We are inviting applications for a postdoctoral scholar with expertise in water governance, water policy, hydro-economic modeling or integrated water resources management to develop recommendations for integrated land, surface and groundwater management strategies to balance conflicting objectives and alternative water management portfolios for the southern Central Valley in California. The position is funded by an NSF Coupled Natural and Human Systems grant (#1716130). The goal of the project is to contribute strategies and model-based decision support that improve the resilience and adaptive capacity of rural disadvantaged communities (DACs) in California’s southern Central Valley to environmental and socio-economic change. Specifically, we like to explore socio-economic-environmental tradeoffs among water resources, land use, economy, governance structures, and regulatory scenarios to understand changes needed to achieve water security for DACs, agriculture and the environment within the region. Biophysical models on surface water availability, groundwater, and land use change have already been developed and interviews conducted to understand stakeholder preferences with respect to changes in climate, land use or water supply. Building on the existing data we envision the postdoc:

1. Analyze stakeholder preference and evaluation research data to gain understanding of how persistent change in water supply and land use in the region has impacted structures of socioeconomic opportunity as well as the socioeconomic values of and perceived trade-offs available to stakeholders in the region.
2. Evaluate several adaptive management strategies (e.g. groundwater recharge, conjunctive use, drought management) and to examine stakeholder willingness to accept tradeoffs and policy to optimize water supply portfolios.
3. Develop recommendations for integrated land, surface and groundwater management strategies to balance conflicting objectives such as alternative water management portfolios that improve water security and resilience of DACs while meeting agricultural water demand to the extent possible.

The successful candidate will work with an interdisciplinary team of researchers including Dr. Helen Dahlke, Dr. Anne Visser and Dr. Jon Herman at the University of California, Davis, Dr. Rebecca Teasley at the University of Minnesota, Duluth and local partners (SelfHelp Enterprises) within the region. There will be opportunities to pursue independent lines of inquiry related to the research, and to co-author publications led by other team members. There will also be opportunities to interact with other UC Davis hydrology, climate science and social science partners.

**BASIC QUALIFICATIONS**
PhD degree or enrolled in advanced degree program in water resources management, civil engineering, natural or agricultural resources economics, hydrology or environmental science at the time of application.
PREFERRED QUALIFICATIONS (by start date)
Strong quantitative data analysis, writing and/or modeling skills and experience with cooperative game theory, agent-based modeling, hydro-economic modeling and/or social sciences. The candidate should have experience with analyzing and combining diverse datasets (e.g. model outputs, focus group interview or survey data), running or interpreting numerical models, data synthesis, and visualization of different datasets using known tools (e.g., R, Python). Demonstrated written and verbal communication skills, ability to think critically and innovatively, and experience leading scientific publications.

APPOINTMENT
The targeted start date for this position is June 1, 2022. The initial appointment is for one year. This is a full-time appointment and the postdoc will be supervised by Drs. Helen Dahlke and Anne Visser.

SALARY AND BENEFITS
Salary will be commensurate with qualifications and experience level and based on UC Davis salary scales: https://www.ucop.edu/academic-personnel-programs/_files/2021/2021-postdoc-salary-scales/t23.pdf. Generous benefits are included: https://grad.ucdavis.edu/postdoctoral-scholar-benefits.

TO APPLY
Interested individuals should include a 1-2 page cover letter outlining research experience, a current CV, and the names and contact information of three references. Letters of reference may be requested for finalists. The total duration of an individual’s postdoctoral service may not exceed five years, including postdoctoral service at other institutions.

Please send applications to Dr. Helen Dahlke (hdahlke@ucdavis.edu).