



**Geology & Environmental Science
University of Pittsburgh**

Spring 2024 Colloquium Series

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University of Pittsburgh

Moisture Source Change of the Last 60ka at Fish Lake, Utah

There is a compelling need for a precise understanding of precipitation response to rising temperatures in regions sensitive to loss of critical water resources. The southwestern United States (the Southwest) is projected to dry over the next century in response to global warming. In particular, the risk of megadroughts, extended periods of severe aridity, is rising at an alarming rate. Insight on the dominant moisture sources for the Southwest (i.e., the North American Monsoon, westerly-derived winter snowpack) during temperature extremes may provide context for future water budgets; however, data clarifying precipitation regimes are lacking.

Here, I present the first $\delta^2\text{H}$ C_{29} n -alkane leaf wax record from Fish Lake, south-central Utah, for the last 60 ka. Fish Lake is positioned at the northern boundary of the modern North American Monsoon region and within the average bounds of the winter westerly jet position, likely recording shifts in relative hydroclimate proportions between both moisture sources. This new record of paleoenvironmental change will aid our ability to predict future environmental responses to changing climate and allow for more effective adaption and mitigation strategies that protect and preserve natural resources.

Bagels, donuts, and coffee
available in **SRCC 219**
before the talk!

January 18, 2024
Thaw 104 @ 4:00PM