CIMIS Drought Alert: Several station sites not irrigated. See updates at bottom of page.

CIMIS estimates reference evapotranspiration (ETo) using the CIMIS Penman and Penman-Monteith equations and weather data (air temperature, relative humidity, wind speed, and solar radiation) measured over "well-watered" grass surfaces, commonly known as "reference surfaces". Some parameters in the Penman type equations (such as the roughness coefficient, aerodynamic resistance, and canopy resistance) are determined through research conducted on reference surfaces and are valid only when there is healthy green grass and adequate water in the soil profile.

For the last 30+ years, CIMIS has been collecting data over well-irrigated sites and providing excellent ETo and weather data to the public. The unprecedented drought situation that California is currently facing is affecting CIMIS data quality by limiting the amount of water used to irrigate CIMIS station sites. We have learned that some of our cooperators have turned off their irrigation systems and others reduced their irrigation frequency because of the drought. This lack of irrigation at CIMIS station sites leads to an increase in air temperature and a decrease in relative humidity, resulting in elevated ETo estimates. Although the actual magnitude of increase in ETo that results from lack of irrigation depends on several other factors, studies have shown that it can be over 20 percent. We are, therefore, putting out this alert so that CIMIS data users can make an informed decision.

CIMIS's longstanding policy regarding stations that do not maintain its siting criteria has been to turn them into a non-ETo status, which means that ETo is no longer processed and reported at the site. Because of the high number of stations that have stopped irrigation and no longer meet the "well-watered" site requirement of a reference station, we decided not to turn them all into non-ETo but to notify users. Obviously this is not a permanent solution for the problem that we are facing. As we hope for an end to the drought, we will work on a more permanent solution in the event of a continued drought. In this alert, we provide a list of CIMIS stations that are currently not irrigating. We will add stations that turn off irrigation in the future to this list and remove stations that resume irrigating from the list once reference surface condition is restored.

List of CIMIS stations that are currently not irrigating:

Station	Name	Nearby City	County
13	Camino	Placerville	El Dorado
57	Buntingville	Susanville	Lassen
90	Alturas	Alturas	Modoc
116	Salinas North	Salinas	Monterey
126	San Benito	Hollister	San Benito
148	Merced	Merced	Merced
159	Monrovia	Monrovia	Los Angeles
160	San Luis Obispo West	San Luis Obispo	San Luis Obispo
167	Tracy	Tracy	San Joaquin

169	Porterville	Porterville	Tulare
182	Delano	Delano	Tulare
203	Alpaugh	Alpaugh	Tulare
224	Shasta College	Redding	Shasta

UPDATE: The above notice pertains to Summer/Fall 2015. As we enter the winter season, we will begin to see reference ET quality grass growing around these stations and the ETo data will now be useful. Please keep this in mind while using this data during the drought.