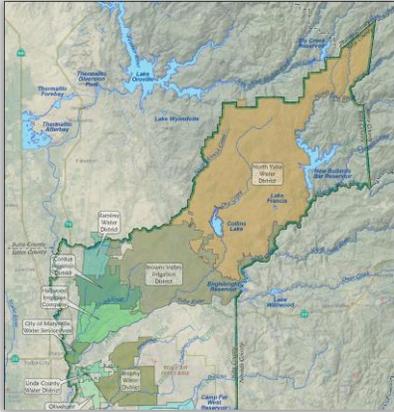


Groundwater Substitution Water Transfer Planning and SGMA Support



EKI provided technical support and planning assistance to an Irrigation District within California’s Central Valley that is involved in groundwater substitution (GWS) water transfers. The District has conducted GWS water transfers during several dry years since the early 1990s, whereby landowners in the District pump groundwater for agricultural irrigation as a substitute for their usual surface water supplies and sell the excess surface water to buyers facing water shortages in other parts of the state. This practice has provided the District with revenue to fund its operations, as well as given the buyers water they need in times of drought. The GWS transfers are conducted in coordination with the county water agency and state Department of Water Resources.

As the District seeks to secure its water supply portfolio, consisting of senior surface water rights and underlying groundwater, it has turned to EKI for water management expertise. The first task performed at the District’s request was to conduct an analysis of groundwater basin conditions to determine if a GWS transfer could be done without causing unsustainable drawdown in the underlying aquifer. The analysis involved a quantitative statistical assessment of historical groundwater levels in dozens of monitoring wells, modeling of the anticipated effect of the proposed pumping on groundwater levels, and comparison to previous years when similar GWS transfers were conducted. Next, EKI helped develop and evaluate an alternative conveyance route for the transfer water that would avoid interference with operations in the primary conveyance route which are, at times, constrained by environmental and hydrologic rules. EKI also reviewed and provided recommendations for modifications to the existing GWS pumping allocation process to make it more predictable and equitable for all pumping entities. Lastly, EKI provided the District with strategic planning support regarding communications with the Yuba County Water Agency and compliance with the Sustainable Groundwater Management Act (SGMA), including assistance with formation of a Groundwater Sustainability Agency.

EKI’s work has provided the District with a technical foundation upon which to develop a strategy for groundwater management under SGMA.