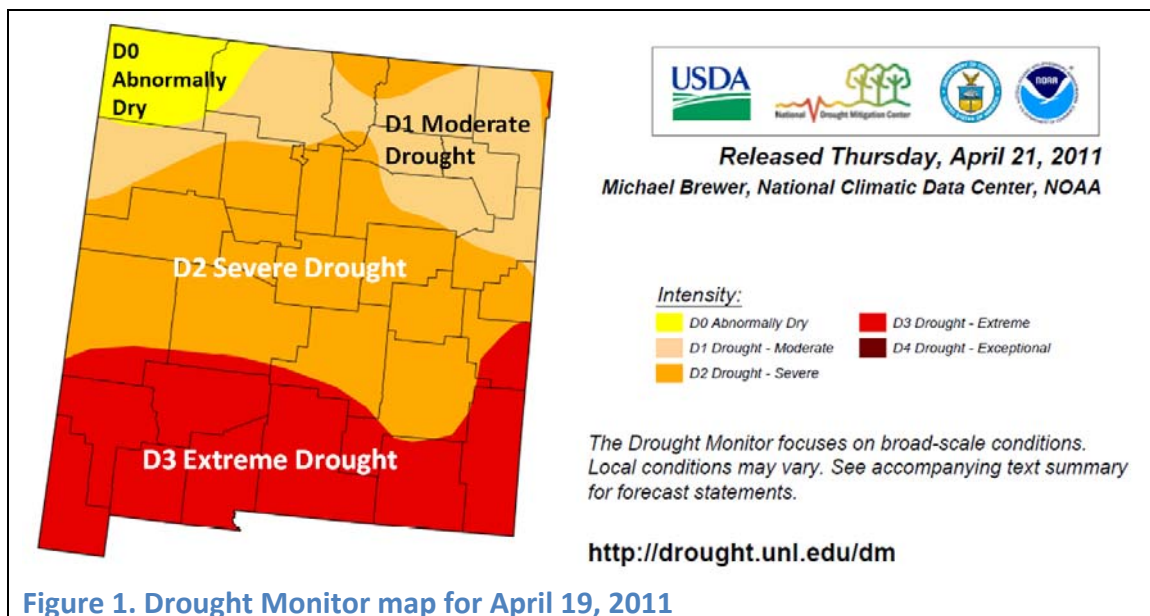


STATEMENT OF DAVID DUBOIS, NEW MEXICO STATE CLIMATOLOGIST
NEW MEXICO STATE UNIVERSITY
BEFORE THE COMMITTEE ON ENERGY AND NATURAL RESOURCES
APRIL 27, 2011

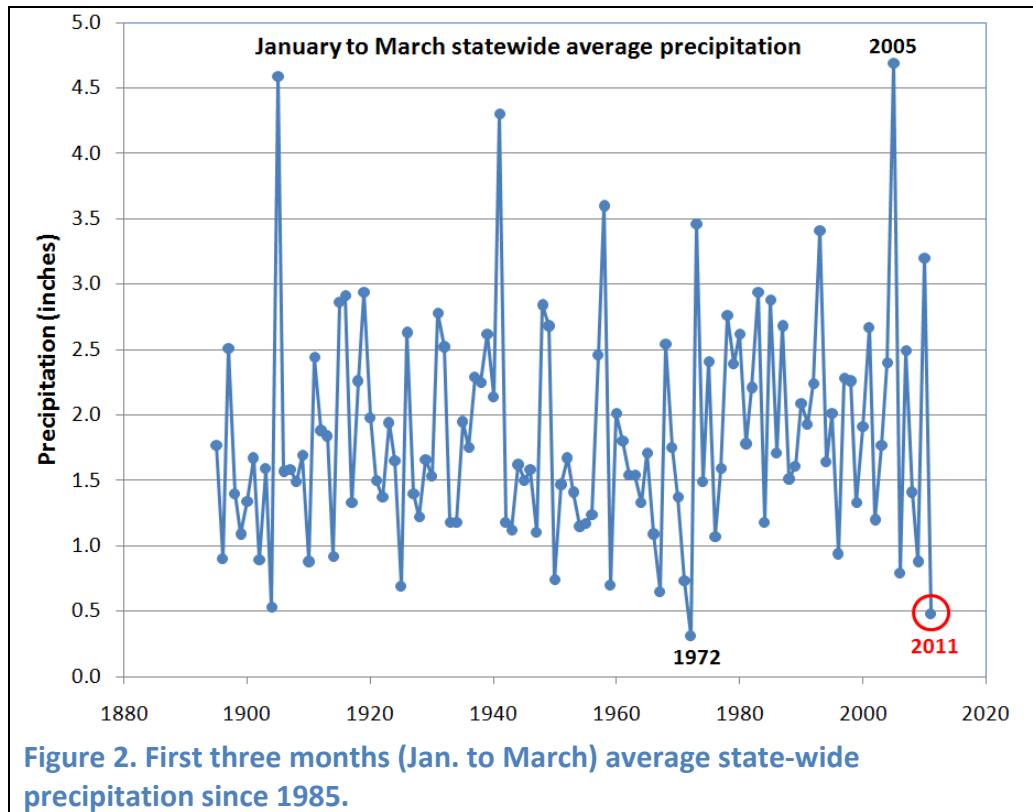
Mr. Chairman and Members of the Committee:

Thank you for the opportunity to testify today regarding the status of the drought in New Mexico. As the State Climatologist I direct the New Mexico Climate Center based out of the Plant and Environmental Sciences Department at New Mexico State University. I have been in this position for just over a year coming from the state of Nevada. Under my direction the Center maintains an archive of climate data collected throughout the state of New Mexico from many public and private networks. As the State Climatologist I meet monthly with the National Weather Service, Office of the State Engineer, NM Dept of Agriculture, NRCS, Bureau of Reclamation, and the Farm Services Agency to track the status of drought in the state.

In this briefing I will report on the precipitation and drought indicators that have been tracked over the past year. The US Drought Monitor assesses drought conditions throughout the US incorporating state and local data on a weekly basis. According to the latest drought monitor map on April 19, 33 percent of the state of New Mexico is in “extreme” drought, 42 percent is in “severe” drought, 20 percent in “moderate” drought and 6 percent abnormally dry. Figure 1 shows a map where these designations appear across New Mexico. Southern New Mexico is seeing the brunt of the drought as the map shows.



There are many locations, particularly in southern NM, that have not seen precipitation for more than three months. Over the past three months state-wide precipitation has been the second lowest since records have been taken. As the chart below shows the start of 2011 is only second to a dry period back in 1972.



Looking at just March 2011 state-wide precipitation is the 3rd driest on record. The hardest hit locations in the state are in the southern deserts and central valleys. In the southern desert region, over the past three months, precipitation is about 7 percent of the long term normal. Not much better, the central valley region is at 15 percent of normal. In Las Cruces we have not seen precipitation for more than 80 days.

Over the past 12 months we have been on a roller coaster ride in precipitation. In the winter of 2009 to 2010 we were under the control of a strong El Niño pattern and during the fall of 2010 a strong La Niña developed. The 2010 El Niño was the strongest episode since the one during 1997-1998. Below is a chart that shows the occurrences of El Niños and La Niñas over the past 61 years. The numbers are a measure of the strength of the El Niño/La Niña signal. Our current status in the La Niña is shown on the right hand side of the chart as the blue shaded area.

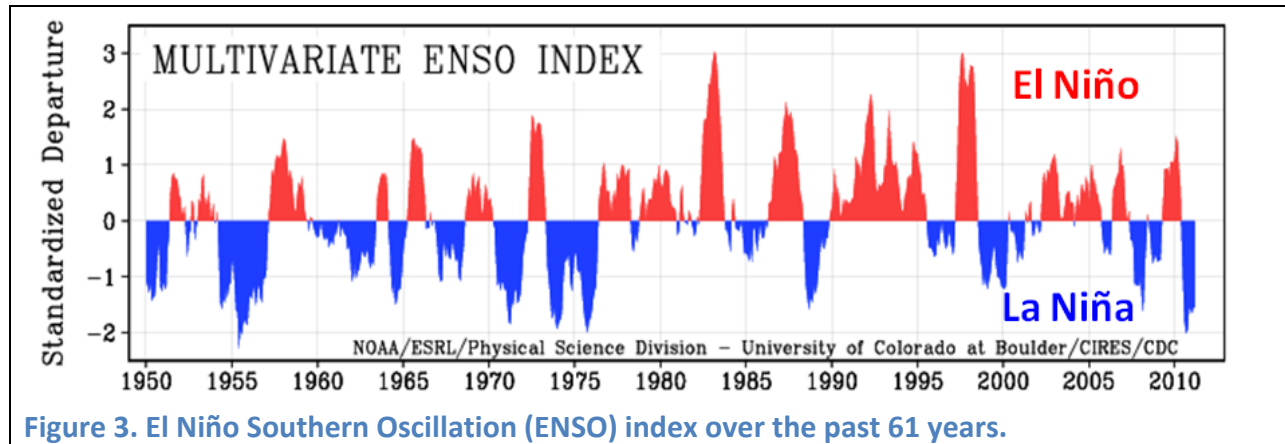


Figure 3. El Niño Southern Oscillation (ENSO) index over the past 61 years.

Our understanding of the effects of La Niña in New Mexico based on past events showed us that we would expect below normal winter and spring precipitation throughout the state and especially south of interstate 40. This is basically what we observed. While it's not guaranteed that a La Niña will bring drought it tells us that it's more likely.

The current observations are indicating a weakening La Niña and the predictions are trending toward neutral ENSO by the start of the summer. It is difficult to give a prediction of the monsoon at this point in time. Based on the past we do know that La Niña's influence on summer precipitation has not been as negative compared to winter and spring. Summer precipitation in NM during all La Niñas has averaged 96 percent of normal.

Thank you for the opportunity to report on this very important topic. I would be glad to answer any questions that you may have.