

Drought and Ojai Basin Groundwater Supply

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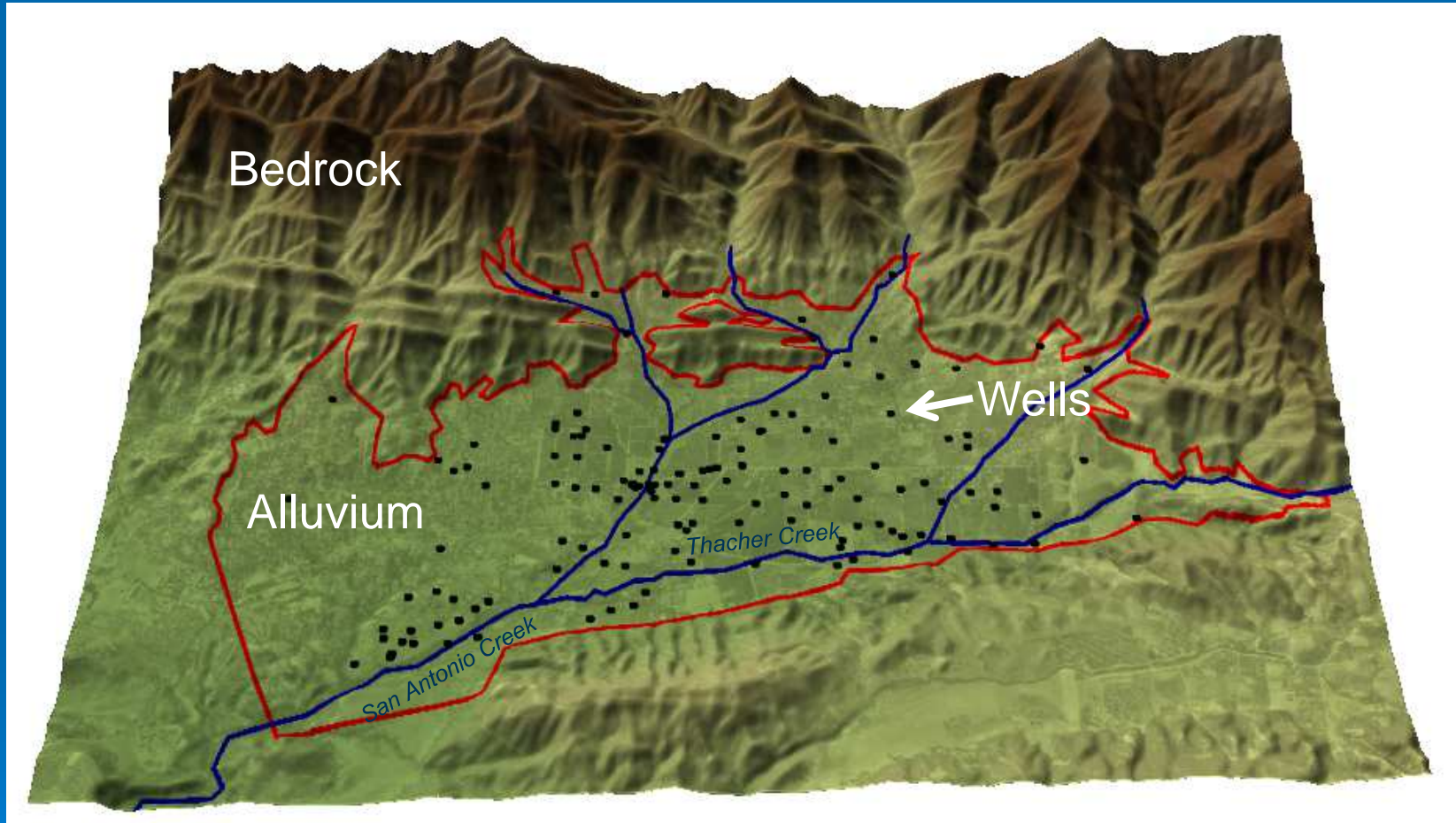
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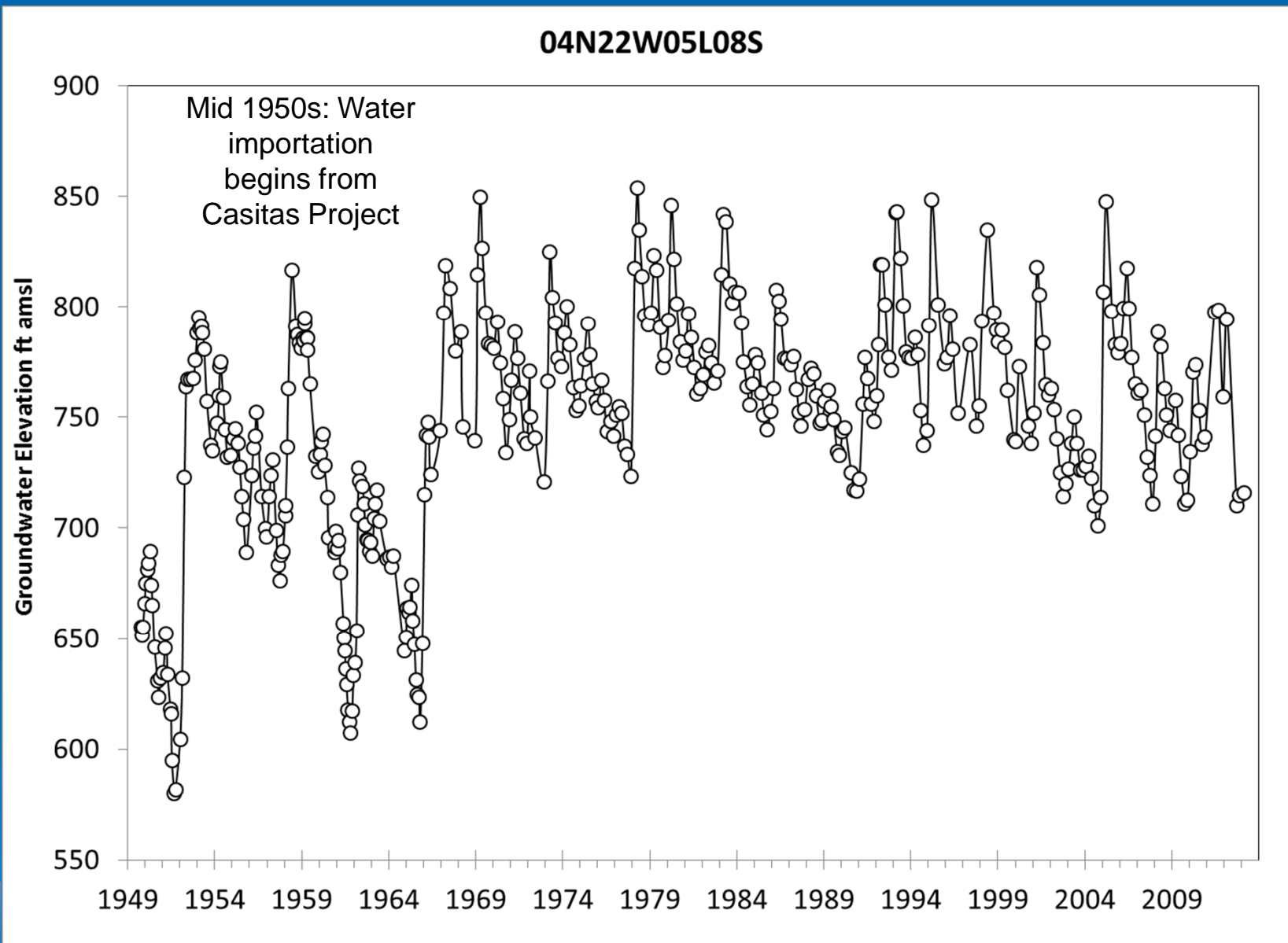


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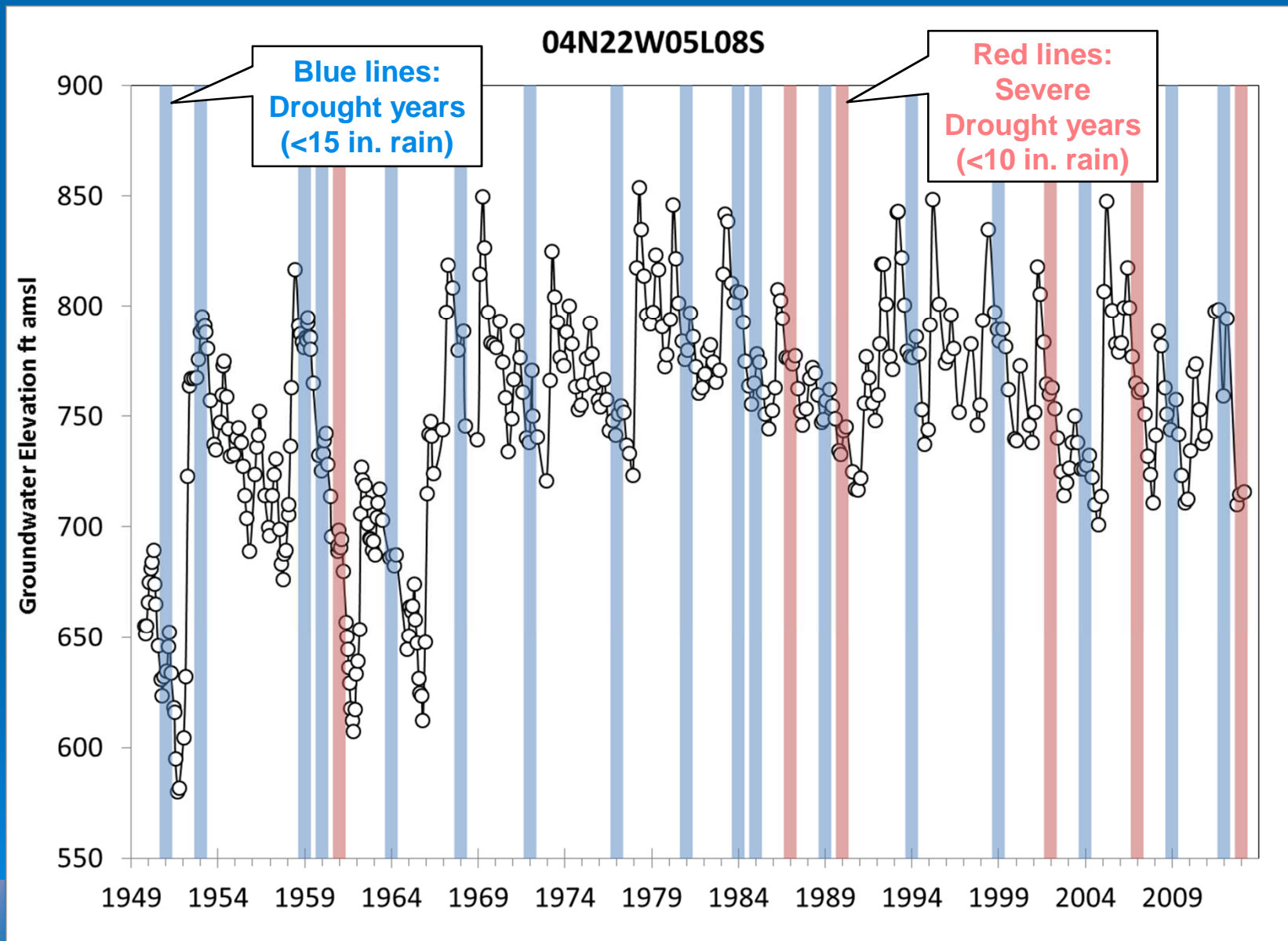
Ojai Basin Hydrogeology



First Let's Look at Historical Field Data



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Ojai Linked Watershed/Groundwater Model: Project Background

- ◆ Model of San Antonio Creek sub-watershed and Ojai Basin funded by a DWR Local Groundwater Assistance Grant to the OBGMA. Project completed 11/15/2011.
- ◆ DBS&A's Distributed Parameter Watershed Model (DPWM) used to predict groundwater recharge as it varies in different locations within the Ojai Basin, and from year-to-year.
- ◆ Model "layering" based on interpretation of geophysical logs from 24 wells throughout the Basin (Kear Groundwater).
- ◆ Groundwater model (MODFLOW-SURFACT) calibrated to 39 years of historical groundwater level data from 18 wells throughout the Basin.
- ◆ Model used to assess future conditions and alternative management scenarios with input from OBGMA board members.



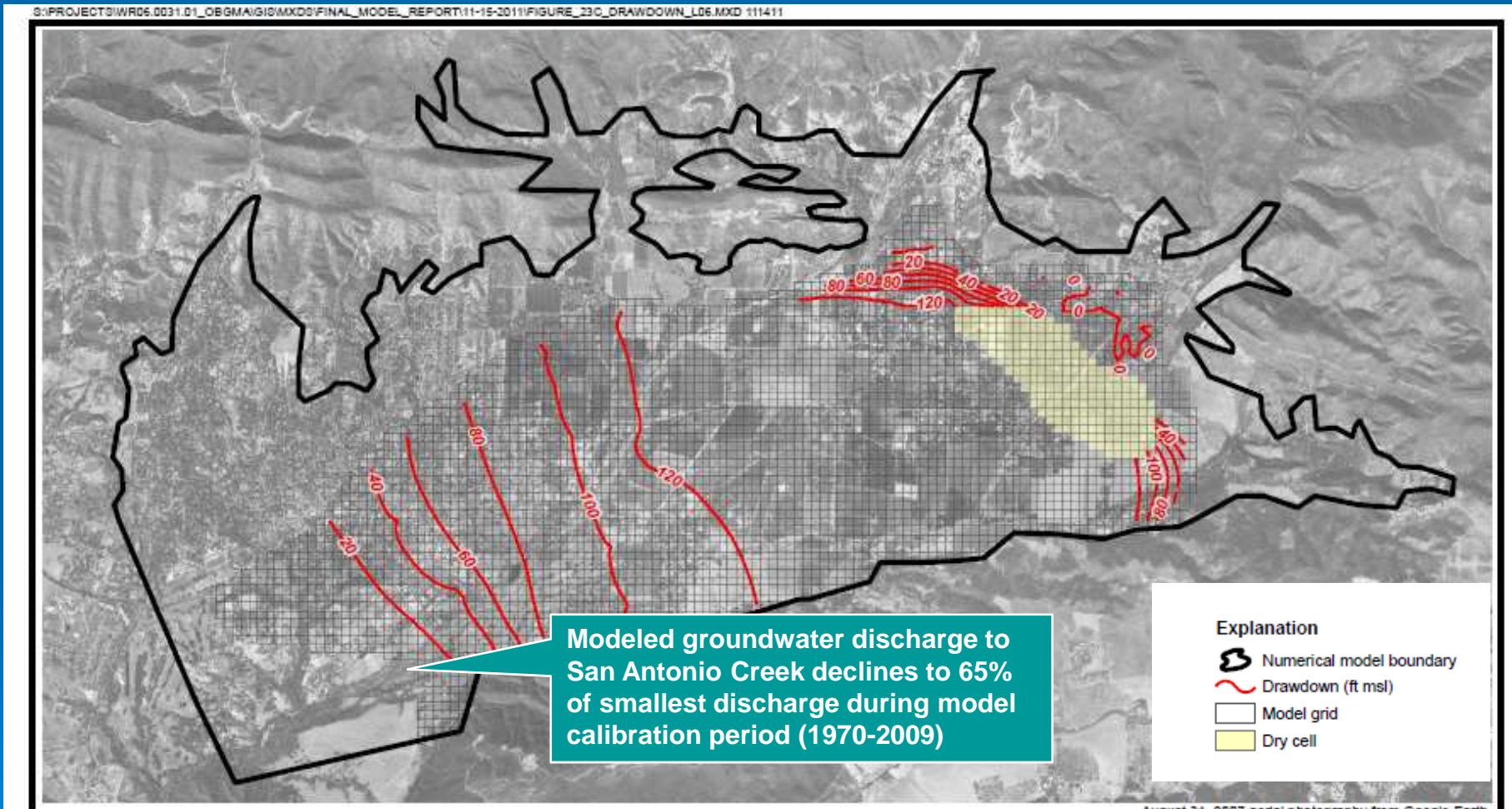
Modeled Groundwater Balance (1970 - 2009)

	39-yr average	Percent
Groundwater Inputs		
Recharge from <u>precipitation</u> , irrigation, septic systems, spreading grounds	6,780	100%
Groundwater Outputs		
Groundwater pumping (wells)	4,147	61%
Discharge to streams	2,282	34%
Evapotranspiration	258	4%
Outflow to bedrock and downgradient alluvium	129	2%
Total Outflow	6,816	

units: acre-feet



Modeled Long-Term Drought Scenario at Current Pumping Rates



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