

PANEL DISCUSSION

Steve Reynolds: Thank you, Tom, for that good report. I'm pleased to note that we are right on time and I thank the reporters for that. We move now to the comments of the panel, asking that they too note the five-minute limitation. I think it is very important that we give the audience an opportunity to participate. To keep matters simple, I will simply follow the listing on the program, and ask Colonel Bernie Roth to offer us five minutes of comment on these four excellent reports. That's gonna be tough!

Col. Roth: I'm struck by the excellence of the reports. I hate to say that I'm the only honest guy in the room. That's not fair -- it may be true, but it is not fair. My biases are very simple. I protect the public interest. My only problem is I'm not sure I know who the public is. I would tell you very honestly, and I said to this group and others, that I find a great deal of hypocrisy in the agricultural community saying, "Not one acre ever leaves agriculture because 'farmers are wise and efficient people and will get the best out of their water'." Now, as an outside observer of competing water interests, I must tell you, in my opinion, I don't

agree with that. I think you avoided the issue. There is no efficient use of water in New Mexico, or probably any place else. I could give you case after case in point. Some of you at the Rio Grande Compact Meeting yesterday heard some folks up north say because they were not afforded the legal right to store water and release waters the way they wanted to, they were going to put that water on their fields whether they needed to or not, recognizing the inherent losses in doing that. I think if you look at the Rio Grande and the potential for storing and moving water other places or other ways, one could make some very significant savings in the amount of water available for competing uses. If you look at irrigation companies, I think the Tucumcari project below Conchas is an example. It seems to me they lose about 40 or 50 percent of their water between Conchas and headgates in inefficiencies. So you cannot tell competing users of water that farmers are using all they have effectively and efficiently and therefore we are not subject to providing excess water. What you can say is that given the appropriate incentives, we could use our water more effectively, or efficiently. I think therein lies the major problem.

What are the incentives? I would suggest it is very nice to say that the marketplace will take care of the incentives. There is no greater believer in that than I am, but I would suggest that the marketplace is not in a position to do that today. It does not do it, otherwise we would not suffer such a magnitude of losses in water in any of the four sectors addressed. It is akin to being told that the way to conserve gasoline is to drive at 55 miles an hour. The marketplace will require you to do that. I would suggest that in this audience there may be three or four people that believe that, but the rest of us drive at 55 miles an hour because we will go to jail or pay a fine if we do not.

I would suggest that you think about the second kind of incentive that one has in an economy. There is the marketplace, but there is also a punishment incentive. Now, in all deference to Steve, I suspect that the State Engineer of this State and other Southwestern states are prohibited from punishing people for not using their water to public advantage. It is true. But if, as the agriculturalists say, the people of New Mexico will have the final decision, I wonder whether the public does not want to start punishing a lack of efficient use of water. I think

in the long term that is the issue. Otherwise the marketplace will take over and, yes, you will lose agricultural acreage. And, yes, the industries, by virtue of money, and the municipalities and governments, by virtue of the right of eminent domain, will take priority. I find all the workshops agreeing that everybody needs more water, but I do not really find you doing much more than paying lip service to how one legally can insist on more water being available. I, for one, think it is there. Thank you, Mr. Chairman.

Steve Reynolds: Mr. Bill Stephens.

Bill Stephens: Thank you, Steve. I think I should make my position quite clear, too. I am an advocate of agriculture. And they are a big part of the public in my mind. I am also an optimist, and I assume you know the definition of an optimist and a pessimist. The optimist gets up in the morning and goes to the window and looks out and he says, "Good morning, God!" and the pessimist says, "Good God, morning!"

But as I see it, the future of agriculture is bright in New Mexico. I do not see major declines in agricultural production in New Mexico. Now I would

compliment the panel for what they identified. I did sit in on part of the discussion. Five of the main points that were mentioned this morning were: beneficial use, court decisions, water quality, better breeds of plants, public education systems, and information dissemination. I think they hit the major areas.

I made my outline before I heard this presentation, so rather than to rehash what they said, I will try to give you my interpretation of what all this means to agriculture. Again, as I say, I do not see a major decline in our production. I see much of the east side (of New Mexico) going out of production because of the Ogallala formation -- it is a mining operation over there. Now the use of brackish water has been mentioned. I'm sure it has been discussed in some other committees: salt tolerant plants. I think we can do much to develop plants that will produce more with lower quality water. I believe Dr. Wilson has already developed an alfalfa that uses less water than we now use with alfalfa production.

Improved technology has already been mentioned; our dead leveling, our irrigation technology. I see this coming to the forefront. The use of effluents from our cities and communities. This was mentioned. I would say that I feel we can double what we have

right now as far as population uses, domestic uses, and industrial uses are concerned, without having a major impact on agricultural production in this state. It will not happen overnight; it will happen over a gradual time period. We can increase our efficiency not only in agriculture, but in domestic uses, in industrial uses. There are a number of things we can do. They tell me over in the Tularosa Basin we have as much brackish water as they have in Lake Michigan. So I think much can be done in that area to use those waters and to clean up some of those waters.

An area that has not been mentioned here, and this is one of the things that is going to keep our agricultural production up, is our rangelands. I think we can do much to improve our rangelands. Now I did not make out too well in Santa Fe this time with a proposal for about a third of a million dollars to help get that off the ground, but we will come back next year and try again. I think by improving our rangelands and better utilizing the water on our rangelands we can hold up and increase our production there -- and after all, the income to agriculture in New Mexico, or about three-fourths of it, is from the livestock industry. So I foresee grass growing out

there instead of greasewood and mesquite, and better utilization of the water that we have.

I also see the demand for agricultural products increasing. There is no question about that. I think that we are going to have to bring up prices in order to give the farmer and the rancher a profit motive. Again, I think we are going to have to do a lot of things to accomplish what I have indicated here, but I think we can do it. I might just mention briefly, Steve, the proclamation that the President of our Regents, Bill Humphries, read yesterday morning in which the Governor proclaimed this "Water Week." We talked about this the other morning at the Cabinet meeting, and the Governor thought about sending it down as maybe a joint House-Senate Memorial. It would be more significant if we had the whole legislative branch supporting this, as well as the executive branch. But as he talked about it, he said, "Well, we would probably get it through the Senate all right, but if it went to the House it would probably get a quadruple reference and we would never make it in time!" So Steve, thank you very much for an opportunity to comment.

Steve Reynolds: Thank you, Bill. Moving next then, to Jim King, Deputy Secretary of our Department of Natural Resources. I

know Jim still looks a little tired and I do not think he has really recovered from that last session of the legislature yet.

Jim King:

Not yet, not yet. I tell you, after being up and playing with the legislature for sixty plus days, and having to guard every word you say and watch it closely, it is a pleasure to be able to come here and loosen up a little bit. When Bill Huey called me into his office and said he could not make this and wanted me to come down in his place, he handed me this program and I looked at it and I see we got Colonel Roth, Bill Stephens, Steve Reynolds, and Bill Huey, and then I get here and we got Fred O'Cheskey and I said, "Bill, you know, I know what Tom Bahr's up to. He's putting all these heavy weights on there and see if some sparks can get going." And then I said, "You know I think you better go." And he goes, "Well, Jim, just go put on fifteen years of experience and get in there and hold your own." So, I wasn't able to put on the fifteen years of experience, but this does give me an opportunity to beat a drum that I like to beat once in a while. It centers around the concept that the marketplace for water, as it now exists, will bring water to its highest and best use.

Yesterday I came in here a little concerned that this probably was not true. Then George Dawson got up here and he was talking about water and economics. He started to say that the marketplace would bring water to its highest and best, and he did not finish saying it, he switched to alternative use. Then Dr. Frank Ward from the college got up and he did say that the marketplace brought water to its highest and best use, but he put a qualifier on that: "for certain uses," if I'm paraphrasing correctly. During the workshop meeting yesterday, I tried to stay quiet and sit back and listen, knowing that I was going to be up here today. I had some very strong feelings about how we make resource allocation decisions in New Mexico and I wanted to listen for a while to see if my concerns, at least with respect to water, were generally recognized by the various participants. I think generally they were.

However, given this opportunity to espouse my philosophy and concerns, I am going to state what I see which may deviate from or place emphasis differently than the recreation workshop did. I am going to concentrate on the issue of water for recreation.

In a nutshell, let me take the following liberties which I would not have dared take with the legislature. In New Mexico, we operate under the philosophy that the marketplace will bring water to its most beneficial use. In the short run, this may be true. In the long run, however, personally I am not convinced that that is true and I am concerned about the consequences to future generations. With respect to recreational uses of water, I view the issue as follows.

Presently, recreation does not compete effectively in the marketplace for water rights. That was generally agreed upon in the workshop. Given New Mexico's continuing increase in population and industrial growth, we can expect consumptive uses of water to increase relative to the less consumptive uses, such as agriculture and recreation. Presently, and in the past to a greater extent, recreationists have been able to rely somewhat on the availability of water for recreation, even though that water was committed to other uses. However, as consumptive uses continue to increase, I believe that recreational uses of water will decrease. If we are to continue to make water available for recreation at present levels, or perhaps at greater levels as our population grows,

then it appears to me that we have two options. One would be to alter the structure of the market system wherein water is brought to its "highest and best use." Some ideas came out of the workshop and this would involve changing the tax structure, or perhaps having recreational water set aside on transfers. All of this probably will not happen, but maybe it will. Second, would be to give the recreational use of water standing in the marketplace. That would be to make funds available for the purchase of water rights for recreation. That is probably the most feasible alternative.

Essentially, I feel that if we fail to specifically identify and provide for the designation of water rights for recreation in the not too distant future, New Mexico will begin to experience a marked decrease in the availability of water for recreation. Of course, recreation is in there with everything else, with the municipal, industrial, and the agricultural uses. You have to ask yourself, "Why should we be any more concerned about water for recreation than for any other use?" Maybe we shouldn't.

Basically, I think that the best comment I have heard is by Dr. Garrey Carruthers a couple of months

ago. He said, "Well, do you think you could get one of the politicians up in the legislature to actually stand up and say he was against having water for recreation and that he didn't want to fund any more of these state parks or any of the other activities having to do with water?" So I think there is a concept of value and that people do value having water available for recreation, and legislators and bureaucrats and other people do too, but it is nebulous as to what that value is and how it should compete. That's a hard point to get across when you are going for the money. Thank you, Steve.

Steve Reynolds: Fred, as I understand, has been persuaded to take the place of Marion Cottrell. Here is Fred O'Cheskey of the Public Service Company of New Mexico.

Fred O'Cheskey: Thanks, Steve. I am sorry I was not able to attend the conference yesterday. I was at the Legislature and I want you to know that that old axiom is true. You should not watch laws or sausages being made, because they will both make you sick. That is where I was yesterday -- I was working out some laws, but no sausages.

I work for the Public Service Company of New Mexico and represent the industrial or business user of water. I think we ought to keep things in perspective when talking about water. First of all, I think it is a fact (and Steve can argue with me when he has the floor), that agriculture utilizes 85 to 90 percent of the water in New Mexico. If you look at the other uses, municipal and industrial, they only include about 10 to 15 percent of the water consumption in New Mexico. If you further break that down, the industrial use is probably only about 5 percent of the water in New Mexico. I think you ought to keep this in mind when talking about the competing uses of water. Several speakers, both in the program this morning and during the program yesterday, talked about the future use of water in electrical generation in New Mexico.

I would like to make a brief comment about that because my company is looking at building a 4 1/2 billion to 5 billion dollar generating plant in New Mexico. Now at first blush, I'm sure that many of you would be very concerned about the water use and there has been some indication there is a concern about the use in the northwest quadrant. An electrical generation plant at one time used a great amount of

water. If you look at the San Juan plant that was recently constructed by PNM and other participants, PNM recently received a national award for zero discharge from that plant, zero water discharge. It is all being reused, essentially. There is some loss of the water through evaporation, but that has been reduced by 35 percent from the usual 500 megawatt plant consumption. So, what I am here to say is that industry does have a responsibility and is taking that responsibility in reducing water consumption. Hybrid wet-dry cooling towers can reduce the water consumption by 35 percent from the normal operating power plant. I will hope that in looking at industrial uses that you would keep some of those water-use conflicts in mind: that the percentage is relatively small and that industry is doing something to reduce its consumption in the water area. Thank you very much, Steve.

Steve Reynolds: Thank you, Fred. Now we are prepared for that very important audience participation by way of comments, questions, or discussion.

Bob Lansford: My name is Bob Lansford. The recreationalists kept talking about value. I never heard the word demand

mentioned once. It appears to me that before you start valuing something, you have got to have a demand for that resource. Has anything been done on demand for water-based recreation in New Mexico?

Steve Reynolds: Tom Moody, would you like to respond to that?

Tom Moody: Our department (Fish and Game) does not have the expertise to determine it. There are some contracts that we have currently through WRRRI in the College of Agriculture to work on some of this information that is needed.

Bob Lansford: My major concern is that you are talking about value which appears to me to go back and look and see if there is a demand out there. Sure there is a big demand for fishing, but could you provide more if it was allocated around the state properly?

Tom Moody: I believe Mr. King addressed the allocation question. There are undoubtedly some inequities in allocation between some of the various uses.

Steve Reynolds: Would any of the panel care to respond. Jim?

Jim King:

The fact of the matter is that with respect to the other uses I think we should be answering those questions more specifically. If we want to know if there is excess demand, we can go down to Elephant Butte on Memorial Day. The full concept of value has to become more scientific before we can convince legislators and other decision makers that, in fact, they should spend public money on acquiring water rights for recreational uses.

Steve Reynolds

I would like to offer just one comment on this point. Jim King said in his presentation that recreation does not compete effectively. Well, I think that Tom made it clear that recreation has not had to compete. It enjoys the incidental recreational benefits of stream flows preserved by water rights and compact provisions, and reservoirs constructed for irrigation and other purposes.

I think perhaps the important point when you start talking about recreation is that there is an element of aesthetics involved. This is entirely subjective. That is, a hungry man is not going to buy a Picasso -- not first, anyhow. The way you determine these things, it seems to me, is political. As the legislature can determine what recreation is worth to

the people of the State, and therefore what price the State, for example, should pay for water rights to create additional recreational opportunity when that demand becomes high enough. When that demand becomes high enough, the legislature and the congress will do something about it. Dr. Dawson?

George Dawson: I merely want to correct Jim King, if the rest of you misunderstood me as badly as it sounds like he did. I did not say that the marketplace was the sole criteria for the highest and best use. I hope I did not say that. I think I have gone on record in years past, and this one also, that the highest and best use is determined in actuality on the basis of economics in the short run. That is not necessarily the way it ought to be in the long run. There are other factors, other criteria, that ought to be used other than economics.

Jim King: I understood yesterday exactly what you just said now. I probably did not get that across well. The point I was trying to make was that you were starting to say highest and best and switched to alternative use. We are in agreement, I just did not bring it across.

Steve Reynolds: Yes sir?

Arturo Sais: My name is Arturo Sais, Middle Rio Grande Conservancy District. The subject of educating the public in water conservation was brought up. Specifically, what I wanted to ask was how useful is water coming from treatment plants? This is your secondary treatment effluent. We have been confronted with this issue at the Middle Rio Grande Conservancy District. One of the questions related to this is, how do you reduce people's fears about using this treated water? Also, how do we educate a public board, such as the Middle Rio Grande Conservancy District, to encourage the use of treated water? This is more or less a three-phase question that I'm presenting to the panel. Maybe they can give me some information on this. We are currently confronted with this problem.

Steve Reynolds: The question is, how do you encourage official bodies and the water users to use secondarily treated sewage effluent for irrigation. Bill Stephens is also a member of the Water Quality Control Commission, as am I, and I find it difficult to respond. I will say this, however, that certainly in New Mexico this re-use of water has been practiced for many years. It

is common practice for the irrigators to use sewage effluent in irrigation. In fact, in some municipalities it is sold directly from the sewage treatment plant to farmers without rights to use the public water. As far as I know, it is common practice throughout the United States for the downstream municipality to drink the sewage effluent of the upstream municipality. The reluctance comes in drinking their own sewage effluent. Yes sir?

Adrian Ogaz:

I am Adrian Ogaz and I belong to that group of water users that have been cursed in the county for centuries. I would like to take issue with something here today. I don't think we are competing against each other. I would rather use the word partnership. We should be partners in the use of water, not competitors. After all, I do not see anybody here that is not a user of water in one form or another. Of course, agriculture is one of the major users of water, but we want to consider ourselves as partners. We want to share what we have with everybody, but at the same time we would like to see other users carry their own weight. That is one thing that has never been done up to now. Everybody wants to use what the farmer has done to preserve our water and to have the

facilities. Everybody wants to use them, but at the same time they do not give the farmers enough credit for what they have been doing. The only thing I want to say is that we should consider ourselves partners, not competitors. Thank you.

Steve Reynolds: Pete?

Peter Wierenga: My name is Pete Wierenga. I would like to reinforce what Colonel Roth just said about another avenue of using the water. In fact, he was alluding to enforcement. I believe that in Arizona they just adopted a law that all the farmers have to use best management practices, in this case irrigation scheduling systems, to optimize their water use. That's mandatory. I can see that if we get in a crunch in New Mexico that similar practices, similar laws might be adopted in New Mexico. I think what Colonel Roth means is to warn us that we better watch out and try to improve our water management practices so it does not become a law, but it is more a voluntary practice. I would also like to ask him to clarify something. I am sure Colonel Roth did not mean to say that all inefficient farming practices, or irrigation practices, are necessarily a loss of

water. If you have a 50 percent irrigation efficiency, that does not necessarily mean that all the water is lost, because much of that or almost all of that goes back in the drain and is available for downstream use. I do not know exactly the situation in northern New Mexico, but I have seen some very inefficient systems where a great deal of water is lost, but then it becomes available again downstream. The only problem is that generally the quality is degraded; and I think that is a very significant point, anytime you feed water through a system, whether it be soil, or a factory, or a municipality, the quality is degraded. I think we should keep that in mind in our future discussions also. Thank you.

Steve Reynolds: Would any of the panelists like to respond? I might offer a comment. I'm sure of course that everybody is aware that under New Mexico water law, waste of water is a misdemeanor, and one can be fined or jailed for committing a misdemeanor. What one must be very careful about in talking about conservation and more conservative use in irrigation is, again, the economic incentive. I think that a law that required irrigation management services could put a lot of good farmers in New Mexico out of business. I do not think

that we are ready for that. Now one of your comments particularly, Pete, is relevant. That is that much of what might be considered waste arrives as return flow available for use downstream and, if you like, in many situations constitutes a good bit of the water with which we meet our interstate compact obligations. Next? Dr. Steinhoff?

Dr. Steinhoff: I have been a drinker of tertiary treated water for many, many years and many people where I grew up did the same. There have never been any detrimental health effects found. Two years ago I had a physical test which shows that I am in good shape and, I would say, in above-average health, so from that point of view I don't think there's any problem to be feared.

Steve Reynolds: Thank you. All right? Yes sir?

John Lyman: My name is John Lyman and would the fifth member of the panel give us five minutes overview of what the water situation is in New Mexico in his view right now, Mr. Reynolds?

Steve Reynolds: Right now with respect to surface water supply, not good. We are in a lot better shape than we were the

first of March, but we are still looking at, within New Mexico, runoffs 30 to 50 percent of normal in the upper Rio Grande. The Rio Grande in Colorado is not in a lot better condition. As of the first of March the projected flow at San Marchial, just above Elephant Butte Reservoir, was 18 percent of normal. I think that's going to be a little better when we see the first of April readings.

With respect to municipal/industrial supplies, about 85 percent comes from ground water. A brief period of drought will not have a serious adverse effect on those uses. Also, particularly here in the Elephant Butte Irrigation District, most of the farmers have supplemental wells which they are able to use during periods of shortage of surface water supply to carry them through. This is also quite true in the middle valley. But those farmers in northern New Mexico, for example, irrigating from tributaries with no advantage of storage may suffer very severely this forthcoming irrigation season.

Bill Stephens: But, Steve, we do have in Elephant Butte adequate water for this year's irrigation, even better than we had last year as far as storage in Elephant Butte, so as I see it there will be no problems in irrigation in

the Mesilla Valley this year. But if we do not get good snowpack next winter we will be in real difficulties the following year.

Steve Reynolds: Matter of fact, I think you have got enough in Elephant Butte with just reasonable precipitation, reasonable management, you could get by in pretty good shape for two years so, Bill certainly is right, that here below Elephant Butte this current shortage is not an immediate threat. But we can not stand to continue with the kind of snowpack we had this year. At the same time, let us express proper gratitude for the two years of excellent spring runoff that we have just enjoyed, and while I am about it express gratitude particularly to the Colonel and the Middle Rio Grande District board for the excellent work they did particularly in 1979 in getting things in shape to handle that heavy 1979 runoff. They served us very well also in the 1980 runoff. Of course, that is the trouble with the water business as people like my friend Glenn Stout would know. It seems there's always too much or not enough; it never comes just right.

Bill Stephens: Steve, I'd like to pose a little different area for just a second here and perhaps a question to you

relative to the some of the court actions or some of the law suits that are now going on -- particularly the Indian water rights. Could you just give us a quick update as to where we are on that, and if the decision goes one way what impact it might have, and if the decision goes the other way what impact it might have. Now this was mentioned in some of the discussion in the workshops.

Steve Reynolds: As a matter of fact, New Mexico is, I think, proceeding wisely and aggressively in resolving the Indian water rights questions. We have pending before the federal district court adjudications of Pueblo water rights. And it seems to me we've got six of them involved in adjudication suits. These are very important and certainly, in our view of the matter, the Pueblo water right issue is a good deal different than the reservation water right issue. The Pueblo's water rights, as we see it, are not based on what is known as the reservation doctrine, that doctrine being that whenever the United States withdrew from the public domain certain lands as a reservation, the United States at the same time withdrew the waters arising on that land from the administration under state law in the amount necessary for the purposes of the reservation with a priority date as of the date of

the reservation. This had the effect, then, of providing for many of the Indian reservations the amount of water needed for the practicably irrigable acreage on that reservation and it was not necessary for them to forthwith put that water to beneficial use in order to have a water right. They could proceed to put this water to use much later without any forfeiture of that right. Many difficult issues, both factual and legal are involved, but I think at this point in time, New Mexico certainly is in a position of leadership in resolving those rights. We have pending in the state court an adjudication suit on the San Juan River system in the northwest part of the state involving the water rights of the Navajo Tribe, the Jicarilla Apache Tribe and the Ute Mountain Utes. We have pending in state court in the Pecos River system resolution of the rights, reservation rights, of the Mescalero Apaches. So these two very different foundations for Indian water rights will be resolved within a reasonable time -- and by that I don't mean next month. I think it quite likely that ultimate resolution will require the attention of the United States Supreme Court. But we are certainly headed toward that and I will not speculate about the results of one decision versus another. The matter of either

of those classes of Indian water rights will allow you to do that for yourself, Bill.

My reason for not speculating is that most law suits that I've known anything about do not result in a decision which favors one party entirely. Let's wait and see what the court says. Now, do we have another discussant from the floor?

Ted Sammis: I am Ted Sammis in the Agricultural Engineering Department here. Could the panel discuss the implications of trying to maintain our groundwater quality? What's going to happen if our cities, or other people, are allowed to contaminate our groundwater system? What long-term implication would this have?

Steve Reynolds: Dr. Stephens, as a member of the Water Quality Control Commission....

Bill Stephens: I am a member of the Water Quality Control Commission. If you've heard of Section 208, that is non-point source pollution. Another is point source pollution. If you can identify the source, like a sewage pipe coming out, that's point pollution. We have a number of regulations on that. The non-point

source pollution is a little more difficult to get a hold of. An example would be some of your return irrigation flow. It's best management practices which are needed there. I may be drifting a little from the answer you want, but in connection with what Dr. Pete Wierenga indicated back here, the position that I have taken is it should be a voluntary thing, as far as these non-point source pollution practices are concerned. I might just indicate that at a recent hearing for the Water Quality Control Commission they proposed a regulation which said, in effect, if there's a hazard to public health from an irrigation well they would require a permit and a discharge plan. I took issue with that and I got the permission of the Commission to look at the system in New Mexico to try to determine if there was, in fact, a hazard to public health as a result of irrigated agriculture. The legislature this past term -- I think it got all the way through and I believe the Governor will sign it -- said in effect that if there was a hazard to public health then they would have to file a discharge plan and get a permit. But it left the burden of proof on the director of the EIA to prove that there is a hazard to public health and not just to conjecture on his part. That's a quick summary of some of the things I see on pollution.

Steve Reynolds: Is that responsive, Dr. Sammis?

Ted Sammis: Yes. The only other question I had was brought up in our discussions yesterday. Apparently one of the wells in Albuquerque has been contaminated. I don't know anything more than that fact was brought up. I was curious, as we have waste dumps trying to go into an area, are we being sure that these waste dumps are going to be constructed in such a manner as to protect our underground water sources?

Steve Reynolds: I think that our Water Quality Act does provide protection. I might add that New Mexico is recognized nationally as having perhaps acted more effectively than any other state with respect to regulations under law for the protection of our groundwater. Bill Stephens has probably adequately described it, but our law requires any person discharging water that may find its way into waters that can reasonably be expected to be used for beneficial purposes to have a discharge plan. It's the person or entity filing the discharge plan that has the burden of proving that his discharge will not contaminate groundwaters. There are certain standards set for various pollutants to govern such plans.

Bill Stephens: Steve, I might just comment briefly. If you're talking about waste disposal sites, there was another law that passed in the special session. It died after hearings from both Senate and House sides on hazardous waste disposal which gives the EID some responsibilities in our department and the pesticide area for waste disposal sites. I think this might head off some of the things that you're talking about here. If those sites are properly selected and maintained, it would prevent the pollution from the waste disposal sites.

Steve Reynolds: Were you finished, Dr. Sammis?

Ted Sammis: No. I just wanted to say that I think that this is of great concern because the city of Hatch had the opportunity to accept or reject one of these, and the people rejected it. I think there's a great concern by the people about these things coming in and contaminating our whole underground water supply even with regulations to control it.

Steve Reynolds: It's perhaps a collateral point, but certain of these esoteric hazardous wastes are becoming more and more important, and I think that there are many who see

that it is important that there be created a hazardous waste site or sites in New Mexico. It is not the sort of thing that you can just say well we don't want any hazardous waste disposal here. It is, I think, important to the development of the economy and the welfare of the people that we carefully create a system of hazardous waste disposal in the state. Dr. Dawson?

George Dawson: I'd like to piggyback on a couple of comments that have been made. I'd like to go back to Adrian Ogaz' comment on agriculture and its use, and that industrial and municipal uses should not be necessarily considered as "competing," as though we are at each other's throats about the quantities of water that each might use to provide the services that each one of those uses can. Also, I guess I would take Colonel Roth to task just a little bit -- we haven't really jumped on anybody here today, so I want to pick on him. He came out rather strong and hard I thought about the report that Fran gave from the Agriculture workshop. I hope he bears in mind that she was trying to take notes out of three and one-half hours of discussion and condense it into a report. She might have some words in there that are part of

another whole broader discussion as it relates to whether we should take one acre out of agriculture, and therefore you took a dim view of a stand like that.

I would like to piggyback then, that onto what Adrian Ogaz said. Let's think about agriculture. Yes, it uses 80 to 90 percent of the water in the state. Think about what Dr. Thomas said yesterday. It takes, I don't know, how many tons of water to produce a pound of beef. But we're all partners in that effort because we all like to consume the stuff; and it takes so many pounds of water to produce a loaf of bread. That does not mean that necessarily that water was consumed in its ultimate sense in those capacities. If you look at the literal sense of how much water is used in agriculture (and we piggyback on Dr. Stephen's reminder that most of our agricultural income in the state does come from the livestock industry) then you see that we're also providing a lot of wildlife habitat, recreational opportunities, timber opportunities, vision opportunities that center out there on these wide open expanses called ranges. I think it is important that as we leave this conference we recognize that we have a lot of problems as we determine the allocation priorities that should go with this water supply, whether it is limited or

not. We recognize that we are in a partnership in the determination of how we are going to use that water.

Agriculture, Colonel Roth, did not make any statements whatsoever that it should be left alone -- "we're using our water efficiently," etc. Agriculture assumes the responsibility, and recognizes its responsibility to become more efficient in the use of its water; but I think I want to state that agriculture does not necessarily use all that 80 to 90 percent. We wouldn't have any recreation in this state if agriculture wasn't building the facilities or wasn't being charged with the use of the water that's stored in those facilities for agriculture, but on which recreation is piggybacking. There are a lot of activities in this state that are associated with the use of the water that's being charged to agriculture. I think we ought to bear those kinds of things in mind. Let's not single out agriculture just because it's the place we're going to have to go to get the water, as the culprit in the whole operation.

Colonel Roth: Can I defend myself?

Steve Reynolds: No.

Colonel Roth: I've got to tell you, George, I might very well pick on you. I would never pick on Fran, however. The point I was making is that if we all don't get our act together and think about your question this morning to your group, "What are we talking about when we talk about conservation? What does that mean?" I would hearken to Steve: it really means to use water conservatively, whatever that means. We better get our act together, because as Steve points out there are just case after case where "the public" has said, "We are going to pass laws that ensure that from the public viewpoint water is used conservatively." That may not be in the farmer's interest. One attacks agriculture in this state because they have most of the water. Fred says that he only uses 5 percent, and the cities will tell you that they only use 5 percent. Agriculture has most of the water. If you're going to look to use your water in the state more effectively, you have got to look to the farming community.

Bill Stephens: Steve, I might react quickly to that. I don't think the agricultural committee really meant that we could not take one single acre out. I would say agriculture is not an untouchable in this area. I hate to see

them close down the saline plant over in Roswell. Maybe the administration will see the light and come back with those worthy projects. But I do feel that we have to give some in agriculture. Much of that can be made up by research results and efficiencies in the system itself.

Steve Reynolds: If I may add a point. The Colonel made the point well that if, in fact, you could by conservation save 10 percent of the water used for municipal and industrial purposes, it wouldn't solve much problem at all. But if I could save 10 percent of the water used in agriculture, it could double the municipal and industrial economy virtually. So it's a reasonable target. If you really want to save, agriculture is the place.

George Dawson: That's the place, but at the same time I don't think industry and municipalities can sit on their hands and say that they can use what we save.

Steve Reynolds: Well, of course not, except for one point. It is simply not possible to enact a law which says that you may not transfer water from irrigation usage to municipal and industrial usage to preserve your

irrigation economy. Governor Lamb tried that in Colorado. The farmers killed it -- for obvious reasons. For instance, take the middle valley, (and it will soon be true in this valley); a water right's worth now \$3,000 an acre. Now if you tell a farmer that he cannot go out and realize the value of that right by transferring it to municipal and industrial purposes, you've deprived him of a very substantial property right without due process. You cannot do that to the owner of a water right.

George Dawson: We have said you cannot do it so damn long that we have begun to believe it. I say that that is the fault of the public. It is possible to pay that farmer for that water right and preserve it for future society's benefit in agriculture and not deprive him of his inherited rights and so forth.

Steve Reynolds: Then you have not deprived him.

George Dawson: There are proposals to do that in this state, and here we have the golden opportunity among all states to do this. But we are not giving them a proper hearing; we are not even willing to discuss it. Farmers are the first ones that want to shoot me when I start raising

the question. But I am going to insist on raising it until they either accept listening and you accept listening, or somebody better shoot me. There is an alternative instead of saying that we can't do that. I think we've got to dialogue about it.

Steve Reynolds: That's right. You can't do it without properly compensating the farmer.

George Dawson: I've said that loud and clear.

Steve Reynolds: And I agree with you.

Bill Stephens: Steve, again I'm probably talking too much. I would like to comment just briefly on that. That just spills over into what we call land use planning. I would say that agriculturalists had their heads in the sand on this issue of both water and land and I think that we need to address the issue. I agree with what George Dawson is saying here. Now, we don't want to do what Steve said. We don't want to take this without proper compensation. But I think really the thing is happening here, plans are going to be made, and I think we in agriculture have really not been up front on some of these things.

Jim King: I'm not sure what Dr. Dawson has in mind, but I think he's brought up a very critical point. That is, in the interests of the State and the future of the State, I don't believe that we should have reluctance to discuss changes in the way we address issues like this. To that end, particularly since I'm interested in those kinds of changes, could you spell out a couple of those, George? Will that take another two hours?

George Dawson: Let's talk just about this valley, because we can visualize it. We've got a river valley down in the bottom and a mesa on each side. You've got a population pressure coming up from El Paso and from Las Cruces. They're building their houses in the valley. Every time you do that you take land out of production, you likewise reduce the size of the farms, inefficient farming operations, etc. -- the whole ball of wax. There is an alternative.

If we, as the people, think beyond the end of our noses with respect to our own economic welfare and think about the quality of life, what kind of economic life do we want our followers to have? Right now the farmer has the land there at the edge of Las Cruces. Somebody wants to build a housing development on it.

He can pay that farmer \$10 thousand an acre for that land for that purpose. The farmer doesn't really want to sell it, because he really wants to farm, but he'd also like to make a living farming. Right now the price of agricultural commodities is such that that's a tough row for him to hoe. But he has an alternative, and that's where the public comes in.

We're a public domain state. We have a lot of acres out there where we could be building houses that we can trade, at a like value of those acres for that water, that development right down here in the valley. Leave the farmer in the valley, farming, on his land, with his water right, but preserve it to agriculture and put the houses out on the mesa. In doing that it hasn't cost you one damn dime. Not the farmer, not the public, because you are trading a public good out here. I own part of that mesa, you do too, or some piece of forest land, or some place else. I want to trade my right in that public land for my right and the future generation's right to have agriculture down here in the valley. We can do it, folks, and it does not cost us money. How many proposals in the legislature go up there, that come in to do these kind of things that want thousands and thousands of dollars? I'm not asking for that. I'm

asking for consideration of an idea that does not cost money. It costs us mind over matter with respect to looking at alternatives to what might be needed in the years to come -- not looking at just today.

Jim King: George, how does that help us out with respect to retirement of water rights away from agriculture? I can see how it helps with the land, but if given the fact that they developed the least number of acres on the mesa, they are going to get water here in declared basins now.

George Dawson: Let's assume that the best wisdom -- by looking at the future, the world population problems, our own population growth, the Sunbelt phenomenon -- says we want to preserve this for agriculture. So for the next umpteen years (we can see that far down the road), we are going to preserve it for agriculture. The water right that's with that land that Farmer Brown is still on and farming, it now belongs to the public. All right, some time down the road it is possible that that public that owns that property right might, in turn, make a new decision that they need some of that water for a higher better use -- to have drinking water for somebody. They then can

retire that water right. But that farmer then would have to be compensated for the difference between his residual dryland value and his agricultural value because that water was there. He traded off only his development right, not his agricultural value. The land in the valley will increase in value in accordance with the increasing demand for food. So his agricultural land value will increase and his land that he traded for out there in the development right will increase if these people keep coming to the sunbelt. And so, yes, the water might someday go to another use, but the public will decide that just like they said that it was important to keep that water in agriculture in the first place.

Steve Reynolds: Dr. Steinhoff?

Dr. Steinhoff: Why do you think there is a history in California of laws in which public land cannot be used for anything else but agriculture? That means industry has to go up the hills, residences have to go up the hills and in the canyons in order to preserve same and I think it behooves us that we do the same thing really.

George Dawson: Let me add quickly, though, this can be misunderstood. We do not want to zone it that way.

Zoning is taking away the rights, the property value of that person. What I'm asking for is not to deprive anybody of anything at no public cost, no out of pocket cost. Zoning merely says, "OK, we're going to zone this area of five miles. You can't sell that to anything else." Now, you have deprived Farmer Brown of his inheritance right. Because now his value dropped immediately from that development right value down to agricultural value, and in this particular case it might be \$4, \$5, \$6 thousand an acre. If you got a hundred acre farm, folks, or more, that's a significant amount of deprivation. Let's not fall into the zoning trap when we have alternatives which will not penalize either the farmer or the public.

Steve Reynolds: We've got time for one more.

Bill Stephens: It seemed to me like almost perpetual motion, George. I did not quite see how you are going to get by this without any cost if you are going to pay the farmer for his development rights. Would you run that by again? You lost me.

George Dawson: Well, that's why we need to devote a conference for this. I am not paying the farmer for a development

right. I am substituting the value. Let's make a simple example. He's got an acre of land down here and right now he could sell it for \$10 thousand an acre to somebody to build houses on or build a municipal plant or an industrial plant. But when you look at what he's producing agriculturally and the income, capitalized income value of that for agriculture, the way he has to make his living it is worth \$3 thousand an acre. You've got \$7 thousand difference. That's the development value. You go out here on the mesa and what is an acre of that worth? Let's assume it's worth \$1 thousand an acre right now. You give him seven acres for his one down here of development rights. So he still has his acre in the valley and he's got seven acres out here. He's not been hurt. In fact, he'll be helped because he's gonna have two things inflating now instead of one. We will be better off because we still have agricultural potential.

Bill Stephens: Thank you, George.

Steve Reynolds: Back here and that will be the last question.

T. C. Horton: I'd like to ask the Colonel how much of New Mexico's water is tied up on military reservations. It's a

point that hasn't been asked. There are large areas of the state that are tied up. Unfortunately, I have a bad taste in my mouth for the efficiency of the federal government and the sagebrush rebellion is coming up. But I'd like to know how much water the federal government has tied up on these military reservations that I'm sure Mr. Reynolds has no control over, nor does the State.

Colonel Roth: I would suspect first that Mr. Reynolds would debate whether he has control over it or not, since he and I have had debates along that line on occasion. The military installations -- I don't have a volume figure; I would be happy to get one for you -- use water to meet their industrial, municipal needs, whatever they may be. They have as the federal government has, I believe, Steve, the right of eminent domain were they to need to seize more water. They have not seen fit to do that. In many cases they buy their water or get their water from a local water-producing source. Fort Bliss, Texas is a good example. A good part of the water used by Fort Bliss is acquired from the City of El Paso. So the military installation is not really the issue. If you're going to ask me how much of the water underlying federal

properties, most of which is not military by the way, and how much water they control, I would really have to defer to Steve because I'm not going to enter into who controls that water, the Feds or the State government. But I will tell you that the military installations have historically, and I think will also in the future, ensure by virtue of federal law that they retain enough water to operate the military installations. That is why, for example, I am a protestor to El Paso's drilling in one basin, because I feel that that impacts on the military's use of water underlying the military installation. So that's about the best I can do with that. If you want a volume figure, we can try to scrape one together for you.

Steve Reynolds: I would think a number would probably be impossible. I would suggest you not undertake to do that in the absence of counsel. As a matter of law, as I understand it, if and when the federal government withdraws from the public domain lands for a military reservation it acquires a reserved right to the amount of then unappropriated water required for the purposes of that reservation. Obviously, the amount required generally for a military purpose is quite small. So

far as I know they do very little irrigation over there at Fort Bliss.

Unless there's something truly urgent, Tom, or unless you have some announcements that need to be made at this time, we are finished.