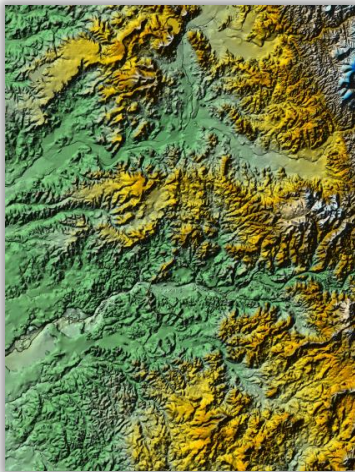


Groundwater Modeling and Monitoring to Secure a Water Supply for a Proposed Gaming Facility

Lone, California



EKI performed site reconnaissance to assess geological conditions near the Project



GIS tools were used to develop a hydrogeologic conceptual model

EKI is assisting a Native American tribe (Tribe) in securing groundwater for use as the potable water source for the Tribe’s new gaming and entertainment facility located in the Sierra Foothills region of California. EKI serves as the Tribe’s representative on a groundwater monitoring group (“Monitoring Group”) comprised of tribal and county officials. In this capacity, EKI is working to satisfy the groundwater-related requirements of an Intergovernmental Services Agreement (ISA) previously established between the Tribe and the County.

Pursuant to the ISA’s requirements, EKI prepared, negotiated, and facilitated approval of a Monitoring Well Work Plan (MWWP) designed to detect impacts of the project’s groundwater pumping on the local groundwater resources. In preparing the MWWP, EKI developed a groundwater system conceptual model, and then established a groundwater monitoring well network, monitoring protocols, and monitoring schedule to implement the monitoring program. Information compiled for the conceptual model included land use data, historical climate and hydrology data, geologic maps, water use data, and over 80 well logs obtained from the California Department of Water Resources database.

Results from the MWWP conceptual model and monitoring program were used by EKI to develop a MODFLOW-based numerical groundwater model for the groundwater basin. The model simulates transient groundwater system behavior, including pumping from the Tribe’s water supply wells, and is being used to estimate the magnitude of potential off-site impacts from groundwater pumping by the Project.

Since implementation of the MWWP, EKI has prepared regular monitoring reports pursuant to the ISA, presented monitoring results to the Monitoring Group, and facilitated discussion between the Tribe and the county on water-related issues. As the Tribe’s representative to the Monitoring Group, EKI is facilitating approval of the numerical groundwater model by the Monitoring Group.