Scientists gain understanding of untapped reservoirs

By Amy Miller, KTVU-TV

According to a widely held belief, you can't squeeze water from a rock. But researchers from UC Berkeley who are trying to better understand where water is stored in nature are challenging that old adage.

After nearly 10 years of studying a steep, 20-square-mile area near the South Fork Eel River in coastal Mendocino County, the scientists have shown that for trees and other plants, deep and highly fractured rock formations beneath the Earth's surface are a much larger water reservoir than was previously known.

The work to understand the role that "rock water" plays in the hydrologic cycle began in 2006 when researchers from UC Berkeley embarked on a multi-year study sponsored by the Keck Foundation called the Hydrowatch project. It was designed to precisely monitor and measure the pathways of water in Mendocino County's Angelo Coast Range Reserve as it cycles from the groundwater table to the tops of trees and into the atmosphere.

"We were really interested in learning the fate of precipitation in the land surface," explains Todd Dawson, professor of Integrative Biology at UC Berkeley. "So really trying to figure out when precipitation arrives at the site, where does it get into the rock, where does it get into the stream, how does is recharge the ground water, how much of it is used by the vegetation, and ultimately, how much of it ends up in the streams and going back out to the Pacific Ocean."

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