

## PANEL DISCUSSION

### ECONOMIC DEVELOPMENT AND LAND USE: HOW DO WE CONTINUE TO GROW WHILE LIVING WITHIN OUR “WATER MEANS”?

#### Moderator

*Bill Hume* was born in Albuquerque and moved to Socorro prior to fourth grade in school. He graduated from Socorro High School, attended the University of New Mexico, with a three-year vacation from 1960-63 spent in the U.S. Army, mostly in southern Germany. Bill started with the Albuquerque Journal in November 1966. He graduated from UNM in the spring of 1967 with a degree in journalism and minors in German language and economics. At the Journal, Bill served as police reporter, general assignment reporter, science and military reporter, state editor, investigative reporter, editorial writer, and for the last 18 years of his tenure there, editorial page editor. On January 1, 2003, he joined the staff of Governor Bill Richardson as director of policy and strategic planning. Bill is married to Elizabeth G. Hume and has two children, a son age 26 and a daughter age 21.



Bill Hume  
Director of Policy and Strategic Planning  
Office of the Governor, State Capitol Building,  
Suite 400, Santa Fe, NM 87501

## Panel Discussion

***Janet Jarratt** is a native New Mexican living and working on the family farm where she grew up, finding her education in electrical engineering and computer science useful. She has become very involved in water issues, particularly along the agricultural/urban interface. Janet is currently vice-chair of the Middle Rio Grande ESA Collaborative Program, Executive Board member of the New Mexico Farm and Livestock Bureau, board member of the New Mexico Water Dialogue, board member of the Assessment Payers Association of the MRGCD, and past president of the MRG Water Assembly. She actively participated in state and regional water planning and is helping the process move toward implementation. Janet has been a guest lecturer at UNM as well as on a variety of panels around the state.*



Janet Jarratt  
MRGCD, Farmer, 2520 Los Lentos Rd SE,  
Los Lunas, NM 87031

***Tom Phillips** is currently the Land Use Planner for the Las Cruces District Office (LCDO) of the Bureau of Land Management. He is the Team Leader for the Resource Management Plan Amendment and Revision for public lands in Sierra, Otero, and Doña Ana Counties (TriCounty RMPs). Tom graduated from NMSU with a B.S. degree in rangeland management and as an undergraduate worked for Dr. Karl Wood conducting runoff and erosion studies at Fort Stanton. He was a Rangeland Management Specialist for 15 years, before taking on the role of Land Use Planner and Team Leader for the Otero Mesa RMPA in 1999. Tom's current responsibilities for the TriCounty RMPs planning effort includes coordination and discussions with various cooperating agencies, interest groups/organizations, the general public, and BLM team members. It is important to gain their involvement and assistance in the development of appropriate public land use decisions that will guide the LCDO in managing public lands in Sierra, Otero, and Doña Ana Counties over the next 15-20 years.*



Tom Phillips  
Las Cruces District Office  
U.S. Bureau of Land Management  
1800 Marquess Street, Las Cruces, NM 88005

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

***James Rivera** is a tribal council member of the Pueblo of Pojoaque. Currently he is the Director of Community Development. James serves on several boards for the Pueblo, including Vice-President for the Pueblo of Pojoaque Enterprise Corporation, the Pueblo of Pojoaque Development Corporation, and the Boy’s and Girl’s Club. James also does community relations with the New Mexico Legislature. He is the Chairman of North Central Regional Transit System, which includes the cities of Española and Santa Fe, the counties of Santa Fe, Rio Arriba, Los Alamos, and five tribal governments in the tri-county area. James owns his own company, Cornerstone Government and Public Relations.*



James Rivera  
Pueblo of Pojoaque  
78 City of Gold Road, Santa Fe, NM 87506

***David Steinborn** is the owner of the largest real estate company outside of the Albuquerque/Santa Fe area in New Mexico. He is also a partner in the largest subdivision outside of Albuquerque and Santa Fe. David has been honored as Las Cruces Citizen of the Year. He was a three-term mayor of Las Cruces, is past president of Hospice, past chair of the Mountain View Regional Medical Center, and current president of the New Mexico Real Estate Commission. David is the father of six, all of whom drink water as their drink of choice.*



David Steinborn  
Steinborn Inc., Realty  
PO Box 936, Las Cruces, NM 88004

Panel Discussion

**Karyn Stockdale** works for *The Trust for Public Land (TPL)*, a national nonprofit organization that conserves land for people to enjoy as parks, playgrounds, community gardens, farms, historic places, and wilderness areas. As Project Manager, Karyn is responsible for all aspects of TPL-New Mexico's land conservation work including working with landowners, public agencies, and communities to preserve important lands and to assist with the strategic planning and development of conservation goals for the state of New Mexico. She also helps communities analyze their conservation financing options. Before joining TPL, Karyn worked for the University of New Mexico in recreational planning and as a wilderness guide. She holds a B.A. from the University of Texas at Austin and an M.A. from UNM. Karyn lives in Santa Fe with her husband, Justin Stockdale, and daughter, Keely.



Karyn Stockdale  
Western Region-Santa Fe Office  
The Trust for Public Land  
418 Montezuma Avenue, Santa Fe, NM 87501

**John Stomp, III** was born and raised in Albuquerque and graduated with bachelors and masters degrees in civil engineering from UNM. John is the Water Resources Manager for the City working as an agent to the Albuquerque Bernalillo County Water Utility Authority. The Water Authority provides water and wastewater services to more than 475,000 residents in the metropolitan area. John's responsibilities as Water Resources Manager include water conservation, water resources, groundwater protection, and arsenic investigations. His primary responsibility is to implement the City Council adopted Water Resources Management Strategy to provide a safe and sustainable water supply for the City. The strategy includes transitioning from sole reliance on groundwater to renewable surface water supplies, namely the City's San Juan-Chama water. The project includes the construction of more than \$375 million in facilities consisting of a new surface diversion, water treatment plant, and distribution pipelines. He is also responsible for evaluating issues related to compliance with the new drinking water standard for arsenic. John has more than 17 years of experience dealing with water and wastewater issues in New Mexico and throughout the southwestern U.S.



John Stomp  
Albuquerque Public Works Department  
PO Box 1293  
Albuquerque, NM 87103

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

**Moderator Bill Hume**

Good afternoon. My name is Bill Hume. I am in the office of Governor Bill Richardson, but before that I was with the Albuquerque Journal and have a long standing interest in water matters. In most things having to do with water I know enough not to come to a good conclusion, but at least enough to get myself in trouble.

Whoever thinks up provocative titles for WRR panels deserves a gold star for: “Economic Development and Land Use: How Do We Continue to Grow While Living within Our Water Means?”, which is of course the topic I am going to address today. That is the dilemma facing every municipal government from mighty Albuquerque to the tiniest mutual domestic water users association. But rest assured it is with absolute certainty that all will succeed. How can I say that? Government can ignore burgeoning populations of young families filling schools to bursting. Urban life and growth goes on. Government can ignore road building needs forcing citizens to crowd up on roadways carrying far beyond their capacity of traffic, but urban life and growth goes on. Government can shortchange needed public safety facilities leaving the community under-policed and the officers overworked, but urban life and growth goes on. But no government anywhere on God’s green earth can deliver one ounce more water than it has available. A government can refuse new connections; it can impose rationing; it can curtail large users, but it cannot create water. No government can accommodate growth beyond its ability to deliver water.

Back in the 1960s and ‘70s when I first became aware of these issues, the pace and location of urban growth was left largely to the developing community. Developers platted; municipalities and utilities extended service; customers bought; and the community prospered. Questions of water availability were pretty much left exclusively to the municipalities. Of course Albuquerque in those days was fat and sassy in the erroneous belief that it sat on top of an aquifer the size of Lake Superior. Water quantity questions in those days were a problem for less well-endowed communities.

It is not from selfish cynicism that the development community is reluctant to assume any responsibility for water availability. That was the way it was for a long time. And regardless of what government wrings out of the developers, the ultimate responsibility will remain with government. Why? Because the water needs of the neighborhood will remain long after the

developer has sold his last lot, built his last house, and moved on.

There’s been a seen change in perception of the requirements since those happy days in the ‘60s and ‘70s. Albuquerque ratepayers have absorbed a steady diet of annual rate increases to put together the money to do our San Juan–Chama Diversion Project. Santa Fe imposes ever stricter requirements on developers to bring water to the table or to finance water conservation retrofits to cover the water needs of new development there. Rio Rancho and the customers of New Mexico Utilities, that’s Paradise Hills and Ventana Ranch on Albuquerque’s west mesa, face onerous requirements to acquire water rights to offset ground water pumping.

There’s the village of Cloudcroft. Its tank ran almost completely dry last summer; they were hauling water up to the municipal tank in a tank truck and dumping it into the tank. They are on the highest drought restrictions that they could have, and they are currently involved in putting in a system where they will take the effluent from their wastewater system and place it back in the front end of the system again. That’s when you’re really short of water.

We are going to explore the ins-and-outs of whether and how our communities can continue to grow while living within our water means as considered from a rich variety of view points represented by our panel here today. Our views will be further supplemented by the variety of questions I am sure we will receive from you all. We will explore how land use planning can help position development where there is sufficient water to support it.

With me today is Karyn Stockdale with The Trust for Public Land. The Trust for Public Land is involved in many land and natural resource preservation projects around the state and the nation. One element that stretches our water means that I am familiar with is the water reuse and recycling technology being built in the Santa Fe Rail Yard.

Tom Phillips, Bureau of Land Management. BLM has come a long way from the days of being primarily the collector of fees from the users of federal lands to being a proactive land use planning agency.

John Stomp, City of Albuquerque. John has been intimately involved in the design and implementation of the Albuquerque Drinking Water Project and has hands on experience in how New Mexico’s largest city is coping with the dilemma of water and growth.

James Rivera, Governor of the Pueblo of Pojoaque. Pojoaque Pueblo has earned the attention of the outside world by converting some of its water resources to the development of golf courses and resorts that are used to cater to the outside world. At the same time, Pojoaque has some ambitious plans for the use of wastewater to stretch its scarce resources.

Janet Jarrett, Middle Rio Grande Conservancy District. While Janet is very much a water user of the Middle Rio Grande Conservancy District, I doubt the

Board of the District would have picked her to be an official spokeswoman. Janet has long been active in water use issues in the Middle Rio Grande Valley, the balance of agriculture with municipal use, and the balance of all human use with ecological inheritance. She is outspoken in her views and critical of bad practices wherever she perceives them.

David Steinborn, Las Cruces. As mayor of

Las Cruces in the late 1970s and early '80s and through his business as a residential developer, he knows the inner action of development and water from both sides of the equation.

So let's hear from each of our panelists following which we will entertain questions from you all. John do you want to start out?

**John Stomp:** Sure, I'll be glad to Bill. As I always do, I would like to thank the WRRI for the opportunity to be here today, and it is a privilege and an honor to be here and also on this distinguished panel. Of course being an engineer I looked at the question, and I said, "Let's answer the question: What are you going to do? How are you going to live within your water means?" So my presentation today, with no slides I might add, is going to focus on how to answer that question.

The first issue I think I am going to focus on is the kind of planning and technical issues related to answering this question of how we live within our water means. First and foremost, I think the state law

planning horizon for municipalities and water suppliers is too short. By state law we are required to have a 40-year plan and a 40-year planning horizon, and I think that is way too short. It is even inconsistent with the state engineer's policy that requires when they do their own subdivision review on a 70-year planning horizon and for some counties even a 100-year planning horizon. From my perspective, that is one part of state law that must be looked at and addressed in terms of how municipalities and water providers look beyond 40 years. Forty years is a short time frame with which to deal. I don't know if the answer is 70 years. I don't know if the answer is a 100 years or even beyond that, but still the planning horizon of 40 years is just way too short.

I believe from a technical standpoint that entities like WRRI, USGS, Bureau of Reclamation, all the federal entities, and all the state entities with respect to water planning are significantly under funded. It's really a sad sight to see. As our water challenges become more and more complex, and we face more and more protests, and legal challenges, we don't have the technical information necessary to help make decisions. For the City of Albuquerque and the Albuquerque-Bernalillo County water utility authority, we are making decisions in the future to look out in this planning horizon. You have to analyze and set up some sort of decision matrix.

In fact, from a water resources perspective, we are going to start looking at water resources much like municipalities and other entities look at managing their utilities, as asset management. We are going to put together a profile of your assets called your water resources and evaluate the cost, the benefit, the risk, the security issues, all the environmental issues, the legal issues, all those challenges in that portfolio of options. It will determine whether or not you are going to pursue a potential alternative for a new supply or even use the existing supply that you might have, because cost and environmental wise it may not make any sense. So I think asset management from a water resources perspective is something that is on the horizon for water managers and water users.

I can't tell you how many times we have been approached by somebody who has an alternative water supply from Amarillo or from someplace in Lubbock. Somebody came to Albuquerque about four years ago and said, "We can make water." Bill said, "You can't make water," but the reality of it is you can make water. The problem is you need an average relative humidity

**...the reality of it is you can make water. The problem is you need an average relative humidity of about 7 percent to make it economical. In Albuquerque the average relative humidity is 5 percent. From an energy perspective that makes absolutely no sense...**  
**John Stomp**

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

of about 7 percent to make it economical. In Albuquerque the average relative humidity is 5 percent. From an energy perspective that makes absolutely no sense, but you can imagine the actual traction that got when somebody said to a city council or city policy maker, ‘Hey, we can make water.’ Yet from an economical or environmental perspective, it was just ludicrous. Yet we don’t have the tools and abilities to actually set the foundation for our policy makers to understand the impacts basin-wide or statewide. I’m advocating that for the planning agencies and the entities, we really need to seek additional funding.

When we talk about existing water resources, conservation obviously is your first defense when you talk about water resources. Frank was up here earlier talking about whether people should conserve. Well sometimes you get mandates to conserve. You say, “Well here’s the cost. Here’s the price.” You have mandates, and now the state engineer is actually placing conservation requirements in permits. For our new permit that the City received the 4830 for the drinking water project, there are actually two conservation mandates in there. The first one is that we have to reach 175 gallons per person per day before we can divert a single drop of native water, and we must reach a goal of 155 gallons per person per day within 20 years. So how do you make people conserve? How do you do those kinds of things? Sometimes you don’t have a choice as a municipality or water provider, because we are the ones out there actually transferring water rights. We are the ones actually in the process of trying to get new water or even use our existing supplies. We are being held to a higher standard. You could argue whether that’s right or wrong. But the fact is we are held to a higher standard. I believe obviously municipalities and water providers like the city aren’t necessarily the only ones that should conserve. Rather than start a fight on that, I’m just saying that conservation needs to be practiced by all segments in one way or another whether there is an economical incentive or not. We must find a way to conserve.

Reuse and recycling obviously is your next step. But even in reuse and recycling there is going to be a cost benefit in which some things work and some things don’t work. In Albuquerque we have the benefit of contaminated aquifers, which I’m sure nobody here has ever heard of. We have plumes of TCE sitting around different places in Albuquerque. Downtown for example, the Fruit Avenue plume, is a potential

source of reuse water, non-potable water that could be used to fill up the lakes at Tingley Beach or used for non-potable supplies at Caballo Park or whatever. The point is that when you do reuse and recycle, you must look at all available supplies. It’s not just reusing your effluent. Cloudcroft is really doing the reuse, the ‘toilet to tap’ concept, which by the way in California did not go over very well, and they are pretty proactive in water resource management. Toilet to tap didn’t work there, but maybe it will work in Cloudcroft, maybe it will not.

We all are trying to transition to renewable supplies because obviously we are on an unsustainable aquifer, and Bill talked a little bit about that. I would be fired if I didn’t bring up the San Juan–Chama Drinking Water Project. Just to give you an update on where we are on that project: the project is scheduled to come online. Even though we still have existing legal challenges that are ongoing, we are proceeding with the project. It is estimated to cost about \$375 million of which about \$300 million is already under construction right now. We are hoping to have the project online by 2008. But even in using our existing supplies, there is a perfect example of where we still have challenges. We have challenges that we must meet and people are still fighting us in court over the use of that water.

I see some opportunities for the future. By the way, Bill told me I had seven minutes. I’ve probably already gone way past that. I think one of our key issues is planning during wet years. We have spent a lot of time and effort in drought management, and we have to. Obviously we live in a place where there are droughts. But we also live in a place where sometimes we actually get water. And I think sometimes our water managers are so tired and so worn out from drought management because of all the pressures and stresses that are put on them during a drought, the first time we get an average year or wet year all they want to do is relax and be able to go home at 5 o’clock and not have to think about what the release rate is going to be next day or whatever. I think we sometimes lose focus on being able to save during those wet times, because it would be amazing to see how much you might be able to save during a wet period to offset a use during a dry time.

I presented an alternative called The Rio Grande Interstate Water Bank back in 2003 at the Law of Rio Grande Conference. Some people said, “You are insane John, you’re psycho,” and I am. But the reality of it is I still believe that the Rio Grande Compact is an

interstate tool for water banking with flexibility in its debits and the credits for trading water among Colorado, Texas, and New Mexico. I still think this might be years and years away. Like all good ideas, maybe this will never work, but the reality of it is we have to start thinking and trying to find a way to do it. This state has been very successful working with Texas and Colorado in the conservation water agreement where we are able to use credit water in Elephant Butte to take it upstream for other instream purposes. Why can't we take that one step further and find a way to trade water on that same sort of accounting methodology? I still think it is something worth looking at.

Desalinization is obviously something that is important and people have already talked about it. Other people at this conference will be speaking about it. We are even looking at it on the west side of Albuquerque. We are looking at using our methane gas from the Cerro Colorado landfill to generate power to utilize reverse osmosis to clean up the water. We are trying to balance all kinds of environmental considerations and use methane gas where it's possible to generate power and use that power to take the salt out of the water.

Concerning aquifer storage and recovery, we worked so hard back in 1999 to get legislation approved. Some people would say that given the history of water bills in the legislature in the last five years, just getting that bill approved was an accomplishment, but still to this day I don't think there has been a single aquifer and storage recovery permit approved by the state engineer. I'm not even sure one's actually been submitted. So here we are five, six years later and although this is going to be a tremendous management tool for all of us, we still haven't been able to take the next step. Now the New Mexico Environment Department is looking to establish a committee to evaluate the potential for using wastewater effluent for aquifer storage and recovery. That's another potential alternative water supply that could be used.

Water banking is an important concept that we have talked about before. I think that water banking doesn't necessarily have to be water. For the City of Albuquerque, we have some space up in Abiquiu and working with the Corps of Engineers, there is a possibility to actually leverage that space to create more water for the authority or for other purposes like conservation of water, and for example, for the minnow. Can Abiquiu become an asset of which you

can use and leverage space for water banking as opposed to the water itself? I think that is something worth looking at.

Regarding transbasin projects, I know the City of Santa Fe went out on a limb and suggested that they might actually try to get some water from the Estancia Basin. I don't know how you guys view that, but it was certainly very politically motivated. The media got a hold of it, and it was huge. Yet those are the kind of projects that we get approached with every single day. How do you figure out a way to make that work if you can even make that work at all? How do you find a way to increase your supplies without burdening other communities? I think that is going to be a tremendous opportunity for us and others. But they are going to have to come over and figure out what to do about the institutional, environmental, and all those other constraints. Wrapping up my talk, I would say asset management, evaluating and using your water resources, and looking at the entire picture is going to be the key for water resource management for water providers in the future. Thanks Bill.

**Bill Hume:** I should have said we'll go through everybody, and then we will open it up for questions and comments at the end of this. Karyn, why don't you go.

**Karyn Stockdale:** As Bill said, I work for The Trust for Public Land (TPL), a national non-profit land conservation organization. We were established in 1972. We have been working in New Mexico for about 25 years, although we just opened our state office in Santa Fe in 2001. Our mission is to conserve land for people to enjoy as parks, gardens, and other natural places ensuring livable communities for generations to come.

Across the country TPL is one of the leaders in land conservation. We have helped to conserve more than 2 million acres in the United States. In the past year alone we completed about 250 projects worth over 400 million dollars. We also work on conservation funding. We have helped communities raise 2.3 billion dollars in new funding.

TPL is also a leader in using land conservation to protect drinking water supplies. We protect municipal water supplies, rural acequia systems, mountain streams, and as Bill mentioned, we also work on innovative water harvesting in some of our parks for people projects like the Railyard Park and Plaza in

Santa Fe. Other examples around the country: in San Antonio, Texas they just opened the Government Canyon Natural Recreation Area. It is part of a greater effort to protect the Edwards aquifer and surrounding areas and to create greenways along sensitive creeks to protect about 16,000 acres of aquifer recharge land. In Cleveland, Ohio, we assisted the regional water district in acquiring a lake preserve at the headwaters of the Chagrin River to protect water quality. We have worked on demonstration sites in conjunction with the EPA in looking at source water protection activities that result in cleaner water. We have also looked at some GIS/computer mapping systems working with the University of Massachusetts in ranking priority lands in order to have that source water protection. I did put a couple of booklets out front, and I didn't bring nearly enough, but hopefully a couple of you that were interested picked those up. You can always order them on our web page if that is something that is more interesting.

But specifically in New Mexico TPL has been working on several projects that protect water resources in connection with land conservation. Along the Rio Grande we focus quite a bit on the federally designated wild and scenic stretch of the Rio Grande up by the Colorado border and south towards Pilar. We protected about 2,600 acres just south of Taos called the Taos Valley Overlook and over 14,000 acres of Ute Mountain on the Colorado border. We also work on projects that prohibit the conversion of lands to subdivision development by purchasing conservation easements. And just in the last month we completed two different projects using federal Farm and Ranchland Protection money as well as local funding sources in both the village of Corrales and in the town of Mesilla just outside of Las Cruces. In Mesilla, our efforts to protect the Harris farm have added benefits to the adjacent Mesilla Valley Bosque State Park including securing that scenic entrance, providing educational opportunities about the historic uses of the Mesilla Valley, and protecting additional wildlife habitat.

We have also worked to bring a federal program called Forest Legacy to New Mexico that provides funding for the purchase of conservation easements and in some cases outright acquisition to ensure that private landowners continue to use their land, conserve their forests, and protect their water resources. The State's first Forest Legacy success was this summer, and we helped them work on the Vallecitos Mountain Refuge up in Rio Arriba County. It is bordered on all

sides by the Carson National Forest. It had an old growth Ponderosa Pine forest with some mixed conifer, numerous ponds, and flowing water with the Vallecitos River and Rock Creek and that helps protect some of the downstream acequias by preventing any kind of future water diversions and keeping that live water in those systems. And then one other example in Santa Fe is along the Santa Fe River, which most folks don't recognize as a river.

It's more of an arroyo, because it is without water most of the year, and it is pretty heavily eroded. We have been collaborating with public agencies and citizens groups to protect, restore, and create some recreational opportunities along that corridor. We have mainly focused on the village of Agua Fria which is just west of the City of Santa Fe or surrounded by the City of Santa Fe, in working with Santa Fe County and acquiring land and easements to create these pocket parks and trails. These kinds of acquisitions even though they are for land conservation they allow restoration projects to stabilize the banks, restore native plants, assist in efforts to slow down the water in storm events to continue to hopefully reduce erosion and recharge the aquifer.

So despite all these examples what in the heck does land conservation have to do with our water resources? Professor Hall noted earlier today that water and land are linked and you can't separate the two. The quality of the water that we drink and the health of our ecosystems are directly linked to the health of our land. Across the country and we have been talking about here in New Mexico, population growth and development threaten our natural lands to protect our regional and local water supplies. The fastest growing threat to our water quality is pollution from non-point sources related to development, urban runoff from roads and parking lots and houses and big subdivisions. Also the development increases storm water runoff and erosion, whereas undeveloped land serves as a natural water filter and buffers our water

**The fastest growing threat to our water quality is pollution from non-point sources related to development, urban runoff from roads and parking lots and houses and big subdivisions.**

*Karyn Stockdale*

supplies. So my work with TPL emphasizes the permanent protection of land around both the ground water sources and the surface water sources. It's a means for watershed protection. And watersheds by definition are that interaction between the land and the water drainage of that river basin. Land conservation can create groundwater recharge areas that can actually increase water quantity, and in general source protection including this land conservation is much less costly than cleanup.

The impact of development and the loss of forest land and water quality happens over time but as some water suppliers can note the increase in capital investment on our water treatment facilities and the new treatment technology can be very expensive and these upgrades of treatment systems can cost anywhere from, we have seen statistics here in the Southwest of 5 million up to 35 million dollars or more, and municipalities are having to invest in these systems. One of our studies showed for every 4 percent increase in raw water turbidity, water treatment costs increase 1 percent. So that increased turbidity, which is the presence of sediments and algae and other microorganisms in the water, is a direct result of increased development whether residential or commercial and erosion and contaminants in that watershed. And then when water quality causes an unusual taste or maybe even an illness in the community the public quickly loses confidence in the safety of its supply. Businesses or individuals may even choose not to live in a certain area, and I'm not going to let the word out too much about Cloudcroft because they might perceive it has a poor water quality. Protected land provides clean water sources and will only require minimal treatment and serves as a natural filter for contaminants that might get into the water supply, and it's considered one of the key approaches in providing safe drinking water by water suppliers and municipalities.

Protecting land for water also has other benefits. I know we were thinking about economic benefits primarily. So that alternative to costly cleanup could enhance surrounding property values. It also has the recharge opportunities and can prevent or control erosion and floods. But it can also have the added benefits of improving air quality, sometimes providing recreational opportunities, maintaining scenic views, or protecting historical, environmental, or cultural resources. I'm looking forward to maybe a lively debate. Thank you for allowing me to be on this panel.

**Hume:** Thank you Karyn. Tom?

**Tom Phillips:** Bill, this panel discussion has an intriguing title to me, how do we continue to grow while living within our water means? I think the answer lies in constant communication among all interested parties. As I think about that I'd like to explain what BLM's role in this is. I see the BLM as having a variety of roles. Three come to the top of the list for me. They are: facilitator, consultant, and mediator. I'll explain those a little bit.

As a facilitator, BLM's role is tied to our land use planning process which follows the mandates of both the National Environmental Policy Act and the Federal Land Policy and Management Act. NEPA was enacted to establish a national policy for the environment that encourages productive and enjoyable harmony between man and his environment. FLPMA requires the BLM, with public involvement, to develop, maintain, and when appropriate, revise land use plans which provide for the use of those lands. FLPMA also states that a track of public land may be sold, where as a result of the land use plan the BLM determines that disposal of such a tract will serve important public objectives, including expansion of communities and economic development so long as that outweighs other public objectives and values such as recreation and scenic values. BLM incorporates the policies of NEPA and FLPMA in its land use planning process, and in the Las Cruces area, we are currently doing just that.

Earlier this year we started the revision to the White Sands Resource Management Plan which covers public lands in Sierra and Otero Counties and the amendment to the Mimbres Resource Management Plan which covers lands in Doña Ana County. This started with a public scoping phase where BLM identifies the areas we are developing the plan for and the anticipated issues or concerns that we felt needed to be addressed. We recognize the area around Las Cruces has seen tremendous growth, and we knew that our decisions in Mimbres RMP were likely outdated as far as addressing this growth. During the public scoping we heard very clearly that the public was interested in how we may consider subjects, such as what lands would be made available for sale and what lands would be retained in federal ownership. I believe that this is a reflection of how people want to see growth managed.

As a facilitator BLM will use the planning process to bring special interest groups, local and state agencies,

and the general public together to look at the current situation of land ownership patterns and land uses. Through this dialogue we will openly discuss opportunities and options for adjusting those current decisions in ways that will address the needs and desires of all involved. Very clearly this is a huge task and in the end not everyone will get everything they wanted. But our primary purpose is to involve all interests in the process and allow that involvement to help formulate appropriate decisions to direct decisions and management of public lands over the next 10 to 20 years.

Now for the consultant role. The BLM’s recently revised planning handbook describes a number of program areas that must be addressed in the plan with decisions that address desired outcomes and allowable uses and also actions to achieve those outcomes. These eventually impact how communities adjacent to public lands grow. The decisions that must be addressed include managing for watershed health; identifying measures to meet local, state, and tribal water quality requirements; ensuring water availability for multiple use and functioning healthy riparian and upland systems; identifying special recreation areas; delineating travel management areas; and also identifying lands for retention, disposal, or acquisition. This list obviously does not include all of the land use plan requirements, but should give you a flavor for the real challenge facing us as we proceed with the revision and amendment of these two plans. Within BLM we have a team of resource specialists that participate in the planning process, and they serve a role as a consultant in the various resources and uses that they represent.

Finally regarding the BLM’s mediator role. Over a year ago when the Las Cruces District was looking at how we would initiate and develop our land use plans, we envisioned a very involved public, and we anticipated the desire of local and state agencies and governments to participate. We were certainly not disappointed, as we have had extensive input from the public regarding their desires, and we have also had numerous discussions with state and local agencies and governments regarding issues they would like to have addressed. BLM has recently issued guidance on collaborative planning that recognizes that individuals, communities, and governments working together toward commonly understood objectives yields a significant improvement in the stewardship of public lands. Also we have invited many state and local entities to participate with us as cooperating agencies,

and to date we have agreements with Sierra and Doña Ana Counties, the City of Las Cruces, and New Mexico Department of Agriculture. This grants those entities a special level of involvement that we believe will help them clearly offer guidance on how they would like the BLM to manage public land in order to help them deal with their issues.

Although BLM is a participant in the process we recognize our mediator role of bringing parties together to assist us in the development of appropriate decisions for the management of public lands. Even though BLM does not make decisions directly towards where and how our communities grow, our decisions can affect that. Without input from local entities and the public, we could make inappropriate decisions regarding what lands will be available for that growth.

**As a facilitator BLM will use the planning process to bring special interest groups, local and state agencies, and the general public together to look at the current situation of land ownership patterns and land uses.**

*Tom Phillips*

Through BLM’s various roles, including facilitator, consultant, and mediator we can improve the outcome of our land use planning. This will ensure that our management direction will work in concert with the local desires for community growth. I have been working in the Las Cruces District for over 20 years, and in that time I’ve had the chance to meet and work with individuals, special interest groups, and with government entities who have specific requirements. One thing I have learned is that listening is usually more important than talking. And anything I can do to help bring people together and help them voice their concerns is one of the most important actions I can take. With that I would like to quit talking and continue listening.

**David Steinborn:** Good afternoon. How many people in this room are elected policy makers? Please raise your hands. Four of you. How many run public parks? None of you. How many of you run public or private golf courses? One. [One of the panel members, James Rivera, Pueblo of Pojoaque raises his hand.] How many developers are there in the room? Two. [Both panel

members James Rivera and David Steinborn raise their hands]. We may be talking to the wrong publics. And I say that seriously, because during the time I was Mayor of Las Cruces we had occasion to have a day that was called the Las Cruces Day at Santa Fe. We invited all of the elected officials in Santa Fe. Many cabinet people came.

**I think public policy needs to be proactive. I think you need to have 100 year water plans and not 40. I think you need a plan for the future...**

*David Steinborn*

One of the things I said six years running, was the State of New Mexico does not have a growth policy. That was 1981 through 1987. Las Cruces isn't any different now than it was then except for being bigger. New Mexico still doesn't have an urban policy. I would suggest to you that the policy that it doesn't have also is the same policy it doesn't have dealing with water.

There is no real incentive to conserve.

As a matter of fact, I was Mayor of Las Cruces during the time that El Paso was trying to get water out of New Mexico, and I became familiar with the Nebraska-Vorhees case, and I learned all the language that you all in the water business use. I found it very interesting that as a matter of public policy the decision we made is that the more water during that period of time we used, the more we insulated ourselves in the event that later on we were told that we had to go to a historic place and that was what we were going to get. I'm getting enough head shaking; I think you all understand exactly what I am saying.

So now we've got this issue in 1985 of the conversion rate from farm land to urban—it took 9/10 of an acre-foot in 1985 in Las Cruces to supply water to one acre that was urbanized. If you took a piece of land out of the valley and took away its water, in other words, they sold or gave away or turned over to the city the water rights, the city used those water rights for urbanization. For every acre you converted in the valley you could grow houses on that acre or you could grow houses on two acres of the mesa.

After I left office, I had four years of no public policy work and then I got to chair the State Environment Board, which was very interesting. I found, for example, the area in downtown Albuquerque that is contaminated originally had a dry cleaners on it.

When Sunwest Bank sold to Bank of America, Bank of America asked for an environmental impact statement. When that was done, it was discovered that they had the problem. I would suggest to you that up and down the valleys of this state there is a lot of contamination nobody knows about yet, because those farms have never sold, and the farmers have for years changed their oil and dumped the stuff into our earth. We've gotten smarter, but the reality is we have dumped a lot of bad stuff into our earth.

Now as a policy maker I understand those things, and I understand that what we really need to do is to get the stakeholders together. Our friend from BLM is exactly right; the stakeholders need to sit down over a period of a long time, maybe two or three years and really talk about where we are. We have a finite amount of water. We don't know if we are mining water in Doña Ana County today. We would like to think we are not. But we don't know until we go through the adjudication process and somebody comes up with a model that everybody salutes at. I don't think we really know the answer to the question.

I can tell you that five years ago as one of the three developers of Sonoma Ranch Golf Course, we spent \$1.5 million extra developing our water system so that we could be good shepherds of water. Our water doesn't go on when the wind is blowing; we have meters everywhere, our water doesn't go on in zones that don't need the water. We have meters all through the golf course that are electronic on our GPS system; so our man in charge on our irrigation system actually drives around and turns on and off systems to make sure the only areas that get water get it when they need it. But the reality is, it's still water isn't it? And no matter how much you conserve someone else thinks that your ox could be gored because your ox is different than theirs.

Let me give you something different to think about. My in-laws are in the agriculture business. How many of you own farms that you make a living off of that's your livelihood? Not many of you, we've got a few people but not very many. Isn't it interesting we have major stakeholders here at the table with us? In our valley it takes 5-6 acre-feet to really run an alfalfa field. The real question is: Where does the alfalfa go? We all know where it goes. It goes to cows and horses. I am not a vegetarian; I am a carnivore. Two of my adult kids are not only vegetarian, but they eat raw food, nothing cooked over 120 degrees. They don't eat any meat. So from their point of view alfalfa is

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

what a golf course is to someone else. They don't ride horses; they don't eat cows, so they don't understand why we would use 5 acre-feet of water to grow alfalfa when you can convert that into 6 ½ acres of houses, which converts to 30 families. When you start looking at water in terms of the economics of water, everybody sits around the table understanding everybody wants a piece of the action.

I saw something on the news this morning that maybe all of you saw. Gas production right now is at the lowest it has been since 1941. We know we have a lot more people since 1941. We have a lot more vehicles. SUVs' are today's target for people that think that people shouldn't drive cars. SUVs mileage is not a whole lot better than cars in 1939-47. Oddly enough we have a comparison. If you are looking at somebody that made \$5,000 a year, that was making a living in 1950. Here it is 55 years later, and the question is in New Mexico if they were making \$55,000 a year as a family, how would they be doing? If you convert that to housing, that is about \$190,000. That's what that buys about \$190,000 worth of house. Look at Albuquerque, Santa Fe, and Taos, you can't buy a house for that amount. If you do, it is way on the bottom end, and you are lucky to be able to find one. If you start multiplying and looking at the value economically of water and what that buys, convert that to gasoline, or interest rates, or housing costs, or car costs. A 1957 Chevy was \$1,800; today can you get a brand new car for \$18,000? Yes. In 1957 if you were making \$5,700 a year, you were making a living, so today if you make \$57,000 a year, are you making a living?

In the 1980s in Las Cruces when I was in office we created an inverted block rate. We said if people keep using water, the next 10,000 gallons of water they use is going to cost more than the last 10,000. We figured out about how many gallons a family needed that we called a life-gallon-per-month number. We said you go beyond that, you pay more per 10,000 than you did on previous ones. The other thing we did then in 1985 is we actually created a public policy that said that if somebody wanted to annex land into the city of Las Cruces, they either had to bring money to pay for water rights, or they had to bring water rights. The City Council got rid of that unfortunately about 8 years ago. I think it is a good public policy. If we are going to have growth in New Mexico, the people that are enjoying the growth ought to help pay for it. Having said that, I have a few more things I want to say.

I am trying to be provocative. I am hoping that this will tweak some of you to ask questions. I think the development business is a reactive business. If there's no activity, there's no development. If there aren't people knocking on the door wanting to come to your town, there is no reason to do development. If you can't get the financing, can't get the builders, you can't sell the lots, there's no development. Conversely, I think public policy needs to be proactive. I think you need to have 100 year water plans and not 40. I think you need a plan for the future instead of just planting rice that's good for a year. The Chinese were smart. They said if you plan for a year, plant rice, if you plan for 20, plant trees; if you plan for 100, educate people. I don't think we are educating people. We are educating each other, but the reality is I doubt that we will leave here and come up with a concise 3-page executive summary and try to get face time with elected officials. Do not send it to them in the mail. But get face time with them, go over the executive summary, and ask what they are going to do about it.

But I think you also need to get a consortium of people who are sitting there with face time, and they just can't be people that are labeled as 'concerned about the environment,' 'concerned about water.' It has to be all of the stakeholders. It has to be a big broad list. It has to include the developer community, the realtor community, the builder community, because every one of them has a stake in the process.

The last thing I would like to cover is this. In 1972, I was State President of the Realtors Association of New Mexico, and I attended a meeting in Santa Fe of 25 different presidents of large and broadly membered organizations in the state. The meeting was sponsored by the Director of Tourism for the state. He asked this question, he said, "In your views, (there were 12 of us at the table) what is the single biggest thing that we could do to change New Mexico to cause more people to come here?" Now I know that some of you don't want any more people to come here. I know that. But I grew up in Tucson, and Arizona is not a whole lot different than New Mexico. And the question that begged an answer was – it's a marketing question isn't it? – what would you do here to cause people to come here? And everybody went around the table. One person said "Well, we need to have a right-to-work state." Somebody else said we need to have a big zoo, or whatever, but I said we needed to change the name of the state. I believe that. I am now 33 years older, but I would still say exactly the same thing. When I

travel around the United States talking about Sonoma Ranch subdivision or the City of Las Cruces or anything else, and I tell them I'm from New Mexico they start talking slowly, because their immediate assumption is that I'm translating as they're talking.

**Janet Jarratt:** I did bring a PowerPoint. I like to know who I'm talking to, and the best way to let people know who they are listening to if I'm talking is in pictures. I am part of the three generations that live on a family farm south of Los Lunas. This is where my mindset comes from. I don't know if anyone else in the room raised their hand when he asked who is making a living in agriculture, but I did. So I feel kind of in the minority. I too found the questions here fairly provocative.

What I hear a lot not just here but everywhere is about water markets, and economics, and how to expedite transfers, and reallocation to produce economic development. And it's always about reallocating from agriculture. So when I saw the title of this; 'economic development and land use' the first thing I thought of was that we need to define economic development and not just make assumptions about what economic development means.

In response to what was said earlier today, I want to point out that all of our fields whether we lease them or own them are all laser-leveled. Most have concrete ditches and the reason is because time is money. The higher level of production you get off of an even distribution of water across the field is also an economic benefit. So it isn't necessarily about governmental mandates or tax incentives or any of that other kind of business. Don't get me wrong, that'd be great. But it is because time is money and this is a business. If we have a proper head of water we have 137 acres that are together that we lease that are laser-leveled and have a dirt ditch, and if we have a proper head of water we can irrigate it in less than 36 hours. That's pretty efficient. It doesn't have anything to do with the cost of water. I just wanted to mention that.

I want to show some information that was generated here at New Mexico State University (Table 1). What I find most interesting is the fact that the full economic value of agriculture is not represented as output value. That means to me that there is a significant opportunity to increase economic development within this current resource use. You don't have to necessarily reallocate that water to enhance the economic development of that resource. We don't have to be doing all the value added services out of state. We can

do it here; we can employ our own people and keep it within our use sector. These numbers don't reflect the fact that Petsmart in Albuquerque has about one-third of the store devoted to equine. but that goes down as retail sales, not agricultural sales. There are many spin-off businesses that are not part of the state's economic development that don't ever go to the proper sector, which would be agriculture.

Table 1.

<ul style="list-style-type: none"> <li>•Considering the forward linkage industries, the value increases to \$4.74 billion.</li> <li>•Currently, raw product is grown in NM, then shipped out of state for value added processing, then shipped back for consumption.</li> <li>•Agriculture is a raw material industry. Agriculture is not the final product that is purchased directly by the consumer and therefore the full value is not represented in its output value. All other industries in the top 15 (other than oil and gas) are final product businesses that sell directly to the consumer.</li> <li>•The farmer's share of grocery store price averages 22%.</li> <li>•Value of agriculture is \$3.24 billion</li> </ul> <p><i>From "Total Economic Value of Agriculture in New Mexico" by Nick Ashcroft, NMSU</i></p>
--

Another interesting thing is the cost of community services. Figure 1 was put together based on over 102 studies nationwide that demonstrates that agricultural land has a similar return value on your tax-basis as other commercial and industrial uses have. In other words, the cost of community services is extremely low for the amount of money that you get back, and I think this flies in the face of conventional wisdom that agricultural land is not taxed high enough, that it's kind of a "loser" for a county for instance for doing a tax-basis. That doesn't actually work out to be true, because when you look at the cost of services, agricultural lands are supporting those residential uses as well.

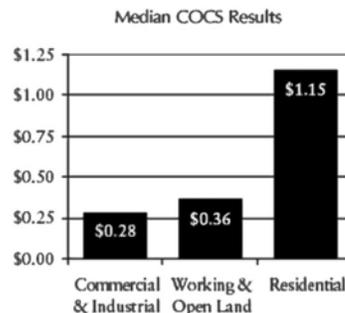


Figure 1. Median cost per dollar of revenue raised to provide public services to different land uses. *from Farmland Information Center, Aug. 2004*

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

Figures 2 through 7 are photos taken on our family farm.



Figure 2. Winter wheat harvest in late spring



Figure 5. Snow geese and Canada geese during the winter



Figure 3. Snow geese and Canada geese during the winter



Figure 6. The last whooping crane in New Mexico



Figure 4. The fall season



Figure 7. Snow geese and Canada geese during the winter

Panel Discussion

Let's look at what changing land use has looked like historically in the valley. Figures 8-11 depict the Albuquerque area in 1935, 1951, 1973, 1991. These slides do not include Mesa del Sol, which is 20 square

miles that was subsequently added to the south of the illustrated boundaries. This is what happens when you shift those uses.

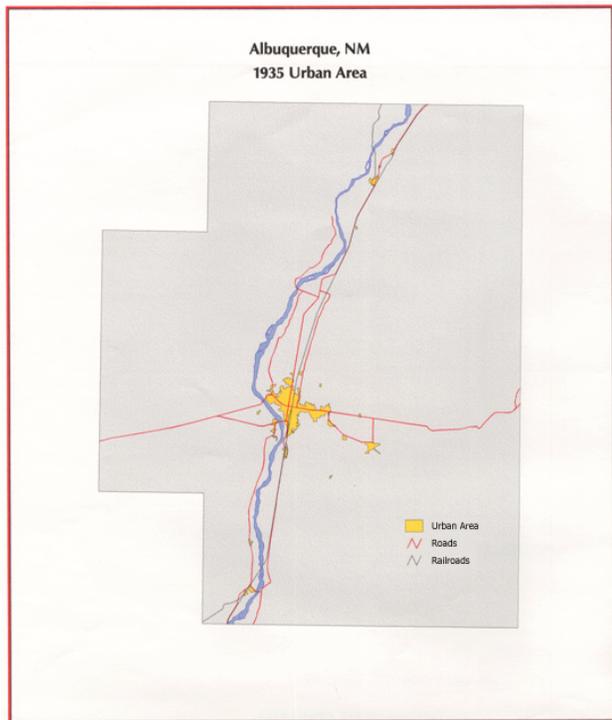


Figure 8. Albuquerque, NM urban area in 1935

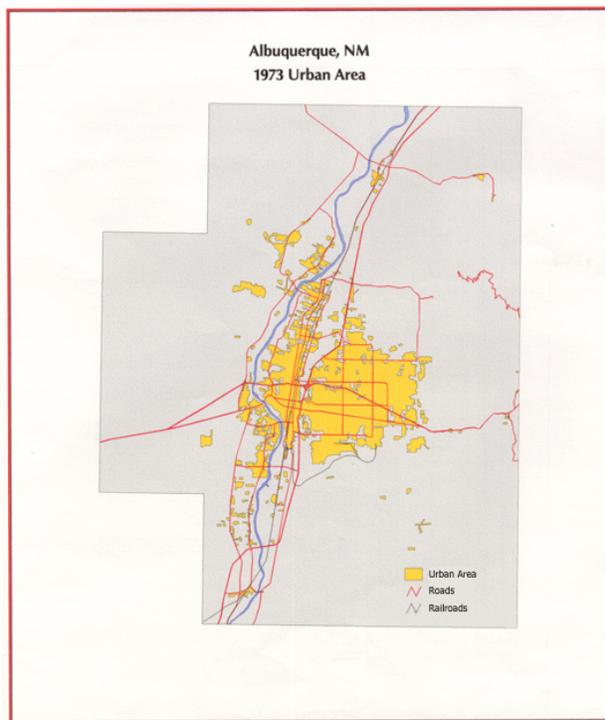


Figure 10. Albuquerque, NM urban area in 1973

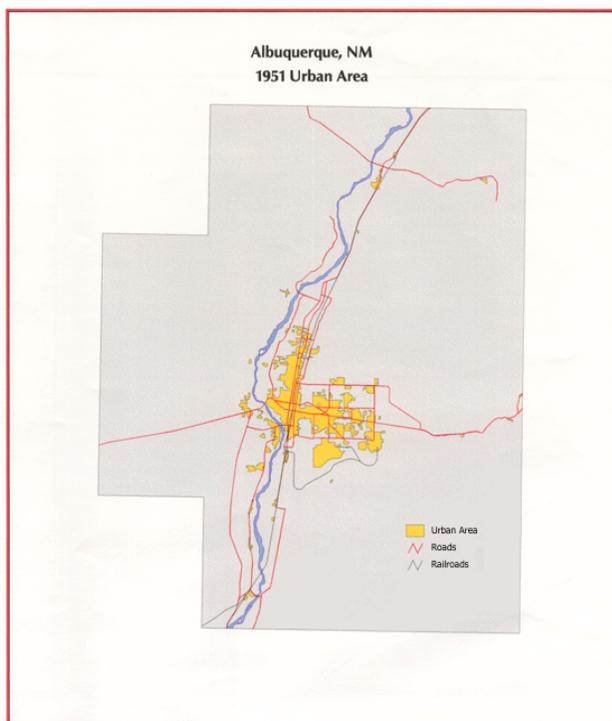


Figure 9. Albuquerque, NM urban area in 1951

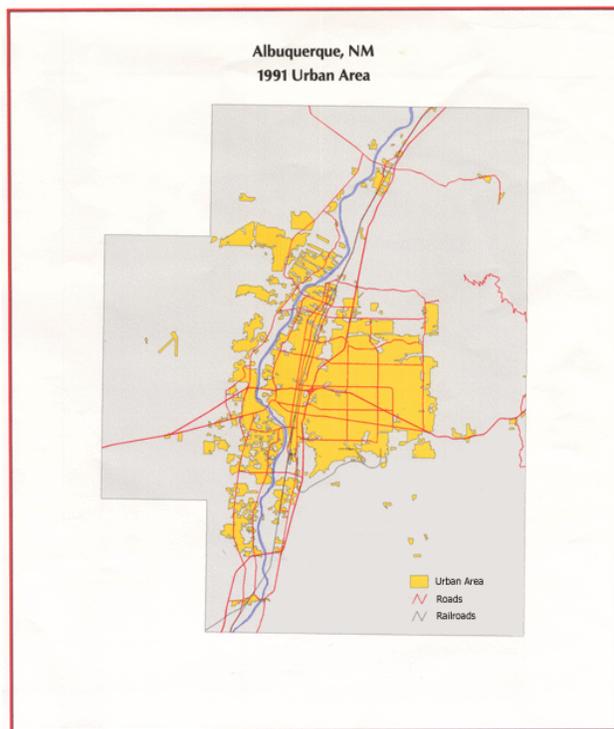


Figure 11. Albuquerque, NM urban area in 1991

Economic Development and Land Use:  
How Do We Continue to Grow While Living within Our “Water Means”?

Figure 12 comes from a study that came out a couple of years ago showing the flow of groundwater is no longer toward the river, but is away from the river toward the pumping centers. To me that is pretty darn scary, because you are not recharging the aquifer anymore. In fact, the Papadopolous study that was funded with the interstate stream commission shows that in the Middle Rio Grande Basin, there is a 70-110,000 acre-foot a year depletion to the aquifer, every year. It is cumulative, so this is what happens when you continue to change land uses and you don't have that recharge.

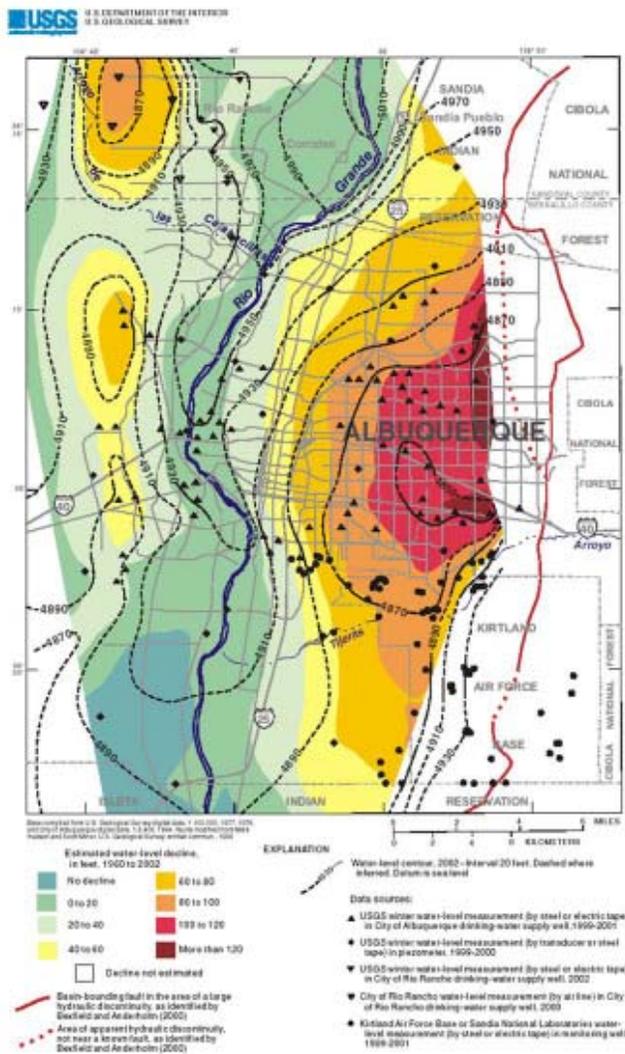


Figure 12. Implications for groundwater flow and response of the aquifer system to pumping stress; USGS report 02-4233

Figure 13 is a map of the Belen Quadrangle. There is an area between Los Lunas and Belen that is platted. It's an antiquated subdivision, but they are in the process of developing it. They have several hundred homes out there. They are extending the water lines, and moving on it, so it's looking like it might go forward after all. It is platted with over 100,000 lots. Well what does that mean on a localized basis? The bottom line of what that means is that about 40 percent of the privately held agricultural land in the Middle Rio Grande Basin would have to be retired to support this one subdivision. What that doesn't tell you is that there are several more in Valencia County, one 2,200 acres, another 6,000 acres. This doesn't include the other developments in the basin in Sandoval County around Rio Rancho, City of Albuquerque and the west mesa, all of which are going to require retirement of water rights.

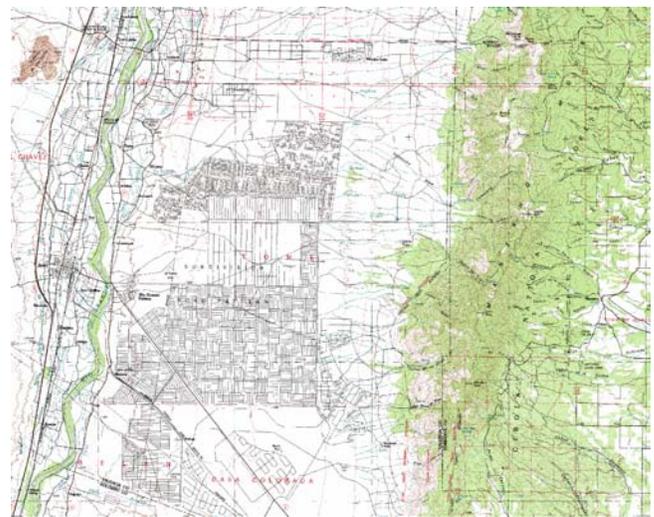


Figure 13. Belen Quadrangle

I found out something particularly interesting in June of 2005 at the Middle Rio Grande Water Assembly annual meeting where their topic was water allocation. Former State Engineer, Tom Turner spoke. One of the topics he spoke about was dedications. One of the funny things he said was that he didn't know they existed until about a year before he was State Engineer. To quote him in defining dedications, "basically you have got to pump water out of storage and only acquire the water right when the flows in the river began to diminish." Later he said, "I tried to get a handle on the extent of these dedications, and we came up with two or three different values. I can tell you that the number is so large it is probably going to require the majority of agriculture in the middle valley to change its purpose of use." That's on dedications. That has very little to do with these developments that I'm talking about except to the extent that they relied on dedications to get their permits. Table 2 shows the trend for developed land and irrigating cropland in New Mexico between 1982 and 1997. We have a shift. It is not necessarily happening in the same place, but overall we're having a shift.

Table 2. Developed Land and Irrigated Cropland in New Mexico, 1982 and 1997.

NRCS 1997 New Mexico Data Tables (in thousands of acres)		
	Developed Land	Irrigated Cultivated Cropland
1982	781.0	998.0
1997	1152.7	635.6
48% increase in developed land 36% decrease in irrigated cultivated cropland		

So we hear a lot about how much water agriculture uses. Of course we spent the capital investment to make it viable to where we are and own the water rights, and I think that has a lot of validity. But nevertheless, you hear a lot – "if agriculture would only reduce their use by some small percentage, we would have plenty to grow." If you look at where the irrigated agriculture is in this state and where the growth areas are, how does that break down in a localized decision? In your community what does the reallocation really mean for the percentage of agricultural land you are going to lose in your community? I think that it's a mistake to generalize broadly across a wide area rather than really looking

at localized decisions and observations about the impacts to your area.

I think we have to talk about what it really costs when you start reallocating. What you've lost is the economic development that is already in place and is prepared to grow without a whole lot of investment and without reallocating water resources by having the value-added process done to the agricultural products in our state rather than shipping them out. So we have the loss of the agricultural economy. We have a loss of food security, which I think is going to get even more important as time goes on. Right now there is the avian flu. There are a lot of issues about food security that I think we are going to

**We have a loss of habitat for a lot of really cool stuff, like the last whooping crane. She's gone now, but she stopped on our farm every single year, and so did the rest of them that came through until she was finally the last one. What is that worth as a value and a place to live?**

*Janet Jarratt*

come to grips with it, and it is going to be scary. We must prepare to become somewhat self-sufficient and not assume that we are always going to be able to buy our food from Chile or somewhere else. Otherwise, I think we are going to find ourselves with a lot of problems down the road.

We also have a loss of aquifer recharge. We have a loss of habitat for a lot of really cool stuff, like the last whooping crane. She's gone now, but she stopped on our farm every single year, and so did the rest of them that came through until she was finally the last one. What is that worth as a value and a place to live? What is that worth to people to have that maintained? That's an unaccounted for value of agriculture that never shows up in any of the economic analyses. The other thing that never shows up in any of the economic analyses is the environmental gains that you reap from agriculture. For example, nitrate removal. Alfalfa is really great at this, because it not only removes a lot of nitrogen because it has a very high protein content, but it is a really lazy plant, so it will take the nitrogen out of the soil if its there or out of the groundwater because it has the roots to penetrate to the shallow aquifer. It

will clean up the nitrates. So you are talking about septic tanks, you are talking about a lot of those issues.

In Canada, they are using alfalfa in 29 locations to apply wastewater treatment effluent in order to get the nitrogen uptake. They have developed alfalfas that do no fixation of nitrogen out of the air to do brownfield cleanup in some of the military ammunition dump sites to clean up the nitrates there. When the alfalfa turns yellow, it's a clean site, and it is happening within maybe three years. Much cheaper, way better deal.

Certainly in the middle valley where we have a lot of alfalfa, we are getting a lot of benefit from it. We don't have a lot of Clean Water Act issues with the

**We figure by the year 2040, we plan to serve about 18,000 people. The new appropriations are going to ensure we supply quality water resources and provide for the health and wealth of the Pojoaque valley.**

***James Rivera***

there are a lot of alfalfa fields along the river intercepting that groundwater flow and cleaning it up?

The other thing we are not thinking about that we could lose in these things is the carbon sequestration potential. Greenhouse gases are a big deal. Globally there are reports where they are looking at going to methodologies, which I guess we consider in my family as being just normal stuff, which is to till manure into the soil. That puts biomass back into the soils that enhances its ability to sequester carbon in the soil. And you plant legumes like alfalfa, because it also has a lot of plant mass to take off and you have some of the carbon sequestered there. They are looking globally at having those kind of practices done in order to alleviate some of the greenhouse gas emissions long enough to catch up the emissions end of it. In Oklahoma, the state legislature passed legislation to pay farmers for carbon sequestration techniques. I really think when you have urban centers like Albuquerque where you already have air quality issues, you are looking at environmental issues. I think the day will come when farmers are going to be paid to farm for the environmental gains that you get out of agriculture.

I guess for me what this really boils down to is that my dad is the best farmer in the world. It's not what he started to do, but he ended up doing it, and he's great at it. He always taught us stewardship of the land and the water together. One is worth nothing without the other. And I think that's the thing we really need to be looking at as a society. You can't make quick fixes like quickly reallocating water from here to there without some consequences. What are the long-term economic costs of having to undo a short-term solution that turned out to be a long-term problem?

And with that, thank you very much.

**James Rivera:** I would like to tell you about a project that we started back in the late 1980s to do with a regional wastewater project in the Española-Pojoaque Valley area. There was a study done, and the book was about 2 inches thick. There was a committee set up. The committee pretty much just went away. There were several, different committees that helped in this project. Our late Governor Jacob Viarrial was one of the leaders that took the first initiative to bring these points together nationally, and he really pushed for environmental issues.

Going back to the project, I want to steal from the gentleman from Albuquerque about trying to alleviate problems by going to 'toilet-to-the-tap' projects. We have started getting funding for a wastewater treatment facility in the Pojoaque area. The treatment facility will cost about \$10.4 million. Right now we have somewhere in the neighborhood of 20 percent of that. The growth in New Mexico was mentioned earlier, and with the Pojoaque wastewater facility that we have right now, we need to service about 3,500 people a day, which includes our businesses and our housing areas. We figure by the year 2040, we plan to serve about 18,000 people. The new appropriations are going to ensure we supply quality water resources and provide for the health and wealth of the Pojoaque valley. We will have the capacity to expand to serve other growing populations in the area, which would include possibly Tesuque Village, the city of Española, and the towns of Santa Cruz and Chimayo. The pueblo has been working with the local governments of Santa Fe County, Las Alamos, and other pueblos. There is a regional wastewater advisory committee that oversees the project, and there is also another Española basin water committee that manages that type of activity.

The pueblo is proactive in the community, being very conservative with water usage. The water system

is probably the most up-to-date in the Southwest. It does a good job. Right now in the valley in Northern Santa Fe County and Southern Rio Arriba County, a lot of the houses are old. Most of them, if not all of them, are on septic tanks. Those septic tanks are starting to seep into the ground and into the aquifers and contaminating the water. Our approach is to help with the quality of the water and to help the communities that surround us.

In the past, every time that we started a new project, there was always a huge outcry about how Pojoaque Pueblo was doing it again. We get bad press, and we get some funky phone calls. When it is all said and done, the people will come to grips with it and say, "Alright. That worked." Working with different governments around Pojoaque, Santa Fe, and Los Alamos, I see that the government understands our privilege to become developed. They see the need for the types of things that we are doing in the valley. It shows that we can do it based on income. With those revenues, we are giving back to the community by providing jobs, furnishing housing, and things like that.

We are very active in the legislature. We monitor a lot of different issues, water, air quality, environmental quality being some of them. We all here have an interest in them. Last year I worked with this group. We had about six different groups that were part of the committee. They were environmentalists, conservationists, tribes, and agriculturalists. We blocked a lot of bad bills that would have had a huge impact on New Mexico ground and surface water. We got a couple of good ones passed. However, we will not be doing it again this year. Working with the legislature will educate us on so many things besides this, and with that I think I am done.

## QUESTIONS

Q: I have a couple of questions for John. You mentioned in the last permit you got from the Office of the State Engineer that some gpd (gallons per day) mandates were part of it. I was curious, did you get to participate in that with the OSE in terms of establishing numbers or where did it come from?

A: **(John Stomp)** We had our own water conservation goals that were set by our own policy makers. That was kind of the process of where we started in terms of our water use for our planning. As you project what the water use is going to be for the future, you obviously need some projection, and

projection was the policy goal set. With respect to how the state engineer came about it, I can't tell you. I wasn't part of that process but we were actually submitting a lot of technical information throughout the process. It took the State Engineer's Office a year and a half to decide. So where he came up with those numbers I don't know. You might want to ask him.

Q: The other question is where are you now in terms of average gpd?

A: **(John Stomp)** At the end of 2004, we were at 177 gallons per person per day, and this year we are about 1½ percent less than where we were last year. Last year we pumped less than we did over 20 years ago. So even though our population has increased over 40,000 counts in the last 10 years, we have reduced our pumping by about 16,000 acre-feet per year. Last year we pumped about 104,000 acre-feet.

Q: The last question is; any thoughts on how to get to 155?

A: **(John Stomp)** I have lots of thoughts and it's going to take a lot of actions. I think we have peeled off a lot of the low-hanging fruit. The rest of it is going to be more difficult. I think there will be a lot more mandatory measures. It will be interesting to see how the public reacts, because conservation from an education standpoint is working out here. We will have

**At the end of 2004, we were at 177 gallons per person per day, and this year we are about 1½ percent less than where we were last year.**

**John Stomp**

to take that next step past the education, past the voluntary measures, and move on to the mandatory measures and see how that works. Policy makers are going to have to make some tough decisions.

Q: My question is for David Steinborn. I am interested in the remark you made about changing the name of the state. I would be interested in knowing what you would name it.

A: **(David Steinborn)** That is a great question. I would like to answer the question that was asked of John. As housing stock gets smaller and lots get smaller, the gallons per day per person will naturally change too. It is a function of a moving target. If you look at the housing stock in Albuquerque, there is a greater and greater percentage of smaller and smaller houses that are being built in Albuquerque and Rio Rancho on smaller sized lots. If you go back to the 1990s, there

were a lot of lots that were a quarter or a half acre. That is relatively variable now in the same market.

Now to answer your question about what I would call New Mexico. That is an interesting question. I do not know that it really makes a difference. I remember that one of the other eleven people sitting around the table took umbrage at that, because he thought I was talking about the culture of the state. I absolutely was not talking about that at all. You can call it anything.

**The biggest single factor that dictated where the growth patterns in the central part of the state went was the building of interstate freeways. They were intended to be an interstate transportation hub, but they in fact became feeders into the city of Albuquerque and the growth of Albuquerque...**  
*Bill Hume*

As a matter of fact, there has been a joke going on in the news, because there is somebody that is trying to deal with the crosses in our tradition and wanting to get rid of the crosses. Some people are suggesting to get rid of the name.

Why don't we just call it Fred? I guess you could call it Fred. I have no serious substitute for a name. I just think that it is a serious subject. When I attended mayor conference meetings in the 1980s, I remember being on an elevator with a guy from Ohio. He did the slow talk with me and said, “It is very nice to have a mayor from your state.” I replied, “It is nice to have a mayor from your state.”

Q: I am surprised with what you just said. I understand, living in Albuquerque, that lots are getting smaller, but everything that I have ever read says that houses are getting bigger. What am I missing?

A: **(David Steinborn)** Well, the houses are getting bigger, but the family unit is getting smaller. The number of times toilets get flushed is really based on people rather than square footage. I may have misstated that. Houses may be getting bigger, but that is a consequence of interest rates. The places that get water (showers, toilets, sinks) are being used less; there are fewer hands getting washed, because there are fewer people per household. The square footage of the lot, where it used to be 8,000, 9,000, 12,000, and 15,000 is now 5,000 to 6,500.

Q: There is tremendous growth in Las Cruces and Albuquerque. Going back to what you were saying

about lot size, if we were to have made a policy to combat urban sprawl by providing smaller lot sizes, it sounds like that would help conservation. What are your thoughts on that?

A: **(David Steinborn)** This first part of that is a public policy thing. If it was a public policy incentive for the development of infill areas, which is what you are talking about, then there would be more infill. Your postulation is not correct. First of all, Las Cruces is not sprawling in the sense that it is growing north, south, west, and east. It is not. Eighty percent of Las Cruces's growth is to the east. People follow intersecting lines. So if you put lines in the east, that is where the people will go. If you go north and south as a matter of public policy, Las Cruces has never tried to urbanize the valley. If you go to the west then you run into the airport. I see that pattern continuing.

Q: The name of this panel seems to imply that economic development is necessarily predicated on growth. Why are we asking if economic growth and development are possible within our water means instead of whether or not we can have economic well being within this state within our water means. Economic well being, seems to me, to be tied not necessarily to growth and development, because if you consider the history of this state, we have been a developing state for one hundred and fifty years. We have the second highest poverty rate in the country. Growth does not translate into economic development and well being for the people of the state.

A: **(Bill Hume)** I would neither agree nor disagree with where you went. I would observe where you take that vastly expands the scope of what we were discussing beyond what was given to us. There are those who say that economic growth and development in a community and this country is dynamic only so long as it is growing and you cannot stop the growth. Colorado is an example of that. I remember Albuquerque when it was a lot smaller than it is now, but with some nostalgia. The biggest single factor that dictated where the growth patterns in the central part of the state went was the building of interstate freeways. They were intended to be an interstate transportation hub, but they in fact became feeders into the city of Albuquerque and the growth of Albuquerque or sprawl, depending on which term you choose to use for it, followed the interstates because that was the path that got you from where you were to where you wanted to be. I think when we get our Belen to Bernalillo train going that will stimulate growth

in some of the outlying communities in different areas than it is now. When we get all the way to Santa Fe, it will also change people's living and travel and working patterns. So many of these things are easier to analyze and form theories around after you have something happen in a community or in a state and you study what happened and why it went that way. Frequently when you derive lessons from this and try to change in the future, you will find out later that you were pushing on the wrong variable. I do not know the long answer to your question. Does anyone else want to address that?

A: **(Janet Jarratt)** I actually think you make a really good point. I tried to go after the fact that we need to define economic growth and development. One of the things that Bill just observed that is true is that the land or real estate development goes along where the transportation corridors are. The problem with that is it becomes bedroom community development, not economic development in those outlying areas. That is a very different thing. I would be much happier if instead of just looking at population growth as an end in itself, we would look at the growth of disposable income in this state and see what it takes to have economic health. In my mind, economic health is about how much disposable income you have, not about how many people you have at a certain level. I can certainly tell you that as Valencia County grows, the poverty level has definitely increased there. It is a big difference. The number of undocumented people has increased as well, the number of people not on the tax rolls or in the census. It is a very big economic problem to all the governmental entities. It is a drain to have a very low level of disposable income and to always be looking at bedroom communities and not any kind of self-supporting communities that can go together. I have some concerns that the transportation is not linked to water and land use and the ability for Valencia County, for instance, to pursue its own economic development. Everything seems to be focused on shipping people to Albuquerque, not about letting it have its own economic development. I think that is a really important question that we need to look at as citizens in this state. We need to impress on some elected officials about what it is that we really want for a standard of living in this state and how to get there.

A: **(David Steinborn)** I am going to take a shot at your question. I have been very blessed to do a lot of things in my life. Five years ago, I was on the state school board. Let me give you a state school

perspective in New Mexico, this very rural state. Of all of the fifty states, we are the second highest state that is giving the second highest percentage of our general budget to education. We are the fourth lowest when it comes to dollars per student. We have a very low average tax per person in a very rural, very difficult state to deploy education. The question is: if you want to give the same quality of education to the child in Abiquiu as you do in Albuquerque, how do you do that? It is really complicated when your provider of internet cannot give Abiquiu the same level of speed as the kid in Albuquerque takes for granted. We had major companies willing to put computers in every classroom in the state five years ago, but we did not have internet available in 50 percent of the state to be able to connect. The question is: where do you get more money? The conventional wisdom has been that you get more money by bringing in more people.

**In my mind, economic health is about how much disposable income you have, not about how many people you have...**

**Janet Jarratt**

Twenty years ago somebody come up with the idea that people who move here as retirees was actually economic development. At the time that they said that, I thought that it was silly. The more I have thought about it, the more I realized that in their way of thinking that was economic development. The question that you bring up is a great question. If we did what Oregon tried, which was putting up a wall and saying, "We don't want any more growth. We don't want any more people. We are going to try doing this by bringing up the bar." They tried to do that. Twenty years later they put the bar down again and said, "Come on in." It took about ten years before people were willing to trust that process. I do not know how to answer your question, other than to tell you this. I went to the General Motors Company in 1986 with a delegation from the state of New Mexico in trying to get the Saturn plant centered in New Mexico. I got a phone call from their head of government relations in Dallas a week later. He said, "Your presentation for Santa Teresa was the best presentation in the country, and we are not going to give it to you." Why not? They did not trust the state of New Mexico's long term governmental decisions regarding whether or not they will do what they have been saying they would do. They went to Tennessee. We have a lot of things in the state of New

Mexico to work on. One of them is our public policy process. I thank you, because you are exactly right. More people does not mean more economic development, but no more people does not mean it either. We have a real task, and water is just part of it.

Q: Mr. Steinborn spoke about subdivisions and tourism. (To Janet Jarratt) Thank you for those beautiful slides that you were showing. People come here, spend their money, and leave to see things like that. There was no question there, but thank you for that.

A: (**Bill Hume**) You are right, but the fact of subdivisions though, as David pointed out, is that they are a service industry. If nobody is buying the houses, the subdivisions go away. With regard to Valencia County, it is not Bernalillo economic leaders that are encouraging the development of bedroom communities in Valencia County or in Sandoval County. It is the developers and the local governments seeing this as development that they love. This is the dynamic of our

**One of the amazing statistics that we have seen...is that people are increasingly willing to tax themselves or allow governments to increase public funding measures to protect farmland, to preserve natural lands and views that people have taken for granted.**

*Karyn Stockdale*

free enterprise system. We have some controls and planning in place. I think we undoubtedly need more. I talked about the roads and the r a i l r o a d . Virtually all of the development is reactive, rather than proactive. We do not build roads because we want people to be here or there. We build roads because there are a whole lot of people there, and they have to get from there to here. We build a road, and then they build many more houses at the end of the road. We are then right back to where we were before. The long term answers to these things are not easy.

Q: If you take a look at Las Vegas, Nevada, they only have 300,000 acre-feet out of the Colorado River Compact. Arizona has 2.8 million acre-feet. Las Vegas was a city that was not supposed to be there, but the Colorado River Compact gave it the rights to be there. I have heard Patricia Mulroy speak a number of times, and she said, “I do not worry about the building going on. My job is to get water. If they put up a house, by

god, we will provide water for it. I am not involved in public policy.” They have a go get ‘em attitude. This state, when there is a plan to develop water, to bring water to communities that need it, you have to convince the legislature, you have to convince the administration. They will not do it. They stand in the way, and they block efforts to bring water from point a to point b. The plan to draw water from the Estancia Basin to Santa Fe was a good idea, but look at the opposition. Any time some one comes up with a positive idea for solving a water problem, thousands come out in opposition. What if I were to suggest a nuclear power plant in New Mexico? We would mine uranium here, dispose of it in Hobbs, and we have the water to cool the uranium power plant. A thousand people will come out of the woodwork and say, “No. We cannot do that.” There is not a go get ‘em attitude. In other states, if you come out with a good idea, there are a hundred people who will finance it. If you come up with a good idea in this state, there are a hundred people who will oppose it. If we were to become proactive, we would not have the same problems that we have been talking about for several years.

A: (**Karyn Stockdale**) This sort of ties in to some of the conversations that have been going on. It is one of the things that New Mexico and people across the country are doing that is proactive. One of the amazing statistics that we have seen, mainly in the west which is experiencing such intense growth, across the nation whether it was a red state or a blue state or what the demographics might be is that people are increasingly willing to tax themselves or allow governments to increase public funding measures to protect farmland, to preserve natural lands and views that people have taken for granted. I think as people see the rise in development, people say, “Wait a minute. This is changing before my very eyes. Five years ago, this town did not look the same way.” It is not an answer to everything. It is sort of in the mix of everything else that is going on. It has been a really interesting tide. We are seeing it increasingly in New Mexico as well. Bernalillo was one of the first counties to pass an open space and parks measure. Santa Fe County followed. Taos County and Doña Ana County are considering something right now. We are working with the state legislature in hoping to get some kind of state permanent or revolving fund on an annual basis that provides communities with alternatives. It is a different kind of economic development related to tourism or related to

the natural landscape that we sort of identify with New Mexico, the places that are the icons of the state when people think about New Mexico. I just wanted to add that little bit.

Q: Now that the geo-libertarian has spoken, I feel like I should say something. The beauty and awesomeness of this state is that even with all of the population growth, we are only going to be about 2.6 million people, which is great to me. We have this awesome resource. We have the Water Resources Research Institute. We have the universities. John Stomp hit it. We need to sit back and assess a plan for a number of years. We have all of the resources here. Some people might say, “Don’t build a pipeline. We have 250,000 acre feet of rechargeable water down south. Let’s move part of Albuquerque down there.” I do not necessarily endorse that idea, but I think we can get back to the panel. We can grow in this state. The thing is that we have to grow slowly. We have got to use our science, technology, and resources. This state geographically and geologically is totally different from Colorado, Texas, Arizona, and certainly culturally. My biggest joy this year was helping the Santo Domingo Pueblo. We helped them locate their first good water well ever.

A: (**Bill Hume**) All of these things about planning, thinking big, and going in different places in water policy implementation are points well taken. They are things we are trying to address in the administration. The problem with water projects is that you can tend to be vigorous and tend to be statewide and cost is quite local in effect. We are working on it.

Q: I would just like to add a comment on what you are saying right now. I would like to give my support to the last speaker. In particular, I would like to say to the woman at the end of the table, Janet Jarratt, that in thirty-five years of going to these things that was probably the most eloquent, best prepared, and best scientifically grounded advance of the economic value of the family farm that I have heard. I think that anywhere around this state, no matter where you go — Representative Stell and I have talked about this for some length of time — that you will find that the culture of this state is bound up in agriculture, everywhere you go no matter if the culture is Hispanic or Indian. I have lived on reservations for many, many years, and there may or may not be farms, but there is a culture of the land. I have friends who would full heartedly join you in saying that. It seems to me that in the matter of economic analysis what we need to do is

to look beyond the slapping out every few acres, which is going to go on anyway in Rio Rancho forever. We also need to look at the real value of the farms, which are our cultural lifeline, and how we can grow as interconnected societies in the future. I think this has been a really enlightening discussion.

Q: (To Janet Jarratt) Can you tell us your father’s name?

A: (**Janet Jarratt**) Yes. It is Raymond Jarratt.

Q: Raymond Jarratt is one of the best farmers there is.

A: (**Janet Jarratt**) That’s my opinion for sure.

Q: I had a question for Ms. Jarratt. One of the panelists was ripping farmers pretty badly. I finished high school here and went to college here. When we came here, there were about 12,500 people living in this region. There are now over 70,000 people, I understand, living in this region. Over that period of time, there has been a significant increase in the population here. I do not recognize Las Cruces anymore because of the growth and expansion. I have been talking with some farmers in the valleys up and down this state. I have noticed that their land is going out of production and being turned into residences. Isn’t there some way that this state can have the realtors and land developers leave the agricultural and farm lands, which are extremely productive, alone and go build their houses someplace else?

A: (**Janet Jarratt**) That is always the problem. Over the past we have heard a lot about transfer of development rights and those kinds of things, but the fundamental issue is the water. You cannot build anywhere. It does not matter if you are trying to build on the mesas or any where else. You still have to retire agricultural land to get the water, because that is the new use of water — urban usage. You have to get the water from somewhere, and the only place to get it is senior water rights. That is the ultimate problem right there, water. Transfer and development rights have worked in other states where they do not have the same kind of water issues that we do, when they are trying to preserve a land use. For us, it is imperative that we keep the water and the land hooked together, because they are hooked together. You cannot separate them.

A: (**Bill Hume**) I agree with that, but I would like to point out the other side of this particular issue also. I have listened to farmers from the Elephant Butte Irrigation District say that their farm is their 401K. Their kids have gone to college, and they are off doing

something else. This guy is getting old, and no one wants to buy that farm for anything like he can sell it for if he separates the water and the land from one another. He needs to live the rest of his life on what he can get for it.

**I have listened to farmers from the Elephant Butte Irrigation District say that their farm is their 401K. Their kids have gone to college, and they are off doing something else. This guy is getting old, and no one wants to buy that farm for anything like he can sell it for if he separates the water and the land from one another. He needs to live the rest of his life on what he can get for it. That is the decision he faces.**

*Bill Hume*

That is the decision he faces. I think we do need to build mechanisms to deal with this. We have started this program of buying the development rights off the top of the farm and giving the property that way the development value of its property so that it can stay in agriculture. I do not know

what the broad-reaching, long term solution to that is.

Q: I have been told by farmers that these residences that are moving in next to them are raising cane to them when they go out in the morning to do their harvesting, to do their watering. Why can't they leave the farmers alone and go build their houses somewhere else?

A: **(Bill Hume)** I live about half a mile from the Albuquerque International Airport. The airplanes have been there for as long as I have been there, and I have been there for an awfully long time. It is the same related thing. It bemuses the heck out of me for people to move in there and sit down and then complain about the noise of the airplane. The airplanes were there first. The problem you address is true.

Q: I live in Edgewood, which is close to Estancia Valley. Our major concern is that a lot of the water in the valley is being used for municipal purposes. The whole valley was drained to serve Los Lunas. We who live there did not support the economic development

plans. We did not want that plan or any other development plan.

A: **(Bill Hume)** I remember when you all came to Santa Fe, and we ultimately swung our support behind you opposing that particular plan. However, I will confess to you I was as careful as I could be to make that specific to that plan rather than interbasin transfers in general. Overall, that is something that is going to happen in this state if we are going to address these problems regionally. We need to come up with a way to do it more in terms of public policy and in terms of economic questions that exist.

Q: Are we going to use and advance our technological institutes as a way of finding new water or bringing new water resources to the table? When is the state of New Mexico going to begin to link land use and water?

A: **(John Stomp)** My answer is simple. I agree with you on the technology issue. I think that what Janet and others bring about is that you can solve some of these issues with technology advances. We should be supporting that and promoting that. That is the kind of thing that we are trying to do. I do not know when the state will begin to link land and water use. I am not a policy maker. I think a lot of people recognize that land use is tied to water. I am one of those people that believe that land use and water use go together. You cannot separate the two, even though our laws actually separate the two and make each a separate private property that can be moved and sold and transferred. I am saying I do not know.

A: **(David Steinborn)** The answer for me and your question is that I think your question has a bias with it, unfortunately. I think you are making the supposition that developers fall on one side of the world, and everybody else falls on the other side of the world. Let's start this way. I am a guy that has done probably as much public service as anybody in the room and has been a public policy maker longer than probably anybody else in the room. I will tell you that I still believe in laissez-faire government. I still believe that the government that governs least governs best. I still believe that the United States was founded on some principles that still work. I still believe in the free market. For me to represent the development community is difficult, because it is a real heterogeneous group. The group in Albuquerque differs from the group in Roswell. In Hobbs, they built two houses last year. The mayor of Hobbs, Monty Newman, called me a few days ago. I have the largest subdivision in the state outside of

Santa Fe and Albuquerque right here in Las Cruces. He called me and said, “I’ve got a guy in my market who wants to build a subdivision. Is there any good reason not to build a subdivision in Hobbs?” I guess somebody would say, “No. We have plenty of lots.” The reality is that I believe in the free market. I guess the question that I would throw back at all of you is this: If you were going to build a home today, and it was going to be half a million dollars, would you want to build it in a neighborhood that was forty years old where the average cost of the homes was \$170,000? I will throw the question the other way: If you were going to build a house today that was \$125,000, would you want to build it in the middle of a neighborhood that was decaying, in the city center in a rough school neighborhood, where the police ride two in a car and people are afraid to walk at night? I am generalizing, aren’t I? But the question really gets to be: How many stakeholders are willing to sit at the table and listen to what the other person is saying? This man back here said that somebody here bashed agriculture. It is funny. The only person here that talked about agriculture other than the lady in the business was me, and I am absolutely not bashing agriculture. I know what I said, but I know what you heard. The thing that is interesting about hearing and listening is that sometimes people do not hear what the other person is saying. Sitting around the table and having this dialogue is going to take a long time. Step number one is that people need to feel safe to talk about what their fears are, because fear motivates people. People need to talk about their fears, and people like this gentleman who is really a laissez-faire guy needs not be afraid, because the geologist over here knows what he knows the difference between s—t and shinola. Everybody comes to these discussions with a different frame of reference.

Q: I would like to make one comment about the free market. I pretty much support free market ideas also, but I think if you really are going to do it right, you have to account for all of the costs. There is a lot of externality involved, in say, development that does not get into the equation when they are doing a cost-benefit analysis. I think a lot of the free market and market transfers for water do not mention the externality such as costs to farmers, third party effects, other communities, and so on. I want to make that comment. I think that caveat has to be included when you say free market.

A: **(Bill Hume)** I think we have spent about all the time we were allotted for this. I would add just one more comment. It is my belief that everybody in New Mexico fits into two camps in water situations. There are the rural people and the people that run big water systems that understand or tear out their hair or love our system of water rights and prior appropriation. There is the other, the vast majority of the state, the people who live in the cities and know that water comes because you send a check to the water department every month and to get the water when you twist a tap. The people in the latter group need to know and understand much more than they do today

about how the natural water system and the ecosystem work to be meaningful participants in this conversation. An illustration of this was during the silvery minnow discussion a couple of years ago. There were a couple of environmentalists who were saying, “Make Albuquerque use less water, so there will be more water in the Rio Grande.” In fact, the outflow of the water treatment plant in the city of Albuquerque is the sixth largest tributary of the Rio Grande in New Mexico. If they wanted to help the silvery minnow, they would have said, “Run your bathtub on cold for a half hour every afternoon to put more water in the river,” which of course would not be good policy. We all need to understand the other person’s point of view in this to better understand how their needs and wants dovetail with our own. Thank you all.

**The thing that is interesting about hearing and listening is that sometimes people do not hear what the other person is saying. Sitting around the table and having this dialogue is going to take a long time. Step number one is that people need to feel safe to talk about what their fears are, because fear motivates people.**

*David Steinborn*