

River streamflow reconstructed to 1490

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A tree-ring-based study of 508 years of the U.S. Colorado River streamflow confirms droughts have occurred that were more severe than those of 2000-04.

The University of Arizona research also confirms that using stream gage records alone may overestimate the average amount of water in the river because the last 100-year period was wetter than the average for the last five centuries.

"This work updates the original landmark Colorado River reconstruction that was done at The University of Arizona's Laboratory of Tree-Ring Research," said David Meko, an associate research professor of dendrochronology, the science of tree-ring dating.

"The main points of the 1976 research hold up," said Meko. "Droughts more severe and intense than we've seen in the gaged record occurred in the past, and the long-term mean flow is lower than the gaged mean flow."

National Oceanic and Atmospheric Administration scientist Connie Woodhouse, who led the research team, said, "The long-term perspective provided by tree-ring reconstructions points to a looming conflict between water demand and supply in the upper Colorado River basin."

The report appears in the May issue of the journal *Water Resources Research*.

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