

City offers workshop on climate change

The City of Santa Fe and Santa Fe County, in conjunction with the Bureau of Reclamation, are holding an interactive workshop on Dec. 14 to discuss the future of the watershed, the water supply, and the potential impact of climate change. Attendance is limited and registration is required. Local environmental and climate experts will give keynote presentations and a facilitator will guide discussions and help process input from participants on which impacts of climate change are most problematic, what the potential solutions are, and how local governments can work toward sustainability.

One of the most immediate problems facing us locally is the likelihood of another La Niña winter. What is this phenomenon? The definitions of El Niño and La Niña are based on an index of water-temperature extremes for the El Niño/Southern Oscillation (ENSO) cycle. Under La Niña conditions, a band of relatively cooler water extends along the equator from the coast of South America to the central Pacific Ocean. Cold equatorial Pacific temperatures cause major shifts in the patterns of tropical rainfall, which in turn influence the jet streams and patterns of temperature and precipitation around the world.

During La Niña winters, the jet streams typically take a more serpentine path and enter North America through the northwestern U.S., bringing wetter-than-average conditions to that region and diverting storms away from the Southwest, heightening drought conditions here.

To differentiate El Niño and La Niña, the National Oceanographic and Atmospheric Agency (NOAA) began using its index formulae in 2003; but it has been tracking the phenomenon since the early 1950s. These sibling events can bring copious amounts of rain and snow, or accentuate drought, in affected areas. La Niña winters typically bring dry conditions to Arizona and New Mexico. NOAA does not state that there is a direct link to global warming but rather notes that it is difficult to sort out the exact role of global warming without



STEPHEN WIMAN

knowing the natural variability of climate change.

Maybe just looking around at what man is doing provides the best clues! Climate changes have occurred through geologic time, are preserved in rock and ice records, have affected evolutionary successions and have (relatively recently) dramatically changed the habitability of some areas. But what about the increasing future effects of human activities?

One might have expected a slowing of greenhouse gas emissions due to the recent global recession. This did in fact happen in 2009, when total emissions in most countries (including the U.S.) dropped. But global emissions rebounded in 2010. The increase of carbon dioxide in the atmosphere attributable to the burning of fossil fuels actually increased by 6 percent between 2009 and 2010. This is the biggest increase in the 25 years that such measurements have been kept and the rate of increase is greater than the worst-case scenario predicted by UN climate scientists. Half that increase is attributable to China and India, which came in first and second, respectively, through burning coal to meet the energy demands of their growing economies. Could Santa Fe's watershed ultimately be affected by global climate change? Absolutely!

Stephen Wiman has a background in earth science (Ph.D. in geology) and is the owner of Good Water Company and a member of the Santa Fe Water Conservation Committee. He may be reached at 505-471-9036 and skwiman@goodwatercompany.com.