# Sierra Valley Groundwater Sustainability Plan and Online Data Management System Development

## Sierra and Plumas County, California

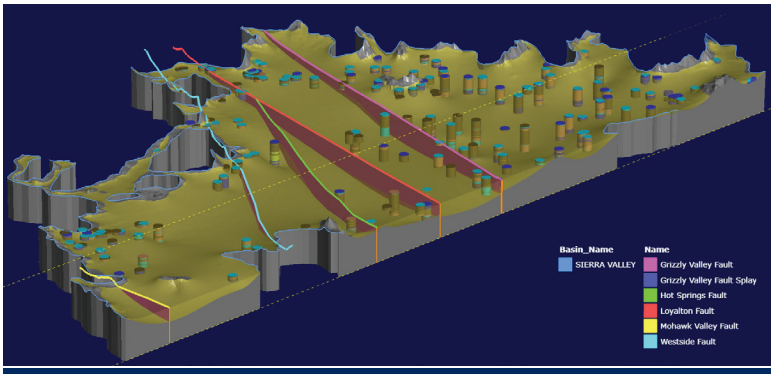
### CLIENT

**Sierra Valley Groundwater Management District**

### HIGHLIGHTS

- **SGMA BMP compliant**
- **Utilizing multiple modeling tools to evaluate alternative management scenarios and develop effective implementation plan**
- **Assimilating data collected by multiple agencies into single database accessible via an interactive online data portal**

DBS&A is on a team working with the Sierra Valley Groundwater Management District (SVGMD) that developed a Groundwater Sustainability Plan (GSP) for the Sierra Valley groundwater basin, in compliance with the 2014 California Sustainable Groundwater Management Act (SGMA). Major components of the project included data collection and analysis; water level and water quality analysis; development of the agricultural and hydrogeologic (landscape, groundwater, and surface water) conceptual and integrated numerical flow model; and stakeholder engagement in compliance with SGMA best management practices (BMPs).




Interactive, three-dimensional geologic model of the Sierra Valley groundwater basin used to define the boundaries and parameterization for the integrated hydrologic model.

DBS&A led the data management system development and data collection tasks, including compiling and evaluating available data, identifying and prioritizing data gaps, and developing a data portal to provide decision-makers with rapid access to information needed to inform GSP development as well as daily operations. The web-based, interactive, data visualization application for the relational database that DBS&A developed facilitates stakeholder outreach, involvement, and data transparency.

DBS&A also led the development of the integrated hydrologic model to evaluate historical, current, and future groundwater and surface water conditions in Sierra Valley. The integrated surface water and groundwater flow model supports the GSP preparation process through implementation to evaluate groundwater basin sustainability. The integrated hydrologic model combined an upper watershed rainfall runoff model, an irrigated landscape soil-water budget model, and a groundwater/surface water model to simulate historical and projected future groundwater and surface water conditions in the basin. Water budgets produced by the model helped inform GSP development and implementation. In addition, the model was used as a screening tool for evaluating predicted impacts from proposed changes to basin water management.