

# Commentary: Surviving a drought

## State residents need to think of ways to conserve our water supply

Bob Wessely  
Tuesday, May 29, 2007

### Water watch

This article is one in an occasional series Insight and Opinion is running on water issues affecting New Mexico. The articles are being written by members of the Middle Rio Grande Water Assembly ([waterassembly.org](http://waterassembly.org)). Each article represents the opinion of the author. Other articles in the series are available on The Tribune's Web site at [ABQTrib.com](http://ABQTrib.com).

### Today's byline

Wessely is a systems engineering management consultant who played a major role in coordinating and developing the Middle Rio Grande Regional Water Plan for Sandoval, Bernalillo and Valencia Counties.

Drought - nature's reminder that water does not grow on trees.

Drought is the time when some form of government advice or regulation prescribes that we collectively choose to reduce our uses of water, usually because of some form of government advice or regulation. It is the time when we receive less rainfall than we would like to have. In New Mexico, we get such a reminder from nature virtually every year.

As a result, we are setting ourselves up for a day of water reckoning.

In Sandoval, Bernalillo and Valencia Counties, we have been using over 20 percent more water than we receive overall, deficit-spending our resource, resulting in the gradual draining of our aquifers. We must stop burying our collective heads in the sand, or all we will have left is sand.

Consider: 23, 28, 35, 39, 47, 34, 29. A familiar series of numbers? Probably not. These are the annual inches of precipitation during droughts in Chicago, Cincinnati, Memphis, Miami, New Orleans, New York and Portland. The averages are substantially higher.

These cities are some of the places from which three quarters of New Mexico's new residents move. The other quarter of the newcomers is born here. It takes some effort to

recognize the implications of Albuquerque's precipitation levels - which average just over 8 inches and peak around 12 inches.

The folks who grow up here usually recognize that we are in a perpetual drought. Generally, that knowledge is reflected in their concern for water and their resultant behaviors for using water. The only question is whether this year's drought-descriptor should be noticeable (above average rain) or serious (near average rain) or desperate (below average rain).

To set a reference, look at precipitation averages from tree ring studies over the last 2,200 years. It is interesting to note Chaco Canyon was abandoned during below-average rainfall, and the middle Rio Grande region's 20 percent water-consumption deficit was during the wettest quarter-century in those two millennia.

Because we are not elected officials in Washington, D.C., deficit spending cannot go on forever. We have limited ability to increase our water income at a finite dollar price, which suggests we need to terminate a sizable chunk of our total uses. That's a tough order.

When we think about it carefully, it's even tougher than it first looks. We have to realize over a third of our total water goes to natural, open-water evaporation and riparian plant life within the three-county region. We have minimal ability to reduce these natural uses. The only credible reduction targets are agricultural, domestic and industrial uses. To meet the goal, those target uses would have drop from 195,000 to 140,000 acre feet per year - with everyone using 30 percent less.

And the toughness of our water-budget balancing order doesn't stop there. The region's population is growing by 1 percent to 2 percent each year - more people wanting more water. Our behaviors, deeper pumping and releasing of effluents are degrading the quality of some of our water sources. The global-warming scientists tell us to anticipate even less rainfall this century than the average over the past 2,000 years.

The techies at the Drought Mitigation Center at the University of Nebraska-Lincoln define four kinds of droughts: meteorological (rainfall shortage); hydrological (water supply shortage); agricultural (soil-moisture shortage); and socioeconomic (resultant goods or services shortage). Their beginnings tend to follow one another and occur in cycles.

Usually it is local governments that declare what actions we are politically willing to take in response to a drought - sometimes depending on the drought's intensity or duration. While our political will has increased somewhat over the last few years of meteorological drought and improved scientific information, it has a long way to go.

While we have increased the price of water delivery a little, there is still a negligible charge for the water itself. When we perceive meteorological drought, we sometimes limit car washing for a few weeks or so or limit lawn sprinkling to selected days. We

even replace a few percent of our toilets with low-flow devices. And we sometimes shorten the irrigation season by a few weeks.

For your homework, please do a little arithmetic, and see how far you think those use-reductions will go toward mitigating our 30 percent annual shortfall.

Drought: It's nature's reminder that water does not grow on trees. Ask your elected officials what they are doing, each and every day, to help us all work together and survive our perpetual state of drought.