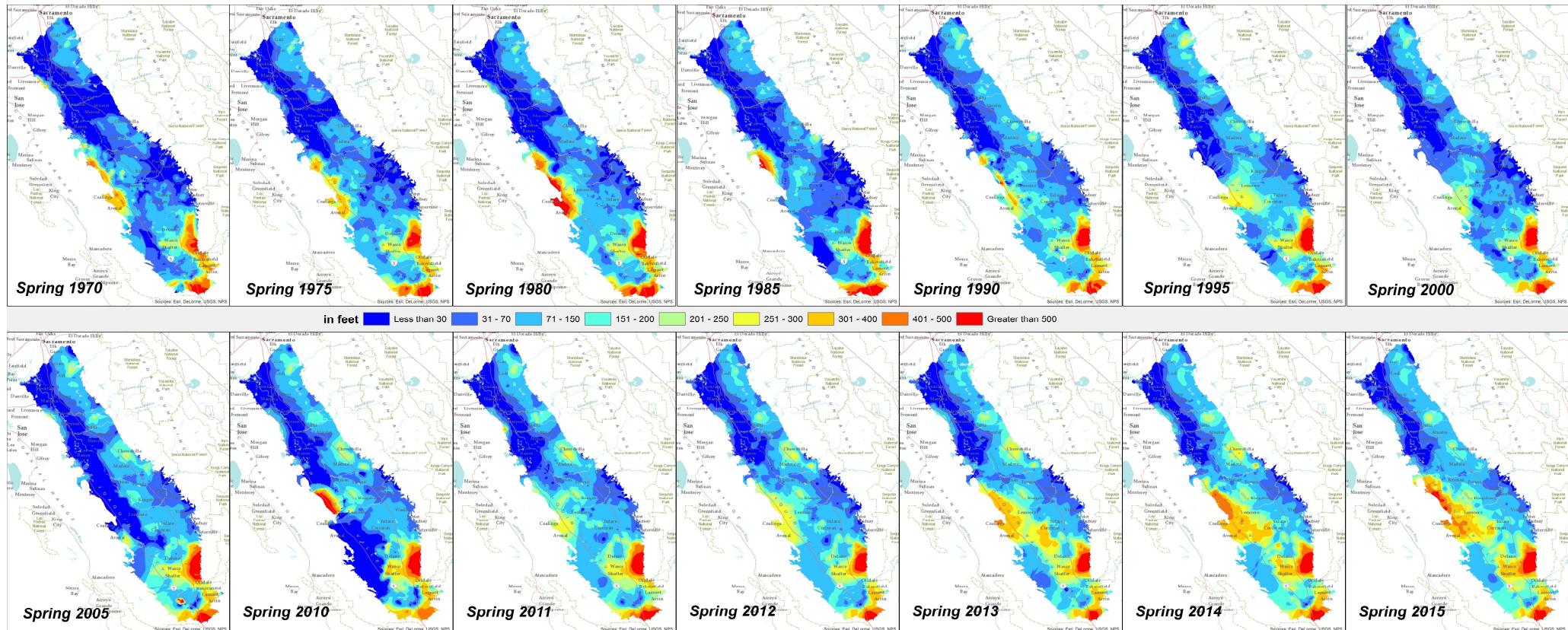


San Joaquin Valley Groundwater Modeling



The San Joaquin Valley is one of the most productive agricultural regions in the nation. Reduced surface-water availability during 1976-77, 1986-92, 2007-09, and 2012-2015 caused groundwater-pumping increases for farming water supply. Over time, over pumping caused groundwater-level declines and associated aquifer-system compaction and land subsidence that resulted in permanent aquifer-system storage loss.

Using cutting-edge spatial analytical technologies, monitoring well based depth-to-groundwater measurements are modeled as groundwater surface. These layers show the depth-to-groundwater below the ground surface and are based on water level measurements collected from wells. The color ramp provide a smooth approximation of the groundwater level "surface" and is interpolated from individual well measurements using geo-statistical analysis techniques known as Empirical Bayesian kriging. Depth information is represented in feet below the ground surface. Increasing values indicate water surface further away from ground surface.

Estimates of depth-to-groundwater are affected by a number of variables, including timing and errors associated with data, as well as effects due to the interpolation method. Therefore, the maps of depth-to-groundwater are approximations; the values represent average conditions and have an associated uncertainty.

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