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## News Release

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Donyelle Davis

626-202-2393

[dkdavis@usgs.gov](mailto:dkdavis@usgs.gov)

Laurel Rogers

619-225-6104

[larogers@usgs.gov](mailto:larogers@usgs.gov)

Jerry Rolwing

760-767-5806

[jerry@borregowd.org](mailto:jerry@borregowd.org)

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# Groundwater Study Assists in Crucial Sustainable Water-Management in Borrego Valley, California

SAN DIEGO, Calif. – A new study completed by the U.S. Geological Survey, in cooperation with the Borrego Water District, will help water planners in the Borrego Valley, California better understand and manage the groundwater resources that the area relies on for drinking water, agriculture and recreation. USGS scientists collected new data and analyzed decades of historic data, from the Borrego Valley to evaluate the potential hydrologic effects of future development, and quantify the limits of the Valley’s groundwater resources. Results of the study were released last week in a [new report](#) and [website](#).

In Borrego Valley, irrigated agricultural, residential, and commercial users, as well as the Anza-Borrego Desert State Park, use four times more water than is replenished through annual average natural recharge of the aquifer system underlying the Valley. Over time, groundwater withdrawals have caused groundwater levels to decline more than 100 feet in some parts of the basin.

The cooperative study focused on water data from 1945 to 2010. Scientists created a 3-D computer model of the Borrego Valley aquifer system, the “Borrego Valley Hydrologic Model also known as the BVHM, to assist in managing groundwater resources. The model will also help Borrego Valley water managers meet requirements put in place by the new California Sustainable Groundwater Management Act. Signed by Governor Jerry Brown in 2014, SGMA directs water agencies and districts in the state to assess their basin’s hydrologic conditions, and to plan, monitor and use groundwater sustainably.

“Because of this study, for the first time, we have a platform based on hard data that we can use to address sustainability issues in the aquifer,” said Jerry Rolwing, General Manager at the Borrego Water District. “The USGS report pulls together 60 years of data into one authoritative model. For the first time, we now have a numerical hydrologic model we can use to build an action plan as we move into the future.”

The BVHM can be used to evaluate the effects of changes in groundwater recharge and pumping, and to compare how different water-management scenarios may affect the aquifer system. USGS scientists applied the model to multiple groundwater-management scenarios up to 50 years in the future to assess effects to the aquifer system.

Dr. Claudia Faunt, USGS supervisory hydrologist and program chief said, “The development of the hydrogeologic and hydrologic models, data networks, and hydrologic analysis provides a basis for assessing groundwater availability and potential water-resource management guidelines.”

“Hydrogeology, Hydrologic Effects of Development, and Simulation of Groundwater Flow in the Borrego Valley, San Diego County, California” is available at <http://dx.doi.org/10.3133/sir20155150>. To learn more about the study and USGS Water Science, please visit the [USGS Water Resources of the United States website](#) or the [USGS California Water Science Center website](#).

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