

## California Drought Analysis from a water budget perspective

- *Level of impact of the drought on different water use sectors*
- *An analysis for the past two decades*

### **GETTING DATA** (software use: Matlab or R, Excel, web browser)

Rainfall data for California for the period 1980-2010: The student will be exposed to a rainfall database of 62 years (1949-2010) for the conterminous US and will select data for the period of interest only for California.

Water Use data: The student will download water use data from the USGS website and will select only the category on interest for California. Water use categories of interest: public supply, domestic, industrial, irrigation, mining, livestock, thermoelectric, total use for the county; from both surface water and groundwater sources.

Investigate water imports from other States: Inter-basin transfers, Rivers

**DATA ANALYSIS:** Compute some statistics about the data; plot the data time series and its average value (software: Matlab or R)

**MAP** the data to show their spatial distribution (software: ArcGIS)

**COMPUTE** the water deficit for each county (software: Matlab or R)

Map the water deficit (max) for each county (software: ArcGIS)

**IDENTIFY** what sectors are the most affected and research the current policies on the water management in CA