seek guidance from history and to witness the progress New Mexicans have made in water management. Looking forward and back helps us know where we are right now. This lesson applies when traveling through the desert, and it applies here in a discussion of water law.

Seeing the big picture is to look at all the pieces of what our present holds and determine, as best we can, what should be added, deleted, modified or left alone to make a cohesive and workable whole. Think of the mountaintop. If the state water plan is the vista of the future, the New Mexico Water Code represents a large part of our fleet of vehicles to drive us there. Unfortunately, some of the legislative vehicles to reach this space-age future include oxcarts from the days of the Camino Real and broken-down jalopies from a century ago.

We just have to review our general water statutes in Chapter 72 of the New Mexico Statutes Annotated, collectively referred to as the water code, to see what I'm saying. We have an amalgam of laws that stretch from 1853 to the present. No doubt each of these was valuable and necessary at the time, but query whether these laws, taken together, rise to the promise of the state water plan.

Here's one example of a law that was once vitally important and now appears to be legally irrelevant. Article 11 of Chapter 72 provides that "All the salt lakes within this state, and the salt which has, or may accumulate on the shores thereof, is, and shall be free to the citizens, and each one shall have power to collect salt on any occasion free from molestation or disturbance. If any person or persons shall prevent any other person or persons, or shall attempt to prevent them from gathering salt, or going for, or returning

with it, or shall arm or embody themselves for any or either of the above purposes, or shall molest or disturb, hinder or annoy any person or persons gathering salt, or going to, or returning from any salt lakes, or shall interfere with the salt gathered, or the animals, carts or wagons, or any other mode of conveyance or transportation, shall be deemed guilty of felony, and punished by confinement in the penitentiary, not less than two nor more than seven years, or by fine of not less than one thousand dollars [(\$1,000)].”

This territorial statute arose from the 1850s Salt Wars, when one Magoffin from Texas attacked New Mexicans attempting to gather salt from a dry lake in the Tularosa Basin, killing several of them. To add insult to injury, Magoffin stole their animals and carts. It is fascinating history, with legal conflicts between British and Spanish law and the creation of New Mexico’s current boundaries. Perhaps some people still get their salt from dry lake beds, but for more than a century salt has been cheaply available in New Mexico’s stores. The Legislature may want to consider whether this and other outdated sections are still necessary for inclusion in the water code. Some portions of Articles 8 and 9, entitled respectively, “Offenses and Penalties under Water Act of 1907,” and “Application of Water Act of 1907,” may bear review.

At least two acts that could be brought into the fold of Chapter 72 were both enacted in 1953 and are found in Chapter 75, Miscellaneous Natural Resources Matters. Article 2 is the Water Research, Conservation and Development Act, a program to be headed by the Interstate Stream Commission. Article 3 is the Weather Control and Cloud Modification Act, which until 2003 was under the control of the “weather control and cloud modification commission” and by amendment to the act is now under the control of the Interstate Stream Commission. Given that the other two phases of the hydrologic

cycle, surface waters and underground waters, are managed under Chapter 72, their partner in the cycle, atmospheric waters, reasonably could be included in the same chapter.

These proposals for consideration that I have presented are easily resolved and are merely illustrative of a larger issue. More pressing than these is the need for legislative change to the general stream adjudication statutes. After a century of statehood, and more than a century since the enactment of the territorial Water Act of 1907, we are only about halfway through the adjudication process statewide, with adjudication of the large basin of the Middle Rio Grande, among others, not begun. If the Great Drought of the 21<sup>st</sup> century hits us before we're further along, our legal system may be overwhelmed by the sheer numbers of claims for water that are unresolved.

I enjoy water cases, and I relish the chance to get outdoors for site visits of the trenches, ditches, rivers and streams during the trials of individual and collective water rights. The trials take several days to a week or more, and there are always pretrial and post-trial motions, with proposed findings and conclusions and then the opportunity for appeals. If the smaller cases like I handle are time-intensive, it's no wonder that adjudications involving hundreds and thousands of claimants take many years. Compounding the delays is the statutory requirement of hydrographic surveys prior to the substantive commencement of the adjudications. It's like trying to build a house on shifting sands, because by the time the survey is finally completed, much of its information is outdated, with changes of ownership, diversion points, places and purposes of use having occurred in the interim. Then, the process has to start all over again. In the spirit of our modern and forward-thinking water plan, there needs to be the most efficient,

yet constitutionally sound, system for moving general stream adjudications towards resolution promptly.

We are fortunate that the Middle Rio Grande general stream adjudication has not been initiated, because we are presented with an opportunity to establish a modern statutory framework prior to its commencement. It may mean that the process can be more streamlined than those that are currently underway and bound by the limitations of the territorial Water Act of 1907.

Our Legislature has recognized this need for change and in 2007, through the Legislative Finance Committee, requested the Administrative Office of the Courts, together with the Office of the State Engineer, to study the adjudication statutes in other states to see how we could improve our own. After the AOC and the State Engineer presented reports to the Legislature, UNM's Institute of Public Law was commissioned to conduct forums throughout the state for input from engaged citizens regarding four approaches to adjudications that had been analyzed by the AOC and the State Engineer. The Institute of Public Law submitted its findings to the Legislative Interim Committee on Water and Natural Resources in August, 2009.

The efforts of the AOC, the State Engineer and others involved in this project are admirable, and I have nothing to add to their work on which way the Legislature should go in changing the adjudication statutes. All I can contribute to the discussion is to suggest that the Legislature look at the water code as a whole in determining its direction on general adjudications. When we look at the whole picture, answers may appear that are not readily apparent by looking at the individual pieces.

In particular, I recommend that the Legislature and its advisors revisit the lessons to be learned from the 1913 New Mexico Supreme Court decision of *Pueblo of Isleta v. Tondre and Picard*. In that decision involving the construction of sections of the Water Act of 1907, the Court held, over a vigorous and eloquent dissent, that because of the wording of the statutes, the act did not regulate rights arising before the act. Ever since then, and because the Legislature since statehood to the present day has not comprehensively amended the artificial distinction of the scope of that pre-statehood act as interpreted by the Supreme Court, New Mexicans have come to discuss in common parlance whether they have pre- or post-1907 rights, yet our hundred-year-old constitution makes no such distinction, simply saying that “Priority of appropriation shall give the better right.”

A reading of *Pueblo of Isleta v. Tondre and Picard* nearly a century later reveals two ironies. First is the concluding remark of Justice Parker in his majority opinion, concurred in by District Judge Leahy, that “the question involved in these cases is no longer of any importance except to the immediate parties.” The second irony is a statement in the dissenting opinion of Chief Justice Roberts, in which he writes that the 1905 predecessor to the Water Act of 1907 was deficient because “the act was not sufficiently comprehensive and modern to place New Mexico abreast of her sister States, and in 1907, the act was repealed and the present comprehensive, modern and efficient code has been enacted.” Yet we know that from the inception of the Water Act of 1907 as interpreted by the majority opinion, the act was not comprehensive. We also know from decades-long weary experience of general stream adjudications that it is not efficient, either. New Mexico’s Water Act was modern in 1907, because it looked to a

new model water code for guidance. Morris Bien, Consulting Engineer for the U.S. Reclamation Service created the Model State Irrigation Code in 1903 as a guide for western states to be approved for federal funds in their major irrigation projects. New Mexico, along with several other states, adopted significant portions of the code, including the sections covering general stream adjudications. Whether the Bien Code of 1903 as incorporated into the Territory of New Mexico's Water Act of 1907 is modern now is a question for the Legislature to decide.

What more can we do to see the big picture, to see if our water code is a cohesive whole that is comprehensive, modern and efficient, keeping us abreast of our sister states? A mirror would help. Such a mirror is now available to us through the Appropriative Rights Model Water Code, published by the American Society of Civil Engineers in 2007. The Model Water Code Project began in 1990 for the purpose of developing "proposed legislation for adoption by state governments for allocating water rights among competing interests and for resolving other quantitative conflicts over water." Headed by Professor Ray Jay Davis of Brigham Young University, the project included "a large number of engineers, lawyers, government administrators, business people, environmental activists, hydrologists, political scientists, and just plain folks."

Upon Professor Davis's retirement in 1995, Professor Joseph Dellapenna of Villanova University headed the project, which started off as one model code and ended up as two, one for the riparian states of the East and the other for the appropriative states of the West. Among just a few individuals singled out in the preface for his contribution to the collaborative effort is our own Professor Olen Paul Matthews, Chair of UNM's Department of Geography.

The Model Water Code “follows the form commonly used today in the drafting of proposed uniform state laws under the auspices of the National Conference of Commissioners of Uniform Laws.” That form is, in and of itself, helpful for the re-drafting of New Mexico’s Water Code, regardless of substantive changes.

The extensive commentaries for each section are also helpful as a guide to the drafters’ approach to each topic. Cross-references to other applicable sections in the Code are informative as well. I found the comparable statutes of each state, as applicable, at the end of each section to be of great assistance in directly comparing New Mexico’s statutes with the Model Code and the laws of other states, although there is a caveat that some of New Mexico’s statutes are not referenced in the Code, because the project, at least in regard to the western states, did not proceed much further substantively beyond Professor Davis’s retirement in 1995. As we know, much progress has been made in the last sixteen years by our Legislature. In regard to the substantive provisions in the Model Code’s nine chapters, New Mexico’s 1985 statutes on inter-state transfers served as the basis for the Model Code’s eighth chapter, entitled “Multijurisdictional Transfers.”

The Code’s drafters did not intend that the Model Water Code be enacted in its entirety, but that it would serve as an aid to legislatures pondering major steps to modernize their own state’s water laws. Our Legislature asked the AOC and the State Engineer to study our sister states’ adjudication laws, which involved interviews with those states’ lawmakers and judges, among others, as to the effectiveness of their systems for adjudications. In the same spirit of seeking wisdom, the New Mexico Legislature can

consider the Appropriative Rights Model Water Code as a tool for understanding how best to proceed.

At the start of this talk, I told you that these are my own views. So what is my view of New Mexico's Water Code as seen in the light of the Appropriative Rights Model Water Code? I'm reminded of Hans Christian Andersen's tale of the Ugly Duckling. Not until he was fully grown did the ugly duckling realize he was a beautiful swan, when he saw himself in the reflection of the lake. The reflection of the Model Water Code shows how far along New Mexico is in not just staying abreast of her sister states, but moving ahead of them. If the Model Code represents the best efforts of the 20<sup>th</sup> century, New Mexico stands poised to represent the best of the 21<sup>st</sup> century. But we must take one more step to achieve that goal.

**Let's take the final step to prepare for the Great Drought of the 21<sup>st</sup> Century: We Find Common Ground.** Throughout this talk, I have treated you, my audience, as having a collective intent to work together for the common good against a common threat. To become a state, New Mexicans had to become one people, even though they had different backgrounds. A century ago we told the rest of America we were a people, by approving our state constitution. Two sections from our Bill of Rights remind us of who we are and what our laws are all about. Article II, Section 2 reads: "All political power is vested in and derived from the people: all government of right originates with the people, is founded upon their will and is instituted solely for their good." Article II, Section 3 reads: "The people of the state have the sole and exclusive right to govern themselves as a free, sovereign and independent state."

Yet I recognize that, when it comes to water, we are much divided. A couple of examples spring to mind: Urban vs. Rural and Environmentalists vs. Developers. Some of you represent diverse groups for whom you are the water-bearer, like I was for my wife in the Jornada del Muerto. Your people depend on you to assure for them the water they need to survive. So, in this final step of finding common ground, I urge you to consider the self-interest of your particular group in deciding whether you will work with others to prepare for a major drought. Of all the principles I have described, this next one should control your decisions the most: the principle of uncertainty. For those of you familiar with quantum mechanics, I am not talking about Heisenberg, but about poker odds.

If you are a stakeholder in the water game, you know how high the stakes are. Imagine that you and every other stakeholder in New Mexico is sitting at a no-limits game of Texas Hold 'Em. I talk about this game frequently with one of my sons who is a good player. This poker game is based more on skill than luck, but Lady Luck can sometimes upset the odds and give the hand to a less-skilled player. The final card played in the game is called the river. The last players still at the table make the best hand they can from the five community cards face-up on the table, including the river, and their two hidden cards. If it's down to just two players, the better hand wins the pot.

So your city, company, acequia, organization or people are sitting at the water table, and it's a game that for some of you may have lasted just a few years, and for others it's lasted a very long time, well before New Mexico became a state. Hand after hand has been played through the years. Just one example: One hand that may have looked good to you included the card of expanding pueblo water rights, and it had been a

strong card for over fifty years, since the 1958 New Mexico Supreme Court decision in *Cartwright v. Public Service Company of New Mexico*. But it got beat by the constitutional prior appropriation card in *State ex rel. Martinez v. City of Las Vegas* in 2004. That prior appropriation ace in the hole is the comparative rule for winning at water in the West, “Priority of appropriation shall give the better right.” Surprises happen all the time in poker and in water. Prior appropriation isn’t just a card to be played, though. It also limits the number of seats at the table, for every time the State Engineer declares a basin to be fully appropriated, new players can only take over a sitting player’s hand.

Nobody here who has worked in water law and management in New Mexico has had a winning hand all the time. But we’re now at the betting stage before the last card is played, the river. Some may have gone all in already, with no chips left. When the river is played, when there may be no rainfall or snowmelt for a long time and we collectively are unprepared for it, what will happen? What will the river card show? Will you lose everything or win big? And if you win, what will you have when everyone else has lost?

Earlier in this talk, I spoke of studies by UNESCO regarding water allocation programs. The theme of trust came up in study after study, and it’s something that cannot be ignored here. I hope that some trust, at least trust in others’ honesty and sincerity, has been achieved over the years among the various groups, even if your positions on water allocation differ, because in order to face the common enemy of drought we must have at least some measure of trust before it hits full force.

Recall that the UNESCO studies demonstrate that pilot projects work. The pilot project I propose is to complete the comprehensive revision of the New Mexico Water

Code, already well underway. I suggest using the Model Water Code as a touchstone, for the dual purposes of modernizing our water code and providing an opportunity for diverse groups to take a step towards finding common ground, by cooperating in legislative efforts to establish ground rules for the next round of basin-wide adjudications. The three foundational principles governing these ground rules should be science, our state water plan, and our Constitution.

If such a project takes place, I encourage those who are engaged in the reworking of our water code and its adjudication statutes to frontload mandatory mediation into the statutory process. One thing that is certain from decades of adjudications is that mediations resolve cases. So why not put the best effort forward at the beginning of a basin-wide adjudication to resolve as many claims and issues as possible, rather than waiting until after decades of wrangling?

Let me close with this: I've attended a number of water conferences over the years, and the attendees are sometimes identified as being members of "the water community." I hope that the water community will collectively support legislative efforts to make our water code the most comprehensive, modern and efficient among the western states, to help us prepare for the next major drought, whenever it occurs. We all win when we do that. Thank you.