

In virtual mega-drought, Calif. avoids defeat

By Bettina Boxall, Los Angeles Times

A few years ago a group of researchers used computer modeling to put California through a nightmare scenario: Seven decades of unrelenting mega-drought similar to those that dried out the state in past millennia.

“The results were surprising,” said Jay Lund, one of the academics who conducted the study.

The California economy would not collapse. The state would not shrivel into a giant, abandoned dust bowl. Agriculture would shrink but by no means disappear.

Traumatic changes would occur as developed parts of the state shed an unsustainable gloss of green and dropped what many experts consider the profligate water ways of the 20th century. But overall, “California has a remarkable ability to weather extreme and prolonged droughts from an economic perspective,” said Lund, director of the UC Davis Center for Watershed Sciences.

The state’s system of capturing and moving water around is one of the most expansive and sophisticated in the world. But it is based on a falsehood.

“We built it on the assumption that the last 150 years is normal. Ha! Not normal at all,” cautioned paleoclimate expert Scott Stine, a professor emeritus of geography and environmental science at Cal State East Bay.

“The weather record that we tend to depend on in California for allocating water ... is based on about 150 years of really quite wet conditions when you look back at, say, the last

8,000 years or so," Stine said.

He found evidence of two extreme droughts in ancient tree stumps rooted in the state's modern lake beds. The trees could have grown only when shorelines beat a long retreat during medieval mega-droughts lasting a century or more.

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