

Advancing the Adoption of Earth Imaging for Groundwater Management in California

Dr. Rosemary Knight

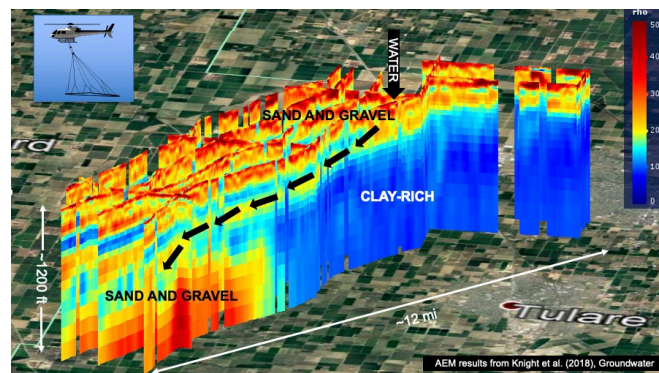
Professor of Geophysics and Senior Fellow Woods Institute for the Environment, Stanford University

November 21st, 2024, 5:00 PM PST
Stanford campus, Mitchell Bldg, Room 350
and [Zoom](#)

Abstract:

Earth imaging data – acquired using satellite, airborne, and ground-based geophysical methods – can be used to provide the information about groundwater systems that is an essential starting point for groundwater management. Over

the past ten years in California, the combination of extensive periods of drought and the introduction of groundwater legislation has raised the awareness of 1) how little we know about the functioning of groundwater systems and 2) how difficult it is to get the data we need to sustainably manage these systems. We are now using data from satellites (primarily InSAR) and from airborne and ground-based electromagnetic systems to characterize the large-scale architecture and connectivity of groundwater systems; and to search for sites of natural recharge and for managed recharge. With the recent acquisition by the state of 25,000 kilometers of geophysical



data, Earth imaging technologies are playing a critical role in supporting the sustainable management of California's freshwater resources.

Author:

Rosemary Knight is the George L. Harrington Professor of Earth Sciences in the Geophysics Department at Stanford University, and Senior Fellow in the Woods Institute. Rosemary received her Ph.D. in Geophysics from Stanford, was on the faculty at the University of British Columbia for 13 years, returning to Stanford in 2000. Rosemary has worked for more than 30 years on the challenge of using geophysical methods for groundwater science and management. Collaboration with local and state



agencies and with nonprofit organizations to move “knowledge into action” has been, and remains, central to the work done by Rosemary with her research group.

Zoom meeting information:

Zoom ID: 813 9433 4930

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