Technical Workshop
Central Valley Hydrologic Model v2 Workshop

January 7 - 9, 2025 - 8:30am to 4:30pm
California Natural Resources Headquarters Building
NRHQ 2-309 Computer Training Room
715 P St, Sacramento, CA 95814

This workshop is open to CWEMF members only.

Workshop Fee: $150 or $30 for students.

Refreshments included all three days, lunch not included.

Please email cwemf@cwemf.org to reserve your seat and include
"CWEMF CVHM2 Workshop" in the subject line.

Payment can be made via Credit Card/PayPal at www.cwemf.org or send a
check to: CWEMF, P.O. Box 5051, Vacaville, CA 95696-5051

Please go to www.cwemf.org for information on renewing your CWEMF membership or
becoming a CWEMF member

The U.S. Geological Survey, California Water Science Center is offering a three-day hands-on workshop on the recently updated Central Valley Hydrologic Model v2 (CVHM2). This workshop is hosted by the California Water & Environmental Model Forum (CWEMF) and sponsored by the California Department of Water Resources Sustainable Groundwater Management Office and the U.S. Bureau of Reclamation, Mid Pacific Regional Office. CVHM2 simulates coupled groundwater flow, surface-water flow, and land surface processes in California's Central Valley. The model has several enhancements: a new version of MODFLOW-OWHM, simulation of subsidence including delayed and non-delay beds, managed aquifer recharge (MAR), pumping with multi-aquifer wells throughout the domain, tile drains, and inflows from ungaged watersheds. More details have been added to the water-balance subregions, streamflow network, diversions, land use, aquifer properties, and groundwater level and land subsidence observations. CVHM2 provides a tool that is capable of being accurate at regional scales that water managers can use to assess the hydrologic-system responses to water management changes, land-use changes, and climatic variability. CVHM2 output provides simulated groundwater levels, groundwater storage, land subsidence, and surface water and groundwater exchange, which can be used to assist decision-makers in effective management of water supplies especially within the framework of the Sustainable Groundwater Management Act (SGMA).

The workshop will provide an overview of CVHM2's features and review major findings. The workshop will cover the datasets and model files used in CVHM2 development and review the model calibration methodology and results. The rest of the workshop consists of hands-on exercises that will teach participants how to run CVHM2 and how to modify input files to develop water management or climate variation scenarios. For each scenario developed, participations will learn and practice how to post-process and visualize CVHM2 model results with a focus on results related to the SGMA sustainability indicators. The training focuses on CVHM2, but skills and tools learned in the training should benefit anyone using MODFLOW-OWHM in their work.

Materials will be provided prior to the workshop. Participants will need to bring a laptop computer that is pre-loaded with CVHM2, pre- and post-processing scripts, and a Python environment to run these scripts. Participant's computers should have a text editor capable of working with large model files (such as TextPad or Notepad++), a spreadsheet program for reviewing and manipulating datasets (such as Excel), and GIS software for visualizing results (such as ArcGIS Pro). Please note that participants will need to bring a photo ID and pass through a security screening to access the training room. Please email Jon Traum (jtraum@usgs.gov) for technical questions related to preparation for the workshop.

Course Instructors: Jon Traum, PE, USGS, Hydrologist
Scott Boyce, PhD, USGS, Research Hydrologist
Claudia Faunt, PhD, PE, USGS, Supervisory Hydrologist
Steve Predmore, USGS, Geographer