Title
Lasting Impressions: Anticipating Pumping Effects on Future Conditions

Abstract
While part of the Hydrologic Cycle, groundwater is one integral component that is frequently overlooked in planning. This omission can produce bias in estimates of hydrologic response. Fortunately, through the application of virtually a single equation, the diffusion equation, we can estimate effects of anticipated groundwater-use changes. A series of examples demonstrate how we can use our calculations to anticipate the onset, spatial distribution and persistence (from decades to centuries) of groundwater conditions associated with projected pumping. Predictive estimates, with a proactive approach and the discipline to adapt to the estimated outcomes, increase the possibility of sustaining desirable hydrologic conditions. A far more efficient approach than attempting to restore conditions. Join me as I guide us through examples demonstrating how researchers and consultants have used calculations to inform decisions with long-term implications.