LSCR Basin Study: Proposed Groundwater Modeling Products

August 27, 2019

Below is a list of suggested map products for the Lower Santa Cruz River Basin Study based on a preliminary discussion that occurred on August 14, 2019. Of note is that the study looks at two time periods: near future (2020 to 2049) and far future (2050 to 2079). The weather generator outputs used as model inputs do not differentiate within these two time periods, so groundwater model outputs are lumped within those two periods. This will be of interest in continued discussion, alongside map development for multiple scenarios.

Map Products

1. Change in stream recharge inputs over the model area
2. Areas with a rate of 4 feet decline per year or greater (threshold for Long-Term Storage Credit Recovery
3. Areas at or below the 1,000 feet below land surface threshold
4. Absolute change in groundwater elevations
5. Overall rate of change of groundwater elevations
6. Change of groundwater elevation with respect to shallow groundwater dependent ecosystems
7. Distance below phreatic zone
8. Areas below a threshold at which exempt wells are likely to go dry
9. Saturated thickness of aquifer
10. Areas susceptible to subsidence due to clays
11. Well Productivity

Other geographic layers of interest:

1. Water Accounting Areas
2. Water provider service areas
3. Location of contaminant plumes