Climate Tools for Water Managers

California Climate Tracker: Tracking Climate One Step at a Time

Source: Western Regional Climate Center
Access: www.wrcc.dri.edu/monitor/cal-mon
Laura Edwards and John Abatzoglou – Western Regional Climate Center, Desert Research Institute

An online tool at the Western Regional Climate Center (WRCC) is now being utilized by a number of individuals, companies, and agencies who are keeping an eye on climate in California. The California Climate Tracker (CCT) provides monthly updates of temperature and precipitation data, allowing the user to track climate in any area of the state from 1895 to the present. A set of 11 climate regions for the state were identified through objective methods using multivariate statistical analysis based primarily on monthly average mean temperature and precipitation data from 195 stations across the state. Because the regions are defined by climatological patterns influenced by topographic and oceanic controls, they may better reflect observed regional climate patterns and thus may be a more relevant tool for some resource managers than National Climatic Data Center divisions, which are largely defined by watersheds and river basins.

Data can be viewed on a statewide or regional basis, and on several time scales such as monthly, seasonal, or yearly, including water year and calendar year. Maps on the website’s front page show the month at a glance, providing a quick snapshot of how the last month’s average temperature or precipitation total ranked since 1895. Time series graphs track these climate elements, and are accompanied by statistical information on trends, averages, and extremes. The CCT was among the first to note the record dry spring of 2008, and was a contributing factor to Gov. Schwarzenegger’s drought declaration in June. The CCT provides an assortment of products to the public in the form of maps, graphs, and raw data.

Precipitation percent of normal in California for March-August 2008, with each of the 11 climate regions color-coded to indicate how wet or dry it was. Normal (or average) is based on the period 1949-2005, when digital records were available and have been checked for quality control.

Tracking spring (March - May) precipitation for the Sacramento-Delta region. Spring 2008 was the driest on record for this and many regions of the state. 100-year linear trends (with 95% certainty limits) are calculated with respect to different base periods and show a decreasing trend in precipitation during the last 30 years. Note that a significant multidecadal drought occurred from about 1907 to 1934.