CONFERENCE WELCOME

Dr. Gerald W. Thomas
President, New Mexico State University

Thank you very much, Tom. It's a special privilege for me to welcome this group to the 27th Annual Water Conference sponsored by our Water Resources Research Institute. I'm glad to see so many people out. This is a good crowd, but it's still not big enough because the topic is of utmost importance to every individual in New Mexico and particularly in the High Plains of New Mexico and Texas. I knew the room wouldn't hold them, but I had hoped we would have 500 or 1,000 or even 10,000 people here because we've put together a fantastic program on a topic of vital interest to everyone in this area of the United States.

I'm glad to be here myself because, as Tom mentioned, I started the year in the People's Republic of China with a team from Texas Tech, New Mexico State, and Colorado State. Dr. Merle Niehaus, head of our agronomy department, was also part of that team. As we looked at agriculture in China, we looked also at their water resources and the interaction between water, energy and land. All three resources are of vital concern to the people in that part of the world.

We particularly looked at irrigated agriculture because much of the hope for feeding the billion people in China rests on irrigated agriculture. We looked at one installation for irrigation that was constructed 2,400 years ago -- 2,400 years ago -- and is still in operation in China. If you think our challenges are great in this country, imagine the challenges in China as they try to feed a billion people on a total land area only slightly larger than that of the United States. Actually, the cultivated land area in China is considerably less than that of the United States.

Their dependence on irrigated agriculture and new technology is awesome. Awesome, to say the least. We learned that China had 17.5 million biodigesters, more than any other country in the world. Their technology in the utilization of wastes is far superior to our own. We have commercial alcohol plants and some experimental units utilizing

grain as the major fuel source in the United States. But in China, biodigesters run primarily on pig manure since they produce more swine than any other country in the world. China cannot afford to use any food resources for the direct conversion to fuel. They must depend on waste. We could learn much from them, and I think we'll learn a lot more from them as time goes on. China, after all, has a per capita income of only about $300 per year and they are heavily dependent on the water base, the land base, and energy which comes primarily from the process of photosynthesis. They don't depend so much on depletable resources, although coal is heavily used in China. So, again we see the interrelationships between energy, land and water.

From China I returned to face the New Mexico legislature with a different kind of a challenge as we tried to defend our budget. We tried again to get more support for water resources research in the state of New Mexico. We were not successful. NMSU received a maintenance budget for our Water Resources Research Institute even though we know the federal government is withdrawing federal support for institutes in the various states.

After the legislative session, I went to Egypt where I spent a week reviewing our $47 million project. The goal for that project is to increase cereal grain production by 25 percent in a four-year period. That is a major challenge -- also related to land, water and energy. I met with the Minister of Agriculture for Egypt, and also the head of the National Academy of Sciences in Egypt. We talked about the agricultural program which is funded through USAID with matching monies from the country of Egypt. We also talked about a joint effort among New Mexico State University, Israel and Egypt on a water project to conserve the fresh water resource by diluting the fresh water with saline water. The people in Egypt also recognize the importance of water. The same kind of project we were unable to get funded in New Mexico, we may be able to support in Egypt through economic assistance that's directed toward trying to stabilize the political situation between Egypt and Israel. This research would help create a better and more stable economic situation in the Middle East. Research directed toward economic

development and better utilization of the fresh water resource may have both direct and indirect benefits to this part of the nation as well.

And finally this week I was privileged to join Sen. Harrison Schmitt, Gov. King, and many others to observe the landing of the Space Shuttle at White Sands. The next morning I interacted with Gen. Nord as we outlined the many activities in which NMSU supports the space effort at White Sands -- working with NASA, the Army, the Air Force, and the Navy. Our university is tenth in the nation in national defense contracts. Just a couple weeks ago we delivered to White Sands a package called "HELDAPS," which is High Energy Laser Data Acquisition System. It is the most sophisticated computer program in the world for looking at the potential use for lasers.

So, it was an exciting week. Yesterday afternoon I flew to Artesia to review our agricultural research and meet with some people to talk about the challenging problems we're facing on the High Plains of New Mexico.

I welcome you here today because I think it's important that you look to the future with hope -- "Hope for the High Plains" -- as was so well brought out in the invocation this morning. The positive approach is the approach that we must take.

We are facing some real challenges in water research. We see the loss of federal funding. We see more dependence upon the state to pick up a bigger share of the responsibility for their own problems and to look at their own opportunities for the future. And, we see more dependence upon private industry. I think it is important that private industry now move in and accept a greater share of the research and development activities that traditionally have been covered by state and federal agencies.

We especially think this conference will be of significant benefit to the people in this region. When you look at the statistics on the New Mexico High Plains, the profile that's in your program, it reflects a situation worldwide. You'll find statements made such as this: "In the last decade, roughly 40 percent of all increases in food production worldwide has come from expanding irrigation and more effective use of

water as a supplement to sporadic rainfall." The statistics are there. The handwriting is on the wall. The challenge has never been greater. It would be a grave mistake to ignore the statistics. But, it also would be a grave mistake to look at these data and not look to the opportunities and build on that base through the focus on "hope for the future." You and I will hear of our options in the next two days as we concentrate on the High Plains Study.

I have a proclamation from Gov. King I would like to read to this group. Gov. King, as you know, served as the chairman of the High Plains Governors' Committee last year for the six states in the High Plains Study. We're hoping we can keep that core of states together even though the funding for the High Plains Study is coming to an end. Harvey Banks will talk to you about that later. So I'll read this proclamation:

> WHEREAS, water is vital to all things living; and
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> WHEREAS, as a continued source of good quality water is crucial to the citizens of the state of New Mexico; and
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> WHEREAS, the state's High Plains is a valuable contributor to the well being of New Mexico; and
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> WHEREAS, the 1982 New Mexico Water Conference focuses on water resources problems in the High Plains and seeks innovative ways to solve these problems;
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> NOW, THEREFORE, I, BRUCE KING, Governor of the State of New Mexico, hereby proclaim the week of March 28 - April 2 as:
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> "WATER FOR THE HIGH PLAINS WEEK"
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> and urge all citizens to pay special recognition to this week and the significance of water to the State of New Mexico.

It's signed by Gov. Bruce King, and I would like for Ralph Finkner, who heads our local agricultural research center here to accept this on behalf of Gov. King. Thank you all for coming to this annual water conference.