www.cimis.water.ca.gov

CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM

SPATIAL
CIMIS

CIMIS (California Irrigation Management Information System) is an integrated network of 145 automated weather stations located throughout California. Irrigation information and weather data is provided free of charge by the Water Use and Efficiency Branch of the California Department of Water Resources.

CIMIS helps agricultural growers and landscape supervisors manage their water resources more efficiently. CIMIS supplies the data used to determine when to irrigate and how much water to apply. Efficient use of water resources benefits Californians by saving water, energy, and money.

What is spatial CIMIS?

Most CIMIS stations are located in lowland agricultural and urban areas. Unfortunately, there isn't a uniform distribution of stations across the CIMIS system, which creates spatial gaps in the reference evapotranspiration (ETo) data.

The close these gap, CIMIS partnered with the University of California, Davis (UCD) scientists to develop spatial CIMIS. Spatial CIMIS was released to the public in September 2009; data is available from February 2003.

Spatial CIMIS combines remotely-sensed satellite data with traditional CIMIS station data to produce more accurate maps of ETo and average solar radiation (Rs) on a 2-km grid.

How to Get Spatial CIMIS Data

The spatial CIMIS data is available to registered CIMIS users. If you need more detailed instructions on how to set up your CIMIS account, refer to the brochure *CIMIS #2: Getting Started.*

Once you have registered at www.cimis.water.ca.gov, select the SPATIAL navigation bar.

For a visual overview, select the Spatial Maps tab. Under Spatial Maps, you can choose a date to view either the Solar Radiation Map or ETo Map.

To personalize your report, select the Spatial Reports tab. (If you have not logged in, this tab will say Spatial Reports Login.) For automated email delivery, after logging in, select the Schedule Spatial Report tab and create a delivery schedule.

Spatial CIMIS Input Data

By combining data layers from CIMIS stations and the Geostationary Operation Environmental Satellite (GOES), spatial CIMIS ETo is estimated for each grid square, using a mathematical model. The model is the American Society Of Civil Engineers (ASCE) version of the Penman-Monteith equation for ETo.

Early every morning, the spatial CIMIS mathematical model calculates and creates layers of solar radiation and estimated ETo data.

Air temperature, relative humidity, and wind speed are interpolated between CIMIS stations using a Spline model.