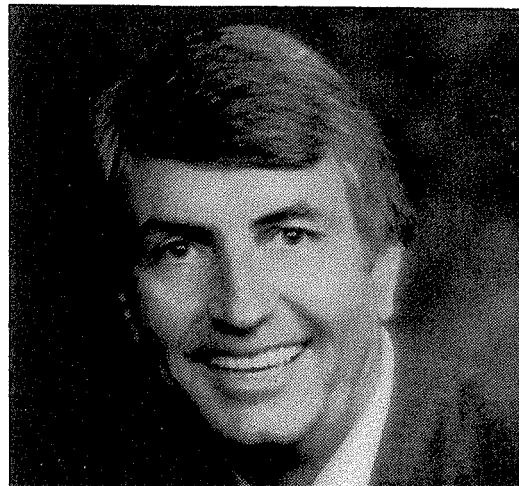


Garrey Carruthers, the 24th governor of New Mexico, and former agricultural economics professor at New Mexico State University, began his political career in 1959 as state president of the Future Farmers of America. In 1974, he became a White House Fellow under President Gerald Ford and he served as Acting Director of the Water Resources Research Institute from 1976-1977. In 1981 Carruthers was appointed assistant secretary of the Interior Department, where he was responsible for the Bureau of Reclamation, the Bureau of Land Management, and the Office of Water Policy. The Interior Department was reorganized in 1983 and Carruthers became assistant secretary for land and minerals management. He resigned at the end of President Reagan's first administration to return to New Mexico.



VIEW FROM THE TOP

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Tom Bahr sent me a letter awhile back asking me to participate in this conference and said he wanted the view from the top. I have not been on top since I had his job as director of the Water Resources Research Institute. Things have gone downhill ever since. However, I will give you my view on what is going on in water resources.

This is the thirty-fourth annual water conference. I can still remember when Dr. Ralph Stucky started these conferences some years ago. It is hard to believe we have gone through thirty-four and still have a lot to talk about in dealing with water resources. It is a pleasure to be back at the Water Resources Research Institute-sponsored conference, the thirty-fourth annual version.

Water has always been a trendy subject in New Mexico. We have been talking about water for thirty-four years, and one would think in thirty-four years, one could solve water problems. My assessment in looking back over the years of water conferences is we have tended to look at water quantity concerns.

We are in this fine river valley where we have just recently had a little contest with the state of Texas. We lost a little lawsuit with an original claim of \$301 billion in alleged damages suffered as a consequence of a dispute over how we measure water. We settled that case very recently for \$14 million. Fourteen million dollars is about right and is the reason the registration fee has gone up for the conference. We just do not have the \$14 million to pay these guys in Texas. You must understand how irritating it is for a New Mexican to agree, and I hope you Texans will forgive me, to pay Texans for water. We do not mind paying occasionally the Coloradans for water because the water does flow from Colorado into New Mexico, but Texas is at the other end.

As we look at the history of water resources in our state, we have fought at various times with Texas, most recently in the Pecos Valley. We have sided with Arizona, California, and Colorado in fighting the Texans. Lawyers have become so extremely wealthy as a result of our many years of litigation in water resources that they have sent their

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grandkids to prestigious, expensive universities on the fees they have raised--prestigious, expensive universities like New Mexico State University, the Harvard of the Southwest.

We have won some of these litigious battles and we have lost some. I would venture to guess that we are going to debate water quantity for a long time in New Mexico. It is not over yet. Contests are underway now in the courts and there will be other contests in the future to determine who really has the right to water resources.

The trend now, as I see it from my position as governor of New Mexico, is that water quality will be the issue of the 1990s. Water quality will be the issue very simply because failure to protect water quality is the same as fighting with Texas over water. Either Texas will fight to take it away from us or we will degrade water such that we will not be able to use it anyway. Therefore, it makes no difference whether we are fighting with Texas or whether we are fighting with ourselves over protecting water resources. We are going to have to protect water quality or we in fact lose water rights in the state of New Mexico. That will be the focus in the 1990s.

Some issues before us today are worthy of media consideration in that they all pretty much deal with water quality and the dangers of degrading water resources. First and foremost, and one that will be on the agenda of the coming legislature, was on the agenda of the last legislature, and may be around for a little while longer, is a little thing called "landfills."

We have discovered landfills to be probably the most topical issue nowadays as we talk about protecting ground-water supplies. Let's look back two years ago. This administration decided to promulgate some rules and regulations dealing with landfills and how landfills ought to be properly operated. I instructed members of the administration, particularly the Environmental Improvement Division, to go forth into the communities and talk about what rules and regulations we need and should have. During the two-year process of developing rules and regulations, it was rather quiet. The minute we promulgated them, I was sued by everybody who was anybody in New Mexico, including some of the mayors here. I see in the audience today two or three of my mayor buddies, my good friends in the mayor business and the county commission business. I did not know I had made so many enemies on such a delightful issue as regulating landfills.

We used to have in excess of 230 or 240 landfills. The mere promulgation of those rules and

regulations led to an immediate reduction to 130 landfills in the state, simply because we had so many landfills out there not being properly run. There was some suspicion on the part of county commissioners and city council people, that if they did not close these improperly run landfills fairly soon--and there was a grace period as I recall - they would have to close them rather quickly or be subject to some cleanup costs and fines for violations. Thus, we ended up with 130 operating landfills in the state of New Mexico. That is the current situation. However, many of those landfills are still very poorly run and endanger ground water in the state of New Mexico. Several are on the Environmental Protection Agency (EPA) Superfund list and you know when you make the ol' EPA Superfund list you have one crummy landfill on your hands.

The cost and problems associated with landfills continue to grow. In 1960, New Mexicans generated 2.65 pounds of garbage per person per day. In 1986, according to the Environmental Improvement Division, New Mexicans generated 3.58 pounds per person per day. We are a disposable society. We used to live without all the disposables we have nowadays. In fact, plastic, the wrapping on everything now, was not used fifteen to twenty years ago. Back then at the meat counter, you received your meat wrapped in a brown paper wrapper. You did not collect all the plastic that is now creating a problem because some of it is not degradable. We are now a disposable society in New Mexico. We have not doubled, but we certainly have increased the amount of garbage we generate today.

The solution as we see it in my administration, is that we are going to have to move to far fewer and much better managed landfills than in the past. We think it is a priority issue for the environment to move to fewer landfills and better managed landfills. The landfill problems in New Mexico led to the promulgation of the rules and regulations now in litigation. I would not suggest to you that we are going to solve that law suit. I think what is probably going to happen is the legislature will give it a run in the coming legislative session and see if we can solve it legislatively. Then perhaps the law suit will be withdrawn.

However, we were correct in developing landfill rules and regulations, even though we just did it this year and it led to litigation and landfill closings. We should have done it many, many years ago. I do not know why we waited so long to acknowledge that landfills are creating problems for ground-water resources, but we did. Let me give you an example. There is a famous landfill in New Mexico called Lea

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Acres Landfill, an infamous landfill would be a better way to put it. If we had originally gone into that site, we believe the site could have been brought into compliance in its early stages for about half-a-million dollars. But because we let it go too long, the cost of investigation alone for that particular landfill was \$1.5 million. We believe now the cleanup of that particular single landfill could cost between \$5 and \$50 million. You can see an economist like Ron Cummings made this estimate. Five to fifty million dollars is quite a range. We will assume that five is the low and maybe a reasonable estimate would be between \$15 and \$20 million. It is difficult to ascertain how much it will cost to clean up a landfill. The troubling thing is we are not quite sure how much damage we have done to the ground-water reserve in that area. That damage cannot be reclaimed in any way. It would take centuries in some cases for that ground water to improve.

The statewide cost of cleaning up landfills the right way is going to be high, but not really too high. We have looked at the costs with the assistance of economists at the University of New Mexico. We looked at our new rules and regulations and what we ought to be doing with landfills in the state. We came up with the following estimates: If in fact, we took the 130 landfills still remaining and brought them all into compliance, it would cost New Mexicans about \$18 million per year. We would need \$18 million more dollars to keep all the landfills right now and bring them into compliance with the new rules and regulations. However, there is a small problem other than the \$18 million dollars. Sixty-four percent of the cost would only take care of 16 percent of the waste. That is, the small communities would pay handsomely for properly managed landfills. Albuquerque, Las Cruces, Roswell and some other cities have sufficient capacity and load and could cover the costs substantially. But if you brought those cities into compliance, 64 percent of the new cost would handle only about 16 percent of the waste.

Because county commissioners have jurisdiction within counties, we wanted to look at a scenario in which we would have thirty-three landfills, one in each county. If done that way, it will cost an additional \$10 million per year across the state, and in this case, 50 percent of the new cost will handle only 12 percent of the waste. Thus, what my task force has decided and what I am going to support, is movement rather quickly into a truly regional landfill proposition where we establish landfills to serve a population between 25,000 and 100,000 people. This would mean only eighteen to twenty landfills in the

state of New Mexico. The beauty of this is that we could reduce the cost substantially to about \$9.4 million. We could reduce the cost to about \$1 more per ton to put garbage in landfills than we are paying today. We are currently paying about \$12 per ton. We believe if we only have eighteen to twenty landfills, we could pay about \$13 per ton. Under the first scenario where we would use the current landfills, in some small communities it would cost \$96 per ton to put garbage in a landfill. If we had a regional landfill system, which would require us to go out and build some new landfills in the appropriate places, we still believe we could do it for \$1 more per ton. That will be the thrust of the legislation you will see in the near future.

The big debate though, quite frankly, is "Who is going to pay for this?" I do not think the cities and my good friends the mayors and the county commissioners in their lawsuit were contending that we should not take care of landfills and the water system. I hope that is not the contention of the lawsuit. They have said, "Governor, you ought to raise taxes to pay for this." The governor said, "No mayor, you ought to raise the taxes and take care of it there." Well, it is an interesting debate, but frankly, New Mexicans are the only ones we can charge for this. Sometime soon we have to decide whether the state government is going to raise the taxes or the local government is going to raise the taxes. The taxes will be exactly the same and the people paying it will be exactly the same.

The other debate, when we get beyond, "Who is going to do this?" concerns the two different ways to proceed. We can use general fund taxes, that is, gross receipts tax and income tax. We can pay for it that way or we can employ a user's fee. The difference of opinion here once again will be between myself and other public policy officials. Frankly, I think whoever creates garbage ought to pay to haul it away to the landfill. There are others who believe it is a general problem and, therefore, we should use general fund money because it is a little less painful when you do not realize the money is going out of the general fund. You have to pay taxes in a lump sum and we benevolent public policy officials, of course with very cost-effective measures, spread those dollars over very exciting programs, which we all support. In my view, however, those who create most of the garbage ought to pay most of the fees. Those who create very little garbage ought to pay lesser fees, and that would be on a user-fee basis. I will tell you, politically I am in the minority. The legislature yesterday authorized use of gross receipts taxes to pay for the new landfill

requirements. Landfills will be a big issue in the coming legislative session. It must be resolved this time, simply because we have endangered the ground-water supply for so many years.

The second thing that comes to mind as we talk about ground water and water quality in particular, are problems down in this country and in the northwest corner of the state having to do with water quality and oil and gas. Oil and gas is a major industry in the state of New Mexico and a major industry down here. About 20,000 jobs in the state of New Mexico are directly associated with oil and gas. That is certainly major. They make \$736 million per year. It is nearly a billion-dollar industry. When the price of gas goes up a little bit, it will be a billion-dollar industry. The industry generates a lot of revenue and a lot of tax revenue in the state.

As a consequence of production and refining, in the past the industry has presented some major problems for water quality. New Mexico was one of the first states to recognize it was up to the oil and gas business to take on the question of what to do with brine. Brine is one of the by-products of oil and gas production. In 1960, New Mexico chose to ban unlined pits for brine. Brine used to be put in unlined pits, and the brine could and would percolate into the ground-water supply. In 1960, our state started requiring reinjection of that brine water. Now, in some areas of the state, brine is used as part of the technology for secondary recovery--to reinject it, create greater pressure in the field, and therefore get more oil from the field. As a consequence of that action in 1960, not only have we forestalled a serious problem with ground-water degradation in our state, but we have developed workable technologies for reinjection.

But now we face other problems, like an oily sludge created in natural gas and oil production. We also have a new problem having to do with residue in tank pits. Closer to home, in terms of the oil and gas industry, not on the production side but on the consumption side, are leaking underground storage tanks.

So these are the concerns we have. What is the state going to do about it? Right now we are in negotiation countrywide, and I share that responsibility with Governor Sinner of North Dakota. We are trying to develop ways of managing these kinds of problems at the state level simply to forestall the EPA taking over this authority. The EPA has indicated that they want to take over this authority, and that is pretty frightening to people in New Mexico because we have always wanted to take care of our own problems. We are independent out here.

We had the vision to do some of these things properly years ago, twenty or thirty years ago. In this particular arena, we would be better off if we had control locally through our Environmental Improvement Division and the Oil Conservation Division than if we turned it over to EPA. The EPA is going to work with us on that basis. Governor Sinner and I have developed a program to accomplish this. We prefer a state approach. No one prefers the federal approach unless we, in the state, fail to assume our responsibility. We should know more about this in the next year or two.

Lastly, as we look at water quality, there is a new enthusiasm, a new excitement in this state for education regarding a host of areas that impact on water quality. We are looking for alternatives while we educate for the acceptance of those alternatives. Of course, the most famous project we have in New Mexico dealing with potential impacts on water quality is the Waste Isolation Pilot Project (WIPP), which merely by my mentioning it, will get me on the front page of any newspaper in New Mexico. The mere mention of the Waste Isolation Pilot Project suggests a host of things from transportation issues to whether Carlsbad is an appropriate site. But in all of our deliberations over the Waste Isolation Pilot Project, there has been an overriding concern with its impact on water resources. I would suggest to you, perhaps in part because of something I once said, and Mayor Forrest will attest to this, when I testified down at the Waste Isolation Pilot Project early in my administration: I said, "What I think we have here is an experimental program and instead of calling it the Waste Isolation Pilot Project, I recommend to those assembled that it be renamed the Delaware Basin National Laboratory." You have to understand the project is in the Delaware Basin but it sounds like it is on the east coast when you mention Delaware National Laboratory. I thought it might deflect a little heat. What you learn about the Waste Isolation Pilot Project, better named the Delaware Basin National Laboratory, is that, in fact, it is still an experimental project. It is the first experimental project of its kind in the deposition of low-level transuranic wastes in a domain with which we have not experimented in the past. We have discovered that not only in this country, but around the world, people are interested in our efforts to find out scientifically how it is going to work. A blue ribbon panel, of which Tom Bahr is a member, is working with Secretary of Energy Watkins. Secretary Watkins is now moving toward, as a result of what is going on in the evaluation of the WIPP site,

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the concept of a Delaware Basin National Laboratory.

Some exciting things are happening in the state right now you should know about. One is the proposed new waste management consortium, of which the Department of Energy is supportive. It is called the Waste Education and Research Consortium. It will have three major components. There will be a training and undergraduate education program including a new degree, an associate of science of hazardous waste management, offered at the Carlsbad branch of New Mexico State University. A new certificate will also accompany a bachelor of science degree acknowledging hazardous waste management expertise. I think this is going to be one of the really hot academic programs in New Mexico. If you think about what we face in this country, hazardous waste management is going to be a fine career for those who are properly trained.

The second component will be research and graduate education. About \$1.5 million will be available in grants for researchers at three universities. Proposals will be solicited for that funding. There will be some ancillary facilities developed for this waste education research consortium. Laboratories will be located in Carlsbad, Las Cruces, and Hobbs. Carlsbad's facility will deal naturally with nuclear waste and may be located at the Waste Isolation Pilot Project. It is anticipated that Hobbs' facility will focus on oil and gas and the problems associated with the disposition of wastes from oil and gas. New Mexico State University's laboratory will operate an air, water, and soil facility, enhancing the capabilities they already have in those areas.

It seems to me we are moving in the right direction. The courses associated with the so-called Waste Education Research Consortium will be carried on our Technet system. Technet is the new fiber optic system connecting all our laboratories, universities, and some of our businesses. We currently have a civil engineering course in hazardous waste management with an average enrollment of about twenty students each semester. This year, just to show you the interest in the subject, 107 students have signed up for the course.

Also, I think there is something that has been needed in our state for a long period of time, a new University of New Mexico master's degree in water resources administration. I understand the Commission on Higher Education has approved the degree program. The program will focus on something I think needs to be focused on and that is administration instead of technical aspects of water resources management. As we deal with hazardous wastes,

landfills, and everything else, the administrative aspect is going to be just as important as the technical aspect. The new master's program anticipates a Spring 1990 start if all goes well. Already twenty students have signed up and forty-five more have asked for information. It is an unusual degree and we think it will be an exciting degree. Twenty-five faculty members are involved. It consists of a consortium of three universities with the lead people from the University of New Mexico.

In terms of the environment, a new movement is underway. We have already taken action at the state level by my appointment of a task force on recycling. We have set up the task force to do two things: to encourage recycling in the state of New Mexico and to begin the necessary educational process of recycling. With recycling, you can retain your resource. We have been recycling many commodities in this country for a long time. However, due to high recycling costs in some cases, we have not always encouraged recycling strongly.

How many of you have ever used reclaimed motor oil in your car? Back when I was a kid, that was all I could afford. We have a lot of products that can be recycled but in our state for some reason, I think in part because we do not have the demand structure here, we do not have enough recycling to create a new industry. We found that in ten agencies of your state government--it is a little embarrassing to admit this - we throw away 730 tons of paper a year. The Santa Fe landfill gets most of this stuff. On a daily basis, we probably send to the Santa Fe landfill one-fourth of this room's capacity in paper alone. Paper is one commodity that can be recycled. A five-ton purchase of recycled paper, paper that is 100 percent recycled, can save enough energy to heat a home for three years. We need to encourage that kind of recycling and the task force I set up should do that.

New programs will be developed in landfills and wastes. New Mexico has made good progress toward dealing with the many challenges of safe and effective waste disposal, but there is still much to be done. It will require the commitment of everyone in this state, including government, private industry, and individual citizens to achieve our long-term environmental goals. The work of this conference has been and will continue to be a key part of meeting that challenge. Thank you.