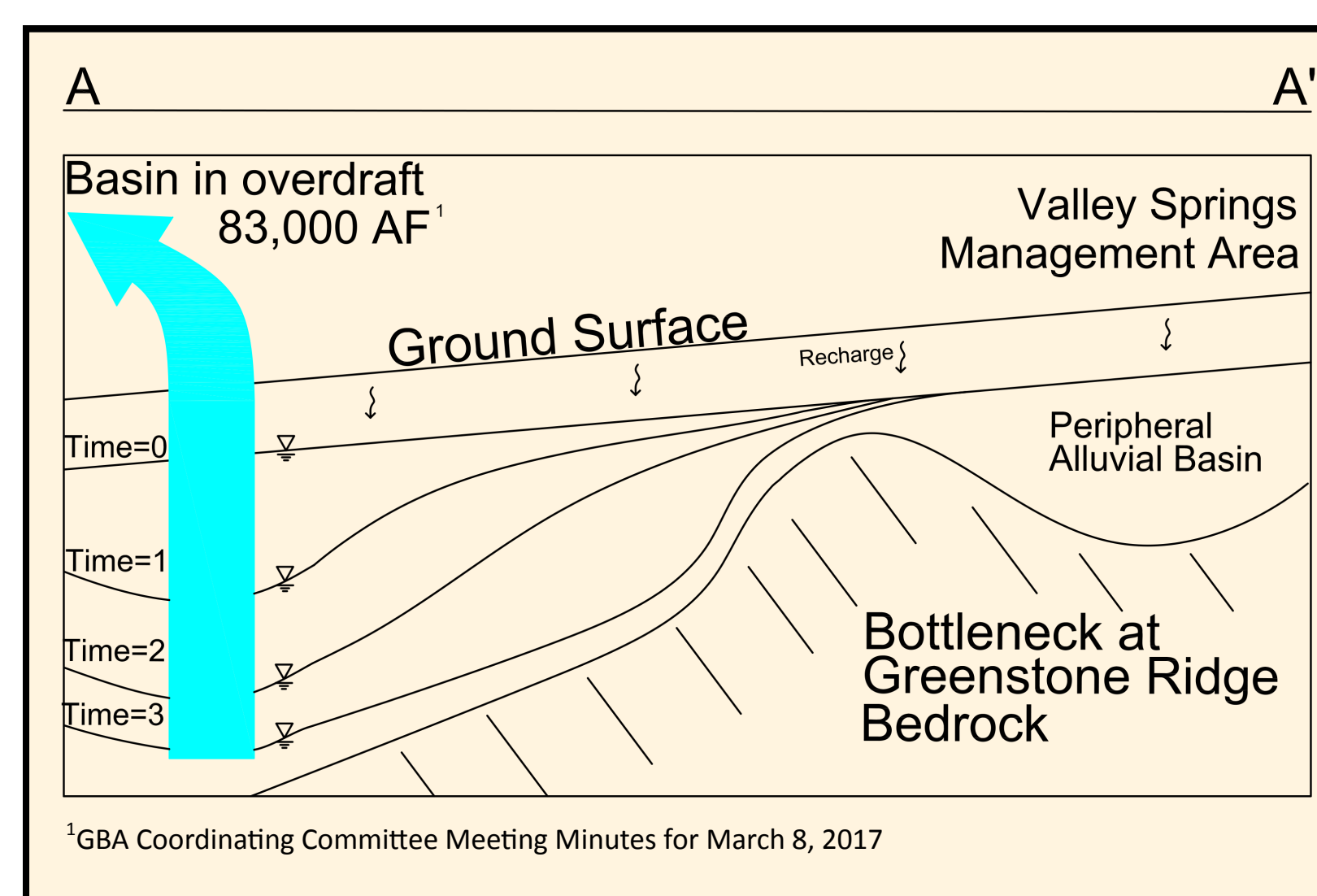
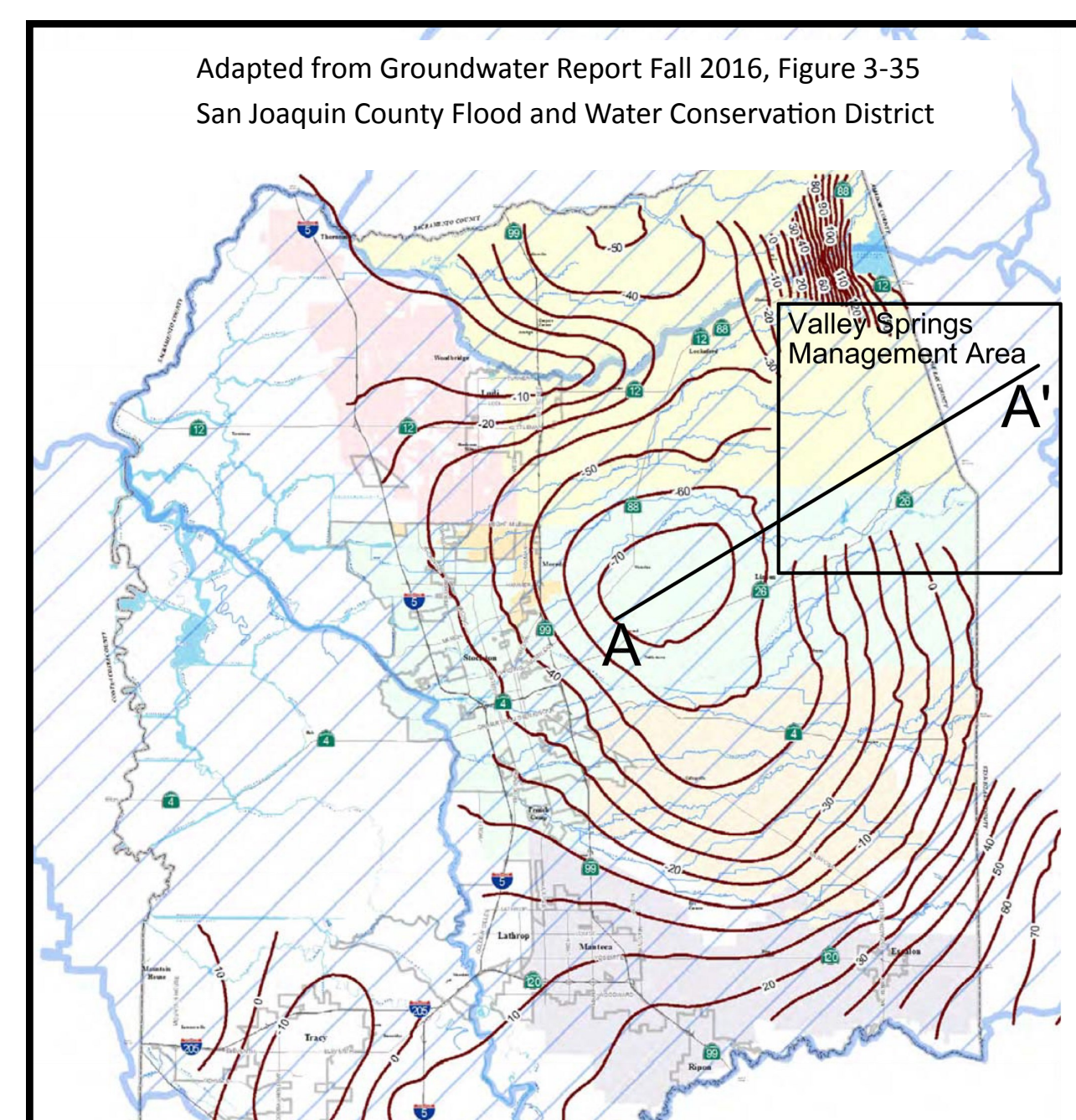
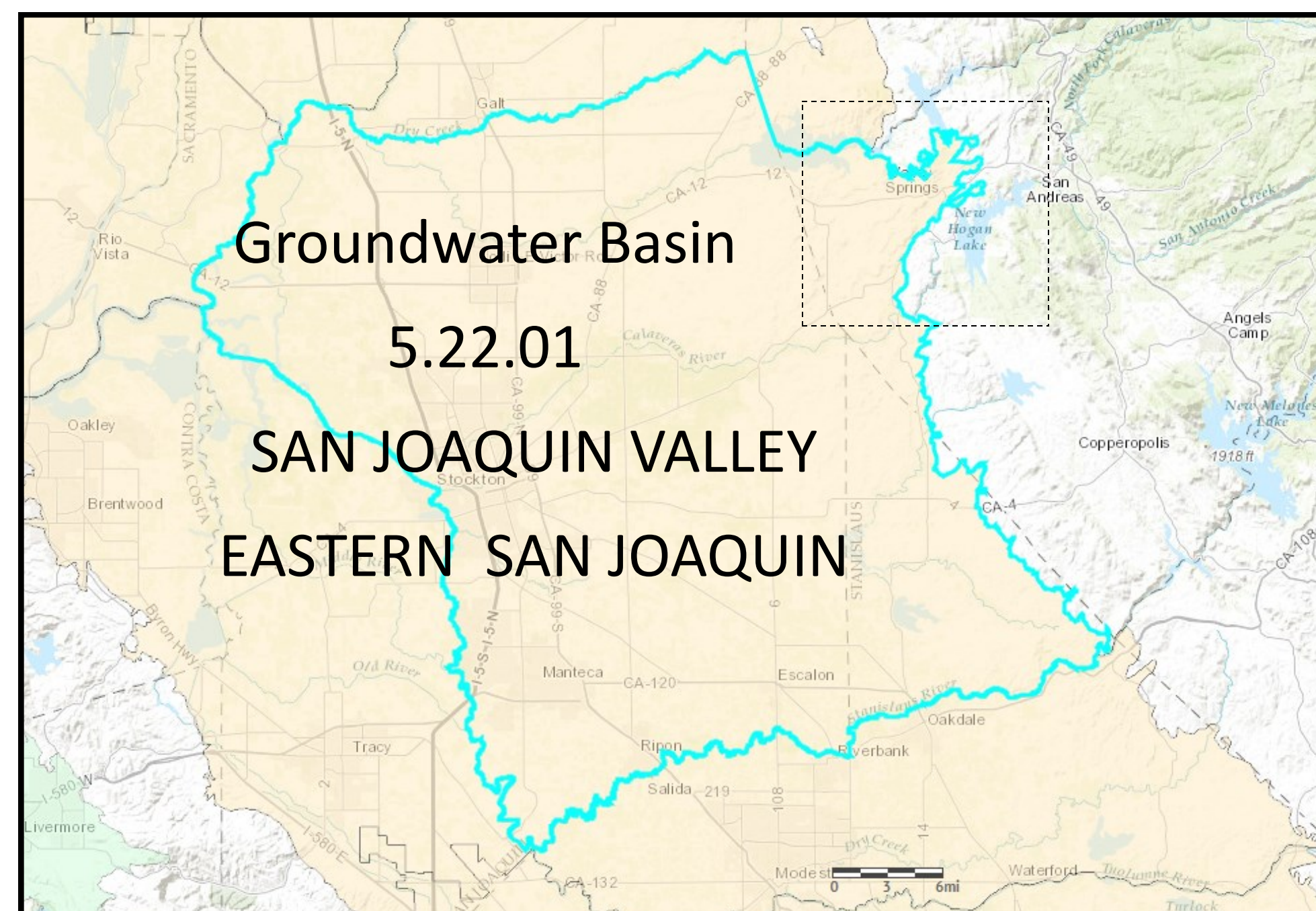


# Management Areas within Groundwater Basins and Hydrogeologic Conceptual Models

## Case #1

Chronic Low Groundwater  
Geologic bottlenecks protect  
peripheral areas from basin  
overdraft.



Dr. John H. Kramer, HG No. 182, Principal Groundwater Geologist, Condor Earth  
Casey Kipf, HG. No. 1011, Senior Hydrogeologist, Condor Earth  
David Belt, HG No. 1023, Associate Geologist, Condor Earth  
Daniel Schaner, GIT, Staff Geologist, Condor Earth

**Management Areas** are hydrogeologically distinct sub-areas with definable boundaries and hydraulic properties. The Sustainable Groundwater Management Act (SGMA) allows agencies to manage these areas with different “minimum thresholds” and “measurable objectives” than the larger basin.  
**Management Areas are a flexible management tool for local stakeholders.**

**Hydrogeologic Conceptual Models** frame our understanding of groundwater occurrence and flow. Two cases are presented to illustrate how they can guide management decisions. Case #1 shows how geologic features that cause hydraulic bottlenecks will protect peripheral areas from chronic low groundwater in overdrafted basins. Case #2 illustrates how aquifer layers above and below significant aquitards can be managed differently.

These cases cover only two of the six undesirable results listed in SGMA. All six can be analyzed with conceptual hydrogeologic models to find boundaries of local importance. **Groundwater users in Management Areas can establish different minimum thresholds and measureable objectives than the larger basin planning area as a whole.**

## Case #2

Land Subsidence  
Aquifers above and below  
aquitards can be managed  
differently.

