Understanding Ecohydrologic Processes of Agricultural Ecosystems from Headwaters to Groundwater During Droughts

By: Dr. Hoori Ajami, Assistant Professor of Groundwater Hydrology

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Day/Time: Friday 6/18, 3 - 4 PM

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Speaker Bio: Dr. Hoori Ajami is an Assistant Professor of Groundwater Hydrology in the Department of Environmental Sciences at University of California Riverside. Dr. Ajami’s expertise is in surface water-groundwater interactions, climate change impact assessment, integrated hydrologic modeling, spatial analysis, and remote sensing. Her research focuses on characterizing surface water-groundwater-atmospheric interactions in the mountain-valley aquifer systems, developing computationally efficient hydrologic models, and application of remote sensing and isotopic data in characterizing hydrologic cycle. She received her PhD in Hydrology from University of Arizona. Prior to joining UC Riverside, she was a postdoctoral fellow with the National Centre for Groundwater Research and Training in Australia and a Senior Research Associate at University of New South Wales Australia.

Abstract: Understanding ecohydrologic processes of irrigated agriculture, the world’s largest consumer of freshwater, is important as droughts continue to affect water availability. In mountain-valley aquifer systems, mountains act as water towers and supply water to more than 16% of the global population. However, groundwater recharge processes and subsurface storage depletion and recovery in response to droughts are not well understood in these systems. In this talk, I will provide an overview of groundwater lag time and recovery to droughts across the Continental US using groundwater level observations. Next, I will focus on two agricultural watersheds in California, Salton Sea watershed in Southern California and Kaweah River Watershed in the southern Sierra Nevada, and highlight challenges in understanding the complex role of droughts and agricultural water management on understanding ecohydrologic processes and water supply forecasting.

Hosts: Safeeq Khan & Ellen Bruno, CE Specialists UC ANR