WATER CONFERENCE PANEL DISCUSSION

April 28, 1978

Panel Members:

Mr. S. E. Reynolds, New Mexico State Engineer

Mr. Aubrey Dunn, New Mexico State Senator, Otero County

Mr. Larry Morgan, Administrative Assistant for Representative Harold Runnels, U. S. Congress

Mr. Von Rue Crawford, New Mexico State Representative, Hildalgo and Luna Counties

Mr. Gary Cobb, Director, Office of Water Research and Technology, U. S. Department of the Interior

Moderator: Mr. Jack Coats, Bureau Chief, Las Cruces, The Albuquerque Journal

Coats: I'd like to address this question to Steve Reynolds. Are water or land policies required in order to keep irrigated agriculture viable?

Reynolds: (I'm not sure I understand the question), but certainly, essentially the viability of irrigated agriculture in New Mexico is dependent upon our basic water law. The worst thing that could happen would be for the Federal government by legislation, sanctions, or any means, to attempt to take over or dictate how the states will manage either surface water or ground water. But the problem even among the western states is almost unique to each state. In my opinion, the expertise simply does not exist at the Federal level that could do a better job of managing water in the western states than the states are already doing. I think that since May of '77 and only since then, the administration has come to recognize that. I think this is due not entirely to the administration recognizing the politics of the situation, though that should have been enough, but because Assistant Secretaries Martin, and Forest Gerard did, in fact, come to the West, talk to people interested in water resources, particularly state officials, and <u>listened</u>. They learned from that. I do not expect that the water policy to be announced by the President shortly is going to include a takeover of Western water rights administration.

Coats: Thanks. Larry, do you have any comments in this area?

Morgan: I kind of agree with Steve. The administration has done quite a turnaround on their position on water. The Secretary probably put it best when he indicated that he certainly was not going to

start any new water battles with the Congress this year. He felt he came out with burned fingers last year. The committees made it clear this year that they were going to conduct hearings on all authorized water projects. Certainly we're not going to limit any water projects that had previously been opposed by the administration. Unless there's been a change in the political atmosphere, in the words of Mo Udall, "They felt the heat!"

Coats: Von Rue, do you have anything?

Crawford: Only that we've won the West with water and if we want to lose the West, we just let Washington control our water. The Clean Water Act is a very good example of this. I don't know how many of you are familiar with the Clean Water Act, but this Section 208 that goes into effect October 1st, it's a humdinger; it's a dandy. It has some penalties that are $10,000 a day! If you find that you have faulty water and you fail to advertise it, you can be fined $10,000 a day. It's a bad regulation. So I'm against Federal control; administration should be at state level.

Coats: Thank you. Do you have some comments, Gary?

Cobb: I'd like to make some comments. I, too, have felt a little heat in recent times. (In fact, I may have been sunburned in more ways than one.) I'd agree with Steve and Larry in the fact that Guy Martin and Secretary Andrus are now sensitive to the views of the governors, particularly western governors, with respect to the water policy. Just a week ago, Guy dropped by Governor Matheson's office on Saturday morning and spent 3 1/2 hours talking about the water policy. The only comment that I would have would be that there are recommendations that are evolving in the Administration. The Director of the Office of

Management and Budget as well as the Chairman of the Council on Environmental Quality were also charged in May with developing recommendations for the President. I'm not sure just what that negotiation, that sharing of views will result in. The general thrust of the policy will reflect the kind of sensitivity, Larry, that you and Steve mentioned.

I'd like to outline (at some risk, because this is in a very fluid state right now, a lot of redrafting is going on) where I think the policy will make recommendations, and perhaps, a little of the nature of the recommendations. If I can do that with the recognized caveat that it's a fluid situation, I'd like to share the recommendations with you. (I think you might be interested.)

Reynolds: Is that a copy?

Cobb: Just a draft, Steve, just drafts. I think there'll be recommendations in five basic areas. First, I think that the whole process will have narrowed down, with recommendations related to some 150 issues and options that were earlier identified in the staff process and public hearing process carried out last summer and fall. There may be some 50 or 60 recommendations. They will be in five major areas as I mentioned. First: Planning and evaluation criteria. There's a feeling (and I think it's widely shared by not only the agency people within the administration, but by state water people as well), that we can improve our methodology in preparing plans and evaluating impacts of various alternatives. There needs to be additional effort so that we have, particularly for our direct federal programs, better evaluations and analyses of the various alternatives being considered. I think there'll be recommendations in that area.

There is concern in the administration about the magnitude of the backlog which is authorized. These authorized projects are either not funded, or funded but not completed, in an amount approaching $30 billion, in programs with the Corps of Engineers, the S.C.S., and the Bureau of Reclamation. Now, in any administration, facing up to that kind of backlog in the budgetary process in light of other competing priorities and issues, including energy, is a major problem. How does one do that? How do you select among those projects in the backlog and come forward with the better ones, those that are really most beneficial, from anyone's perception, be it state, regional, federal? We are going to have to improve our methodology in selection. There will likely be recommendations in that area.

Another issue deals with non-structural alternatives, which in the federal programs, at least, have not really been given the same kind of emphasis in the cost sharing policy that have been provided to the structural solutions. Perhaps the same end result could have been achieved in a different way. Flood plain management is a good example. Structural solutions are one approach, but perhaps flood plain zoning, flood-proofing, and other kinds of activities that would be less costly might be more appropriate. Previously, in our federal programs we could not implement non-structural alternatives because there was no federal authority to finance them.

The next area is cost sharing. It is one of the most controversial areas within the administration. It is also one of the most controversial between the states and the federal government. There will be an attempt to get greater consistency in cost sharing policy in the various programs. There is no

reason why the S.C.S. should be able to offer recreational services under a more favorable arrangement than the Corps or the Bureau of Reclamation. One policy ought to apply, for similar kinds of programs, so that there's equity among the programs and no "shopping around."

I'm going to put out something, and I almost hesitate to, but I've been doing it in public statements previously and I'm going to do it again. There is consideration being given to an approach whereby the federal government and the states will share decision making responsibility with respect to selecting new projects to be started out of that $30 billion backlog. The process would involve a program where the state legislatures, on the governors' recommendations, would appropriate some portion of the capital cost of the new project, thereby expressing support for a project in a very meaningful political way. Now the level of that contribution is something that will be debated at length. Rather than the federal government alone taking the responsibility for deciding which projects are to be initiated, there should be a joint process. Better projects would be selected just by virtue of all the state governors and legislatures being represented in the process.

Another area is water conservation. The recommendations here will be to first put the Federal house in order, with respect to water conservation. In our federal programs and federal facilities we have some wasteful water practices considering the technology available to us at this time. So that would be the first step. There also may be a program of planning and technical assistance to state and local governments that would be carried out through the states, recognizing that water conservation

and the implementation of a conservation policy has to be based on state administration and state law. This would encourage water conservation at the state level.

The next area is water quality. There will be some suggestions for improved ground water management: conjunctive use of ground water and surface water, to be carried out through state law. Again, let me emphasize through state law. The role of your state in administering ground water through the water rights permit system and other systems is going to be well represented in the policy.

Minimum stream flow may be considered. I'm not sure what the recommendations will be in that area. The issue is: Could there be recognition of beneficial values associated with minimum stream flow? I'm a Westerner and I know that some of our streams flow only during flash floods. In many cases the minimum stream flow concept has no application to nature; it is contrary to nature. We recognize that. There are, however, situations in some streams in the West that do flow continuously, where maintaining minimum stream flows may have great beneficial value for water quality, ecological balances, and other things.

Another area will be recommendations for improving the coordination of planning between federal programs and state programs, striving for more consistency in the programs. The possibility of Comprehensive Planning Grants under Title II has been very seriously considered. Perhaps a recommendation in that area would tend to strengthen the federal-state planning relationship.

Now the other two areas (where, as you had mentioned, Steve,

the greatest controversy exists) are Indian Water Rights and so-called Federally Reserved Water Rights. I believe that the recommendations will be related to a process of resolution of the issues over time. I am certain there won't be any sort of major recommendation to the Congress for present action of one kind or another that would tend to preempt the role of the state in evolving resolution of this issue. The recommendation will be to lay out a proposed process, over time, where these rights can be better quantified, so that there's a better understanding of what they are, and so that there can be some agreement where there are conflicts in viewpoint. Certainly there won't be any abrupt recommendations for Federal take-over of water rights. It will be more a process of problem resolution, recognizing that water rights administration basically is a state responsibility. I think the recommendations will be substantive, will lead to improvement in water management, and are going to be responsible as well.

Coats: Fine, thank you very much. I'd like to note the arrival of Senator Aubrey Dunn, the old apple picker, and chairman of the Senate Finance Committee. Steve, do you have any comments regarding the administration's viewpoint?

Reynolds: (You invite that at your own risk, Jack). Seriously, these things Gary has addressed are going to be common to a number of these reports and I'd hate to take up the time to give him <u>all</u> the thoughts he had generated on my part. I'll just address two of them at this point and then let the thing go where it will. I would take first Gary's comment with respect to this $30 billion backlog. How do you address that? How do you pick out the projects? You should go ahead but I can't say too much

about how you should do that. I would remind Gary that the Corps of Engineers has a system of automatic deauthorization that has been in effect under Federal legislation for some time. Before any project is "deauthorized" the Congress has the final word. That is essential. Now I can tell you things that you don't do a lot easier. I'll take for an example one that many here will be familiar with. That is the authorization for the Central Arizona project in 1968. This project was authorized after decades of controversy, litigation, and negotiation. It accommodated the interests of the seven Colorado River Basin states. This happened after many hearings before the Congress, the sort of procedures that you are familiar with. Obviously there was adjustment of interests. People had to give up something in order to get something. California made a million acre-feet out of it. Now then, this also authorized projects in Colorado, New Mexico, and Utah, and in both the Upper Basin and the Lower Basin for New Mexico. The principal one I think of in context of the "hit list", is the Hooker Dam and Reservoir. This was on the President's "hit list." He wants it killed! Now then, I think what the federal government does not do. In a situation where the legislation is designed to accomodate the interests of seven states; you don't go in that and pick out one state's project and kill it, and go ahead with the rest. As soon as you start down that path you have absolutely killed any chance of cooperation among the states with respect to water matters, or anything else. That is, if you can reach an agreement, have it authorized by Congress, and then have it torn apart ten years later, nobody wants to do business that way. We wouldn't do that to Mexico; no way would we do it to Mexico. And I don't think we

ought to do it to the sovereign states of these United States either.

Morgan: Steve, could I add a note? Isn't it ironic that we are sitting in Anderson Hall?

Reynolds: You bet! That's Clint's project.

Now, with respect to cost sharing. And of course, as you know, Gary, this business of cost sharing by the states was not specifically addressed in the option papers that came out earlier. The term I hear, and it's attributed to Federal officials, is "front end money." Is that what you are talking about? State "front end money?" The numbers vary from 10 to 25 percent.

Cobb: That's the term I've heard, too.

Reynolds: All right. Now, to me "front end money" means we put it up now. That is the state puts its dollars on the line during those new construction years. Now then, it would be much different, then, if it were a state contribution over a 50-year payout period. The gentleman is here now that can tell me how right or wrong I may be (nodding toward Senator Dunn). If I look at current New Mexico projects, at 10 percent, we are talking something in the range of $20 to $40 million, for projects virtually ready to go. My experience tells me that I might have a difficult time going before the legislature and saying, "Now I want you in fiscal 1979 to appropriate $40 million so that we can go ahead with all these Federal projects." If I instead said, "Well look, we're going to need $40 million over the next 50 to 75 years," they would listen differently. You will probably find this to be true in many of the states. To put that kind of money on the front end is going to be difficult, no matter what importance the state may attach to the project. Let me say this, I also have some trouble with that. For the

simple reason that under existing national water policy, with respect to municipal and industrial projects, and these are the ones that are currently very important to us: Hooker, Eastern New Mexico, Animas-La Plata, those are not irrigation projects, and under existing federal policy the water user is required to repay construction costs, with interest at something a little over 6 percent. By golly, that seems to me to indicate a considerable interest in the project. The difference is a 50 year period. Now, they can't go to the bank and borrow for that period of time. But we think that the United States is planning on being in business for a long time. I think the Federal Government can afford to be a banker and give us 50 years at 6 percent, which is a reasonable interest rate today.

Cobb: What is the $20 to $40 million?

Reynolds: That's what the state would have to put up in "front end money" for projects ready to go.

Cobb: At a what? At 10 percent?

Reynolds: That's at 10 percent.

Cobb: So you have $400 million authorized, say, roughly --

Reynolds: In this general range, depending on what numbers you want to take. That is, just sitting here quickly, and $400 million is a quick figure. You are looking at Brantley at roughly $80 million, looking at Hooker at roughly $50 million. You are looking at New Mexico's share of the Animas-La Plata at roughly $30 million.

Cobb: 160

Reynolds: I think that does it.

Cobb: Well, the other point I'd make is: it would depend on how it

would be administered. Of course construction periods are five to seven years, as you well know, so it may not be $40 million in one fiscal year, but over a few years.

Reynolds: That's right, but I've got to have the committment if I'm going to contract and have the Secretary start on that project.

Cobb: One-third down.

Reynolds: I might have five years to spend it, but I've got to get it this year.

Cobb: The first decision is the one that we'll count.

Crawford: What if you have a situation like Brantley where you are replacing existing Federal Dams, where it's a Federal responsibility, because the two dams represent a danger right now, when the cost of those dams is minimal compared to the cost if those two dams that are there right now collapse?

Cobb: I can see where that kind of situation would warrant an exception to such a policy if it's a replacement program for existing Federal projects.

Coats: Aubrey, I'd like to have the benefit of your comments on this.

Dunn: This particular subject of the state of New Mexico coming forth with this kind of money - you know, we have to be in a position of operating in the black. We have a philosophy of trying to spend the money that we have in New Mexico for projects that we think are very worthwhile and are going to happen. We hate to obligate ourselves to a position on a project or a group of projects just as Steve has described, and maybe we might have some. We'll take the Grants and Gallup and Farmington area, where we really need some money to go in and help those communities grow for the national energy policy as well as our own. If we were to commit $40 million to a group of projects such as we are

talking about and hold back some of these other growth areas which we might really need, and then have this money obligated, unable to spend it, then have somebody come in, as Steve described, and knock it out, maybe we have abolished the possibility of a uranium area or a gas field or some other thing that might grow. We in New Mexico are desperately interested in water projects! We will fund them to the hilt, whenever possible. We've got to do what we can, but we're not going to over-obligate ourselves. We're just not going to do it. New Mexico has seen the problems brought forward in other areas, with other states in the United States. The population of New Mexico may have to carry water a long way, but I don't think we're going to go in debt over our heads. I think that's what Steve would run into if he came after a big hunk of money. We've obligated money for the Ute Dam project. We've put up some for Brantley. We've put up small amounts, as you know, this time to encourage saline water development. But to come up with front money of that magnitude, I think the legislature would be very hesitant. If we could pay it back over a period of time, if we could see the tap open and see the dam or something happen, it would make a lot of difference. We've been grateful to the federal government for many things. (I'm late this morning, thank God, because of the federal government. We worried when Fort Bliss didn't fire missiles). By the same token, people have a real concern about putting that much money up right at the front and then have somebody back off.

Reynolds: Jack, if I might add one further comment that might support my arithmetic. That Eastern New Mexico Project is some $120 million, which I didn't discuss. It's not yet authorized, but it's ready for authorization. If you take all the numbers it is

a very large amount of money.

Dunn: Sure is, and of course we added to that project this year. We put some more authorization up for it because we are interested in it. We considered that in our obligation. We've considered it as already spent. We have to feel that way about it. We can't go for $40 or $50 million at a whack. You know, we're a small state; we can't afford to do that.

Reynolds: Gary, the Senator is talking about a state project, the Ute Dam and Reservoir project. It is essential to the $120 million Eastern New Mexico Project. The state built the dam and reservoir, and this year authorized the installation of gates, in order that we'll be ready to serve that Eastern New Mexico Project. Now, I would hope, that in whatever system was proposed, that kind of contribution would be acceptable in lieu of dollars. A dam and reservoir ought to be considered a contribution.

Coats: Okay, we need to move along a little bit, and before we get to the Saline Water Workshop, are there any questions from the floor to the panel or anyone else?

Floor: What's being done as far as solar energy for irrigation is concerned? In New Mexico and Texas we have a lot of free sunshine the year round, and it looks like we're not taking advantage of it.

Pope: We're cooperating, as you know, with the Willard Project, in terms of the use of the water, not the engineering aspect. Eldon, is there any other work going on?

Hanson: That's about it in New Mexico.

Pope: But that's our major one. We have a real interest in that. Bob?

Coats: Bob San Martin is in the room. Dr. San Martin is Director of the New Mexico Energy Institute.

San Martin: There are a number of ways of where this is being considered. We're looking at solar energy for use as a power source to assist us in delivering water. We're also looking at solar energy nationwide to be used in photosynthetic capture processes for energy production. There may be some applications in saline water recovery. These are being looked at. They're fairly early in the research and development stages, but they're of great interest to the researchers here because of our very obvious natural resources.

After Saline Water Revisited Workshop

Coats: I'd like to point out that there are two separate thrusts of legislation currently in saline water development. The first involving state activities were two successful bills introduced by Senator Dunn in the last session of the legislature this year. Then, of course, in the federal area, Senator Pete Domenici of New Mexico introduced legislation in Congress providing for the construction of four demonstration plants to explore the use of desalination technology throughout the United States. I'd like to ask Senator Dunn now to describe his legislation.

Dunn: Of course, Jack, we actually had about four different areas which we covered in this past session. We submitted Maurice Hobbson's bill to provide a plant in primarily Carrizozo. There was around $200,000 dollars in state money put up to go with $600,000 more in federal money for such a plant in Carrizozo. This plant would, overall, have a capacity of about one-quarter of a million gallons a day by mixing the less saline water with some of the more saline which would come out of the plant as approximately 250,000 gallons of potable water. That $200,000 will go to the

Department of Development who will call for contracts and arrange for additional federal or other state monies or grants (or wherever the money can come from) to complete that plant.

The legislation which I introduced put up $25,000 for a study and $200,000 to go to a plant that could produce as much as a million gallons a day for a municipality. This was called for and the idea was to try to have some of this small amount "front end money" that we talked about at the state level and try to attract the big plant that Mr. Cobb has that was proposed in the Domenici Bill. We are well aware that the local involvement has got to be there. In addition to the study money and other actual money if the project's obtained, the bill called for a 10 percent local match. The idea is that we don't think the state should be the moving force. We think locals have to become involved.

In addition, we set up a $25,000 grant and a $75,000 project to come up with new and innovative ideas and some other methods other than just the known ones and to try to create some new ideas. One of the projects we thought about was the algae process to try to clean up saline water. We're looking for some new ideas. This is practical research.

We also put up some other money in that particular bill for $25,000 for a study and $100,000 to try and find someone to help clean up the water around the uranium areas. Those who have been to Grants know the vast amount of water that is available. Pollution comes off the tailing piles, some as well comes out of the mines. Some of the ideas put forth by researchers in algae feel that they might do something in

that particular area. (I think it's there.) You know, (I'd just like to say - the moving force behind these ideas of cleaning up this brackish water) - I come from the community of Alamogordo, where last year nearly from June through August the people in Alamogordo either were not able to water their lawns at all, or it was every other day. When they talk about the cost of water, the cost of operation of one of these plants, with all the vast acres and acres and acre feet of water, of brackish water we've got in this state of New Mexico, to think that people can't even water a cactus plant in their front yard in a town as large as Alamogordo, shows me that we as a state and as a nation have got to try to promote this type of thing. Sure, we had a pipeline that went out and they are rebuilding it. The water is there, but with the amount of growth that New Mexico is experiencing from other states, if you don't even count the industry growth or anything like that, it seems to me that we're foolish if we are not the leaders in using saline water. I hope that this legislation which we've been involved with will promote saline water development. The water is here, the brackish water is here, I don't need to tell you people of the vast amount of water that's in that basin. If you don't interfere with the military, and there is no way that there's any problem of interfering with them. There's plenty of semi-saline water. I just wish we'd get on with the act. I hope that the Federal government will come through and help us with this small amount of money we've put up and come out with the plant, because there's no reason that we can't take this amount of water and make it potable water. We're ready to go; the technology is there and I think that we

need to get on with the show. Because one of these days - even right here where we sit there's plenty of water, but if we keep using it for irrigation purposes such as we have here, and your growth continues, you are going to have a water problem in this area. Now we over there, I was born and raised in Alamogordo, and I know what it means to have rationed water. (I live in the mountains now, where I have plenty of water and it's wasted and all this type of thing). I happen to believe in the preservation of the water resources we have, we've got to clean it up. I hope this legislation will get it started.

Coats: Thank you, Aubrey. Gary, can you fill us in on your activities in connection with Senator Domenici's bill?

Cobb: Yes, I was out here about three weeks ago, and Steve and I went over the State; we went to Alamogordo and met with people from Tularosa. So I'm getting a better feel all the time, Senator, of your interests. There's no doubt about it; there's a great potential opportunity here for demonstration activities that can be very useful to the program and can help the nation as far as technology is concerned. I'd be remiss today if I didn't share with you a little bit of a sunburning that I also took in my own program - not on water policy, but in the desalination area. When we requested guys like Steve Reynolds to help us identify potential demonstration sites, we attached to our letter, guidelines outlining the role that the Federal government would have in planning for a demonstration and implementing a demonstration, and the role that the local communities would have as an integral part of the process, and I'll elaborate later on why we feel that way. In any case, I sent out a letter with the guidelines

attached. In our guidelines we suggested an objective in cost sharing of 50/50 based on a flexible policy that would allow the Secretary to have discretion to take into account the capability, both financial and technical, of the cooperating community. Suffice it to say that our guidelines were of a great deal of concern to the states. I made a mistake in my letter by not indicating that the guidelines were based on the Administration's new proposed legislation. That was implied, but I should have stated that explicitly. As a result, our intent was misinterpreted. From the point of view of the states, I can well understand that. In any case, at the hearings we had before House subcommittee on Water and Power Resources, I would describe it as a broadside. Every member of the Committee came at Guy and me like gangbusters. They got our attention, to put it mildly. It was clear from those hearings that there was a real misunderstanding of our intentions. The Committee had the feeling that we had issued, and were going to implement, cost sharing policy according to regulations that were inconsistent with existing law. And, of course, we know in a former administration that that happened a few times. We were very chagrined that that interpretation had been made, even though it was not our intention at all. In Senate Committee the next day, before Senator Domenici, Guy and I had a little more to lay out how this had evolved. Quite candidly, last summer, when the existing legislation was approved by the President, Guy was not into this program, had no input into the bill that was passed through the administration and signed by the President. Guy's and my own participation in the

in the programs was developed in late August and early September, in preparation for oversight hearings last fall, which were very well received.

This Administration is committed to moving forward with a responsible saline water program. That is a committment not only in spirit, but also a committment in terms of resources and budgets. The process that we followed last Fall in evolving the program was first to outline new objectives that we felt were apppropirate to the program, including the roles that the Federal government, the state and local interests would have in demonstration activities. We presented those to the House Interior and Insular Affairs subcommittee on Water and Power Resources - all were well recieved. Following up on our committments at that time we reprogrammed activity in the current fiscal year to initiate demonstration studies. There were no appropriations even for demonstration activities. We reprogrammed, or proposed reprogramming to the Appropriations Committee, to do that. So we took the initiative, to initiate the activity. We, at the same time, had a substantial amount of unobligated carry-over in the program coming out of the past fiscal year, simply because the <u>will</u> had not been there to have a program. We applied that unobligated carry-over of no-year money, you know, continuing appropriations, into our '78 and '79 programs; we redirected our budget request on November the first. It went through OMB with no change. So the program that was in the President's budget was the program that was proposed by Assistant Secretary Martin and me. OMB had no involvement, they approved it <u>in toto</u>. First time it's ever happened to me in 18 years, probably will never happen again! But in any case, we put that program through,

and so we feel that that reflects our committment to the program. The appropriations are presently being considered in the Appropriations Committees, as I say. We had authorization hearings on new organic legislation for the program. We had a broadside, but there's been give and take since. I wrote a letter to Steve and others I had previously written, extending the time period, clarifying our position, and indicating that whatever policy the Congress approves in its actions now will be implemented, without equivocation. So there is no Mickey Mouse at all about our intentions. We're going to implement the policy that the Congress approves in the current process with respect to cost sharing, and also with respect to the whole program. I wrote Congressmen Lujan and Runnels. The Secretary responded to a letter from Congressman Lujan, which made it very clear what our intention is. That was two weeks ago and the program is back on the track. I feel good about it. We're going to have good appropriations, but I'd like to go down through just a couple of points.

I want to commend you, and compliment you, Senator, for the initiatives you've taken in this state. There is no other state, yet, that has, at the state level, taken the initiative in response to this saline water program. There are other states, frankly, who are very interested, and other local communities. There has been an indication on the part of some communities of willingness for a substantial amount of participation in the program. This is the first state, though, and the only state to date, that has taken an action.

Crawford: Can you cut off the application date now?

Cobb: June 1 is the application cutoff. One expression of interest is public knowledge. It was presented in testimony before Senator Domenici; that is Virginia Beach.

But let me just hit a couple of other points related to our program. The point about waste energy or low temperature energy coming out of say, a hookup with thermal power plant. We have a joint project with the Israeli government right now. There is $20 million AID money, $30 million of Israeli money, to advance a technology in distillation that had been developed in Israel called multiple-effect process, as opposed to the multiple-stage flash and other processes that we have in this country. That multiple-effect technology adapts itself to low temperature applications. Multi-stage flash is 160° Fahrenheit on up. This thing will operate at under that, clear down to 110°, 100°. It has great potential if you could take that waste heat out of a thermal plant. So you've got zero energy costs going in. Think what that would be to this technology. The joint agreement that we have with the Government of Israel, administered through AID, provides that the new technology that comes out of this joint program shall be available to the United States government and to public interests in this country royalty free. So, it's coming. That program is in the early design stages. We're not in the construction stage yet. There will be a plant of five million gallons per day as a first module, to be scaled up to ten million gallons a day. The program will be over a period of about seven or eight years. We can look forward to that technology being available in our program.

I wanted to mention, too, that we're now in the process of

negotiating a joint agreement with our Roswell Test Facility and the water center here. New Mexico researchers will use the Roswell blending capability to advance study of saline-resistant crop varieties. I'm very hopeful that that program will go forward. That agreement offers real opportunities.

I've got to respond, frankly, on the point about how the $300 million to date was spent. In fact, much of that $300 million was spent on hardware in distillation. It was not all research. Perhaps that was what led to the former administration and the OMB position that we ought to phase out the distillation technology. There had been so much hardware put in place that didn't work, that we tore down. We tore one down, I'm told, at Roswell, a demonstration plant.

It was not there when I went there, so it went somewhere. I have a demo plant that's sitting out in Orange County. What do you do with it? I'm still trying to find a way out of that problem. So it's for this reason that we felt that the demonstration activity was the most critical and sensitive in the program. Our philosophy and our approach, very simply put, is this: We believe that we ought to carry demonstration activity forward from a point of view of water problems, not technology. We should address a real world water problem. We should make the demonstration an integral part of the water management system for that problem. Then we should have participation, technical and financial participation, and committment of the local participants in the program. This would ensure that when we get the data out, we can turn the whole thing over. Now, that's another point that's not well understood. We would turn the whole project over to the local community and

it would be their project, without additional cost. It would be an integral part of their water supply or water treatment. They would know how to operate it because they would have been in it up to their eyeballs from the time of the very, very early design studies. That's our approach. We don't want to tear any more demos down. We don't want any more white elephants sitting around. We want operating demonstrations. Apart from the money, apart from who pays, I think it is very important we have that kind of committment. We want to step out in four or five years and leave it there, not as a white elephant, but as a continuing demonstration.

Now what happened to the $300 million? I'd like to share that briefly. We spent $300 million developing a distillation technology, a lot of unsuccessful demos. When the former administration in 1973 closed that program down, the profit centers in industry that had built up around that $30 million appropriation per year dispersed. The energy crunch came. The Saudis and Kuwaitis got rich. Our patent policy and our public policy at that time was to put all this technology in a row of green books that covers two bookshelves ten feet long. The Germans, the English, the Japanese picked up our technology. They're now over there selling the plants. Now that's something to think about. We developed it. It's our technology. They admit that they're using our technology, and they're selling the plants, and we're out of it.

Where can we make it? We can make it in reverse osmosis. In membranes we're out ahead. I was in Tokyo last fall at their seawater lab. They were testing Dupont and our PA 300 membranes there. Yes, they had a couple of Japanese membranes

but we're still first there in R.O. In our program's thrust we're pushing very hard to maintain the lead. In this area we have the advantage. In the distillation area, through the joint program we have with Israel perhaps we can get our industry back into it. It's going to take a major committment on the part of industry. It's not just government; it's industry and government that are going to have to make a committment to try to capture some of that Middle Eastern market. In my view, we shouldn't pass over too lightly the great opportunities for this technology in our country, in areas like the Tularosa, in areas like southern Florida, in areas like Virginia Beach, in areas like the Virgin Islands, where there simply are no other alternatives. Cost is relative, if you don't have any other alterative. They're barging water into the Virgin Islands right now. The cost is in dollars per gallon, not dollars per thousand gallons. It's almost like bottled water. If you deal with a situation like that, then this technology makes sense. But it also makes sense in our country in water reuse. These membranes and what we can do in our pretreatment activity and blending back have potential in water reuse. There is great potential application in the whole country in a variety of industrial activities.

Coats: Gary, will New Mexico receive one of the four pilot plants as proposed?

Cobb: I'm issuing a request now for AE's to come and help us evaluate pro-

posals. Of course, I am the director. There will have to be a first one somewhere and we're going to do four of them. We're going to stage out the four of them in a four year period. Let's just say you're very competitive.

Morgan: You know we were talking about the lack of clout in some cases. This is one area where New Mexico is in a strong position. We've got Senator Domenici on the Senate side of the committee; Congressman Runnels is on a leave of absence from the Water and Power Subcommittee; there is a possibility he is going to be chairman of either Water and Power next session or Public Lands, one of the two. Congressman Lujan is the ranking Republican on the Water and Power Subcommittee, and he (Gary Cobb) felt some of the heat last week from this committee because they are very dedicated towards saline water research. They've made it repeatedly clear in the past. Past administrations, for example, have been trying to close down the Roswell Facility in past years, every year for the past 8 to 10 years, and we have repeatedly crammed it down their throats.

So you could say that the committee is very dedicated to saline water research, and I don't see any let up on that in the Western states in particular.

Coats: Von Rue, do you have some comments on that?

Crawford: Yes, just on the Roswell Facility. We had a bill which I co-sponsored last time for $200,000 for that facility for WRRI to do some testing there.

Cobb: And is that work going to go ahead? Do you have the money?

Crawford: The bill got lost in the shuffle, but I intend to reintroduce it this time.

Pope: On the agricultural side, we're going ahead as far as we can with

the resources we have, and come back next time.

Cobb: I'm really excited about that project.

Crawford: The bill, nobody's against the bill. It just ran out of time, but I think we can pass it in the next session. I intend to try. We flew over there and we toured the facility. There's a lot of opportunity there, for testing different crops.

Costs: Thank you. Steve, do you have some comments?

Reynolds: I'd like to make just one. People seem to forget, even in New Mexico, that water is dirt cheap. If I put a half an acre foot on my yard and garden in Santa Fe, it's going to cost me roughly $500 bucks. But if I tried to put a half an acre foot of dirt in my yard it would cost a lot more than that. We need to think about that.

Coats: Thanks. Aubrey?

Dunn: There's one other point that I'd like to make with regard to what Mr. Cobb said. You know, you talk about getting private industry into this thing, and everybody knows I'm pretty hard-rock conservative, some people say. We have private industry working on supplying utilities. We've got private industry working on all of our gas, all of our nuclear energy, all of these other things, but this is one role that government can do. Government can provide water to municipalities. This, to me, is one thing government needs to be really involved in deeply. Local government and state government, nobody wants to touch a water system. I don't blame them. I belong to three little water co-ops. It's expensive. But this is one role that government can really perform. We can burn wood to keep warm with, but drinking water we've got to provide from the government, whatever level.

Cobb: I don't disagree with that. My basic point was to try to capture some of the Middle Eastern market, to get back into that. I think we can help a lot by trying to bring seawater membrane processes up to a point where they work and performance can be guaranteed. But try to go back and reenergize, if you will, a heavy R&D program in distillation in this country - research, yes, but I've got some real questions in my mind about the developmental aspects of it, because it's a commercial process. The Japanese are building those plants right now, and so - sure we can prove it - but I don't think we have to demonstrate it anymore.

Crawford: Did you say we spent $300 million?

Cobb: $300 million on saline water. The Office of Saline Water. The program was created in 1953, and from 1953 until the present time we have spent over $300 million in saline water.

Morgan: That includes the Yuma project?

Cobb: No, that does not include the Yuma project. That's $200 million itself.

Crawford: That's one of the sore points with us. We've spent more money to create saline water treatment for Mexico at the Yuma project than we've spent in our own nation. We're sending treated water down to Mexico right now, and we don't have a major project here in the United States.

Coats: Thank you, Larry. Any questions from the floor?

Floor: Most all of the discussion on saline water has been in terms of large capability. Has there been any research in terms of small, independent types of projects, such as is taking place in terms of individuals in solar type of activities? Is this a feasible

possibility, of small distillation type of saline projects?

Cobb: In my opinion, yes. I mentioned water reuse. Let's take the blowdown process, in electrical generation, on the Four Corners plant, for example. I'm aware of what's going on there. So this technology has all kinds of different applications. The membrane technology, particularly, is adaptable to scale. There are little units, big units. We have little units operating right now at our test facility You might want to go out and look at one of them. They are pipes about ten feet long and they are putting out water. You can see it.

Morgan: The military, also. Senator Dunn and I were over at Holloman yesterday and one of the things they were showing us over there was their mobility kits. And they, for example, have a package less than the size of this table that will provide water for a complete battalion. Drinking water, only, but I mean it's just in a little package, and it's a reverse osmosis system.

Coats: Any others? Dr. Steinhoff?

Steinhoff: I think there's one area which in the last year has shown substantial progress, that is the desalting of the tail waters of irrigation. I think for the first time in history we have succeeded in taking more salt out of the tail water than the irrigation carried with it. This is the limit, a major danger, which saline waters are subject to, say, a salt test of agriculture occurs. And this is that first time in history that it is possible to do that. And this is, I think, a benefit of desalting in these areas and it has been demonstrated in California.

Coats: Thank you very much. That was Dr. Steinhoff with the New Mexico Research group out of Alamogordo, who is doing much of the work at Carrizozo right now. Additional questions? Yes, sir.

Floor: I was interested in hearing Mr. Cobb say that the Department of Interior was not interested in administering the water resources of the states. I know it's too bad that EPA and OSM and OSHA and HEW and other government agencies do not have the same philosophy. But what I really wanted to say was what I mentioned to Dr. Bahr this morning. Something that's greatly needed, is for detailed hydrologic mapping and study done of the water resources of the state. You can go to the USGS and other places and get some sketchy data, but now there are a number of us in industry that would like to use brackish water, but we really don't have the data necessary to go into a brackish water area and spend several million dollars developing it. We don't know how much is there. We don't know the porosity of the formation. We don't know the chemical analysis of it. So this needs to be done throughout the state of New Mexico. I don't know whose responsibility it would be, or where the funding would come from, but this is something that is greatly needed.

Coats: Thank you, sir. Any comments?

Reynolds: I'd like to offer one comment to that. To add some encouragement. Quite recently my office made application to Sandia Corporation for about six million dollars to help us get precisely the kind of information you are talking about with respect to the San Juan Basin. There is some reason to believe that they may come through. This would be very helpful. Getting the kind of detailed information that you express the need for, as you know, is expensive, whether you have to do it, or the state or the Feds have to do it.

Floor: You have to drill test wells, and you have to pump them for months if not years, to obtain this data.

Reynolds: In the final analysis that's what you must do. It's all you really want.

Energy and Water, National Water Policy, and Water Rights Workshop reports followed

Two questions from the Energy and Water Workshop were addressed by the panel:

1. What are the panel's feelings on the order of energy alternatives?
2. Should we have a state energy policy?

Coats: Aubrey, would you like to start off some comments?

Dunn: A state energy policy, as we speak of it, depends on who you talk to, Jack, as to what kind of policy you are talking about. If we were to have a policy that we would have "X" power plants and where these power plants were going to be sited. Are we going to have so much nuclear power generated in our area? Or are we going to use natural gas in a certain area, or is one town going to have natural gas and another town not? If that's the energy policy we're talking about, we're going to decide or have a group of people sit somewhere and decide, that this area of the state will develop and that area of the state won't develop - this guy owns this private land and he owns so many water rights and he has so much land. You know that our country is founded on the right to own land, and New Mexico and the West is founded on the guy that has got enough water to drink. To say we are going to have a set policy is easy to say, but we are a long way from that, in my opinion. We are a long way from having the togetherness or the urgency or the crisis to generate this type of set policy, and to say where energy is going to be located -

we're not to that point yet in New Mexico. We are a few over a million people. Unfortunately almost 70 percent of them are located between Belen and Santa Fe, not by accident, but because that's where the water is. The energy is developed of course, as it goes to the southeast and the northwest, and that's where the energy is. We're not going to be able to say that we can stop these trends. We might be able to come up with some idea or, add to some suggested ideas. For instance, if we could create energy in the Tularosa Basin by using brackish water to cool the generators, maybe that's something we need to look at. But by the same token, the very economics and the great things of national defense happening at White Sands Missile Range and Holloman Air Force Base, they are very important as well. To say that we're going to set a policy that energy development can only be in a certain area is something that's hard for us to do. You know, these are things that I can't say as a legislator, "Yes, we will have a policy." I don't think New Mexico is developed to that point. This is an area in which we are going to have to feel our way, and we can make suggestions. If we develop saline water plants that will make potable water in arid areas of New Mexico, and shift some of this population growth from all going up there in the Albuquerque area, we may be able to prevent some of the social and other problems that are associated with large metropolitan areas similar to those in the East. If we can spread population growth out around the state, that will solve some of our problems. By the same token, when you do this you will move some of the energy needs around and you can solve some of that. But today, we don't even have anybody in New Mexico that has made a suggestion of how much natural gas we will need in

Las Cruces, Deming, Lordsburg, Alamogordo, and other parts of the state in 1985. Nobody can tell us, so how are we going to set an energy policy, much less how to get it over there. We don't know how much we are going to need in those areas. So, I say a policy is a long way down the road.

Coats: Fine. Von Rue, do you have any ideas on a state energy policy?

Crawford: I like Destin's idea over there. He says we've got the energy, some places have the water; all right, we'll trade you some of our energy for some of your water. You bring the water over to us. No, I agree with Aubrey. I think we are a ways away from a state energy policy. The Fed's don't have one, I don't know why we should be any different. Aubrey made some valid points. We don't know what our priorities are going to be. We really don't know in Deming, New Mexico today how much gas we're going to need in 1982, 1985. We don't know how many people we are going to have there, how much industry, and I think it is the same all over the state. Too much of our population is concentrated in one place, maybe Bernalillo County needs an energy policy, because that seems to be where 40-50-60 percent of the people are. And the energy, of course, is concentrated in the Four Corners area, San Juan County, and also down in the Hobbs, Lovington and Carlsbad areas. I do think we need a water policy. I think the next session of the legislature should be giving some thought to where we're going with water. I do think we need an interim committee to study water, to say, "where are we going?" It's tied so closely to energy. The two are just completely overlapped. You can't talk about one without the other. Any time you get into energy, you get into the question of how much water it's

going to take, and how much water is there? So I don't think, Jack, I really don't think we're ready for an energy policy.

Coats: Steve?

Reynolds: Well, I feel obliged to comment on what Von Rue has said with respect to water policy. There it is (holding up volume containing water statutes) - established by the legislature. With a little more over in the constitution, which is not included here. And it's a pretty good policy. It'll work, with respect to energy problems, and all the others, I think. There was an interesting point made in Bill Lorang's statement, that is, are you giving consideration to energy alternatives, including the amount of water required for the various alternatives. I just happen to have a few numbers in mind. First off, if you do coal slurry, you'll take about 800 acre feet per million tons of coal. If you want to do coal gasification, that's going to take about 900 acre feet per million tons of coal. If you want to do electric generation, that's about 5000 acre feet per million tons of coal. Now, you can think about the number of jobs that are related to those various uses of caol, and that's very important. Not many, with respect to coal slurry; it looks like the greatest number with respect to coal gasification, then an intermediate number with respect to electric generation. I think that you have to think about those jobs, particularly when you bear in mind that the preponderance of our coal resources are up in the northwest corner, on the Navajo Reservation, where you have roughly 70 percent unemployment. So when you're setting energy and water policy, keep that in mind. Now, you raise serious questions, some of which have been raised with federal legislation with respect to coal slurry quite recently. Is the use of water to slurry coal to Texas

beneficial use under New Mexico's constitution and laws? I have not reached a conclusion on that, and I'm not going to, I think, until we have a specific case before us. Keep this in mind. If coal slurry is a product, that is, not water and coal, then I don't think our constitution and statutes prohibit use of water to slurry coal to Texas. But if you looked at it as not a product, but as water and coal, you have serious questions, whether that could be done under our law. Now if you look at it as a matter of policy, if the only way you can, and I use the word advisedly, exploit, Navajo coal resources, for example, is by coal slurry, if you can't do it by gasification or electric generation, and there's reason to believe that you can't go much further than you have, then, by golly, I think it may well be in the public interest to use our water to slurry coal to Texas. Keep in mind that the royalty, and I don't have any recent real firm number, but you know it's something like 50 cents a ton. For a million tons of coal, that's five hundred thousand dollars, and I don't know many farmers that make anything like that out of 800 acre feet of water. I think those are the kind of considerations you need to make when you decide about coal slurry and so forth. We're afraid of one piece in the Federal legislation that would give the states general power to determine their use of water for coal slurry, but there's one little provision in there that says that the U.S.G.S. could override a favorable state decision, and I don't think we want to let that go. The legislation is not passed, and I think that'll be taken care of. It's just that first little toe-in-the-door for Federal control over that question.

Coats: Thank you, Steve. I know that you mentioned coal gasification, but you did not mention coal liquification. Is there any particular reason?

Reynolds: I don't have any numbers.

Coats: Okay. The second question posed, and this has to do with the order of energy alternatives, and Bill lists these alternatives: conservation, weather modification, ground water recharge, reuse of waste water, pump storage, recovery of evaporated water, use of waste heat, legal problems, use of non-water intensive energy sources. Should we prioritize these alternatives, and if so, how would we go about it?

Crawford: They are all priority, every one of them. How do you start with one and go through ten.

Morgan: There's no way, really.

Crawford: They're all number one.

Morgan: And they all create their own problems, and we were talking the other day, Steve and I, about water reuse, and we were saying that there is a possibility that there is going to be court suits in the fact if a community starts reusing its water, sewer water, instead of dumping it into the underground aquifers of some type, some place downstream may start suing you because you are not sending them as much water as you originally did. "Water Rights" is fightin' words in western states.

Coats: Aubrey?

Dunn: There are all kinds of problems as you go down those particular areas. How do you put a priority on them? I guess my first priority would have to be conservation. I think that's one of

the main things to put - and I think the law says that. Our law says to put it to beneficial use, it said that years ago, and that's conservation. That's what it is. Use it in the best beneficial use and conservation - I'd say that's what has to be at the top of the list. To waste it, with what it's worth to all of us, those of us that have seen pipelines go sixty miles, and see a little piece of black hose that runs out across the desert to create a little pool out there for a cow to drink out of, you know that's conservation. That's beneficial use of that water. That to me, that's just the top of the list.

Coats: Gary, do you have any comments?

Cobb: Not on these points. I've got some comments later on.

Crawford: Jack, can we go back to what Steve said about we have a water policy. I'm sure he is referring to the water rights laws. Don't you think there's some that actually get around those laws? For instance, a farmer in Luna county has a water right. Someone wants to move a half a mile away, drill a well. If you turn him down, he'll take you to court, and he'll win, unless you can prove that he's going to lower the water five feet a year or four feet a year.

Reynolds: There's a very important difference. He has to prove that he will not impair other rights - I don't have to prove that he will. That is a very important difference.

Crawford: But isn't this happening?

Reynolds: We don't lose many. They take us to court, but in the last 23 years we have appeared 55 times in the Supreme Court, and our record is about 85 percent.

Coats: Fine, thank you, Von Rue. Now the report on National Water Policy, and I feel Gary probably has a few comments.

Cobb: Before we do that, I did have a comment on Bill's report, and that is on getting the research out, I wouldn't let an opportunity go by without plugging our program. Our program is the only Federal-State partnership program for research in the water area in existence. The EPA has some big Federal labs out there, but we have centers in 50 states and four territories that are in partnership with us. We're putting a new element in our new legislation that will let $750,000, to create an opportunity for these centers to take research knowledge not just out of our program, but from anywhere in the world, and apply it to your problems. We've got a fancy term for that, we call it technology transfer, but what it amounts to is making that center a focus in the state for water research from all over in the world, so that they can help bring that knowledge to bear. I want to plug these centers hard. They are important. They are the only Federal-State partnership arrangement in this game in town. So, I've got to "pitch", Tom.

Cobb: Now, on the water policy. There's a game I play sometimes when I'm trying to draw people out, I say "What would you do if you were King? (laughter) If I were King, and the way I understand your recommendations, I would adopt them. Let me elaborate just a little bit on how I understand them. I agree that the states have the primary authority and responsibility in water management. I think many in the administration feel the same way. The role of the Federal government should be to provide assistance to the state programs to meet state needs. Therefore you ought to take Henry Caulfield's model and start playing with that a little bit.

We ought to abolish the Corps, SCS, the Bureau. We ought to create a new agency that would provide assistance to water priorities and management to meet state needs. Our direct Federal programs are coming around, because they are beat over the heads by governors all the time. Look at Caulfield's stuff, at Colorado State University. He's got a model, for instance, that is quite different. State and regional programs should be weighed more, and not just on national grounds. At the same time, I would add the ability and the willingness to pay. So you've got to play with cost sharing a bit more. If you want to meet your needs, you're going to have to find ways to finance them more. You can't have all states and all regions going at the Federal government trying to say, "Meet our needs."

Senator Domenici has said that there are 24 or 26 states that are operating with surplus budgets. The Federal government right now is running sixty billion a year in the red. And, he said, that's something to think about. So cost-sharing and the Federal-State role is something we've got to think about. The old stale tale that the Feds have all the resources just doesn't hold up, according to Senator Domenici, and I agree with him. Federal actions must be consistent with those of the states, sort of a joint program.

Next, there must be continuity, coordination, and flexibility.

I already spoke to Federal project financing. If you want to pursue the interests of the state, then you've got to be willing to compete more, pay more. That's the way I feel about it.

Federal supported water research is good. Through a program like ours, you can build on research that's being carried out in other areas. I don't think we ought to decentralize research. It would be too redundant. We need the research carried out where the expertise is, in the states and the universities. But you need a program like we have to coordinate that and eliminate the duplication and help to meet the objectives. It's a partnership role, with the Federal role being one of pulling it all together, and also looking at major problems of national significance. Not all problems are so pervasive, or so extensive that they become issues of national significance.

Of course, the water rights would be administered by the state, and would update the reclamation.

So, I'd buy it if I were King.

Well, what are we going to recommend, I wonder, that will violate this? Is it levels of cost sharing? What are we going to put into our policy that will violate this?

Let's run the President's policy against this point-by

point when it comes out. I'm going to do that and see how it shakes down.

Morgan: One word in there that I think they may be nervous about. Indian water rights, and of course, that's one that's confronting Congress.

Cobb: Yes, I see that as a Congressional issue.

Morgan: I don't see any great desire on the part of the Congress to attack that issue, truthfully. There's been legislation introduced by Conbressman Mead, Chairman of the Water and Power Subcommittee, but he hasn't even scheduled his own bill for hearings. I don't see anything coming up on it, not this session, anyway.

Crawford: I have trouble with number five. Those three words, I have never seen in connection with any Federal program before: continuity, coordination, and flexibility, all in one sentence.

Cobb: You have to start disaggregating it a little bit. I've been around this thing quite a bit through the (federal Water Resources) Council, so I know how the states feel. The EPA's heavy regulatory approach in water quality is very troublesome to most states, particularly western states. The President's water policy is not going to attack that. You are going to say, maybe, we sin by ommission. I think we may have to take a rap or two on that point. Because the balance of planning and regulatory approach to water management was brought home to me in the recent conference we had where we compared the Thames in the United Kingdom, and the Potomac. In the United Kingdom they approach water quality management quite differently than we do. They say first - what is the effect of contaminants or pollutants in water on people? What is the body of evidence that it has any

health effect? If there's no health effect, they don't worry about it. If there is a health effect, they say, mitigate it somehow. Mitigate it, try to ameloriate that effect. If you can't do that, then try to start backing up to the source. Now there are certain minimum standards on effluents. The point is, we have a strong attack from both the cause and the effect, and it may be costing us a lot of money. I would defy anyone to prove that the people in London are dying at an earlier age than the people in Washington, D.C. because of water. So there's a lot to be learned about the different ways that people do water business around the world. Just because we do it one way doesn't necessarily mean that's best. I don't suppose I'll be very popular with the Administrator of the EPA if he picks up these comments, but Congress has to step forward and take some responsibility for the way we manage water quality in this country. Whenever we tried in the Council to bring a better planning approach or more flexibility into the water quality area, (Public Law) 92-500 was cited as absolutely legislatively mandating! The poor administrator's hands were tied and he couldn't do anything except implement by '77 and '83.

So, it's not just all one side or the other. But I like this policy, and I'd like to run the President's policy against this, point by point, and I'm going to do it.

Reynolds: Perhaps I'd better preface what I'm going to say with background knowledge. If nobody has realized it, I'm over 60, and I've found out that the older I get, the more I'm apt to defend the status quo. To guard it! With respect to Henry Caulfield's model, under which we'd dismantle the Federal water agencies and let the states do this, I think it's very important that the people of New Mexico realize and recognize that the Bureau of Reclamation, Corps of Engineers,

the SCS, USGS, have all cooperated beautifully with each other, and with the state, and since 1955 we've had roughly one billion dollars worth of projects, either completed or authorized for construction in New Mexico. If that were to be dismantled, we're going to have to reproduce that in each of the western states at least.

Cobb: Now Henry went further. He said re-mantle with new objectives and a new role.

Reynolds: Never mind. If you duplicate that engineering expertise in each state, you're in a lot of trouble. I think it is in the interest of this state, any other western state, or in the national interest, not to dismantle, but to enhance, the activities of those Federal water agencies.

Cobb: I want to come back. Caulfield said, "and reconstitute Federal agencies that could better serve the needs of the states." He would not disagree with your point, and he can defend himself, but I will defend him to the extent that I understand the case. He would not try to create the engineering effort in 50 states, but rather feels that that, because of economy of scale and efficiency, is a very legitimate role that could be reconstituted in a Federal program. I think that what you have said and Henry's proposal differs in the extent to which states impact the decisions on the projects that go into place. Now I think that the Bureau and the Corps, particularly the Corps through its "fishbowl planning," have become much, much more responsive to the views of the states and the locally affected publics, and the alternatives that are developed. But nonetheless, a project must then go through the review process, which involves the Office of the Secretary of the Army, involves the Office of

Management and Budget, (and I was in there for three years, right in the line, I know exactly what we were doing), and to the Congress for final action, and in that process, there are many other decision makers, bringing their views to bear on the exact nature of the project. Maybe those billion dollars worth of projects, maybe they wouldn't have been in the same form if they had been projects that were more appropriate to the objectives of the state viewpoint. I think that's Caulfield's argument. It's the decision making process and the sort of historical role, that the Federal agencies have had. I would say that in California, if I were to go out there, and Ron Robie were in your chair, he would say, "We have got our problems with both the Corps and the Bureau."

Reynolds: But this is important. No Federal agency, at least for the past 25 years, has ever tried to build a project that is not precisely what the state wants. And I can tell you this from the politics of the situation in New Mexico, there is no way that a Federal agency could get a project authorized that the state doesn't want. No Federal agency comes to New Mexico and tries to jam a water project down our throat. No reason why they should try it in California.

Cobb: I've never known of a project that was authorized that the Governor opposed with the exception of one. But I'm talking about the degree of shaping of these projects. It's a matter of degree.

Reynolds: They work with us, day by day, week by week, and shape those projects to precisely what the state wants. This is a primary function of our Interstate Stream Commission, to see that Federal

projects are that way, and we don't have any trouble with it. Sure, we come up with suggestions now and then, they can explain to us why that's wrong and we say, okay, so that's wrong, so let's do it this way. We view the Federal agencies as working for the State of New Mexico, and I think they see it that way, and I think they like it that way. They are just as much our servants and part of our water staff as the people on the state payroll.

Morgan: I know we use them to help us draft legislation, the Brantley Dam was an example, which was Harold's very first bill.

Cobb: How about EPA, how do you get along with the EPA?

Reynolds: Recently, much better.

Cobb: Well as you can see, water policy is very interesting, and people have different perspectives about it. I can appreciate your comments, but I think Henry Caulfield has some wisdom behind his view, too. He represents 35 years of experience, and thinking about it.

Reynolds: And he reserves the right to be wrong, just as I do.

Dunn: I'd like to comment on another area that hasn't been mentioned, and that's the severance taxes on exports, and whether or not any money created from that should be put back into water development or what-have-you. We're doing that somewhat already, for example, the gates on the Ute Dam, the severance tax on Brantley Dam. What front money we've put on that has come from severance taxes. I'd like to point out that this relates very directly to cost sharing, cost sharing with the Federal government. I'd like to use an example. We put on a little tax on the electricity generated in New Mexico, and folks in California and Arizona got rather upset, and some of the Congressmen took it to Congress, and

they've taken it to court, and so far we've won each time it has come along. This same money that is generated from electrical generation, goes back into building roads in the northwest corner of New Mexico, where the coal and the uranium and the gas are, which is national policy.

My point is that we're hampered, and we're going to see more of this, if the state doesn't react quickly, and put a severance tax, or some kind of tax on our natural resources that are exported or used, that go into the national economy. If we don't do something about it we're going to be preempted by the Federal government, and we already are. So we talk about what should cost sharing be, and if we are going to talk about building a water desalinization plant for $10 million, and we have to put up $5 million. I'd like to just point out in the area of natural gas, if the bill passes that is now before Congress that is supposed to be the solution, the great compromise, New Mexico will be prohibited from future taxes on natural gas. If that happens, there goes our wherewithal to put up this cost sharing. There is even the possibility that if they don't get it straightened out, we may lose what we've already put on it, which is absurd. If they've ever had a gun to our head, that's it. At this point, we may lose the severance tax that we put on in 1977. So when we talk about cost sharing, what New Mexico has is clean air and brackish water, and a little oil and gas and uranium, and then they prevent us from using that right there, it's a real problem. Keep this in mind when they talk about cost sharing. They, in effect, take what we have. 90 percent of our natural gas is going out of state or is used as electricity out of state, and we are prohibited from putting

a tax on it to develop the other things that we do not have, so cost sharing is important.

Coats: Thank you, now the last workshop report, Water Rights. There was some concern as to whether there is adequate policing to assure that water users' diversion of their water was left within their individual water rights.

Reynolds: That's difficult. We do find a number of violations. We do something about it. Now, whether we find them all, of course, there's no way for me to be sure. Policing, of course, costs money, in addition to being sort of an unpleasant activity. At this time I think that it is reasonably well balanced. I think that we do catch enough of them to discourage such violations.

Coats: Thank you, Steve, I think that concludes our program this morning, and I'm going to turn it back to Tom Bahr.

Bahr: I think the conference here has been an outstanding success. I hope you share that opinion with me. I heard many candid and courageous comments from the panelists. I heard rational answers to many questions, I learned a lot, and I hope that many of you go back with a few new ideas. I've met many new, fine people that I had not met before; I know for a fact that I am going to see many of you in the very near future. Let me at this time extend my personal thanks to the distinguished panel members, many of you traveled many miles to get here, and I think we all appreciate your insight into some of these important issues. Workshop leaders, you put a lot of work into your workshops in preparation, and it is reflected in what came out of the workshops. To the advisory panel for the conference and my staff, thanks for your help, and to the Cisco Ford Equipment Company, the Romney Equipment Company, and the Tri-State Equipment Company for their help

in sponsoring our gathering last evening. At this time I'd like to declare the 23rd Annual New Mexico Water Conference adjourned, and we'll see you next year.