

# Helping stretch a limited resource

**Getting the most out of every drop of water is crucial in Santa Clara County, a semi-arid region where little or no rain falls six months out of the year. To make each water drop count, farmers and landscapers must know when and how much to irrigate. Irrigation decisions depend almost entirely on the weather: Heat, humidity and wind all play a part in determining how much water a plant absorbs and how much is lost to evaporation.**

**To help large-scale water users irrigate efficiently, the Santa Clara Valley Water District, together with the California Department of Water Resources (DWR), offers around-the-clock climate information from the California Irrigation Management Information System (CIMIS). CIMIS collects climatological information from 100 weather stations across the state to give major irrigators daily data on the amount of water that evaporates from the soil and the amount used by grasses.**

## A vital tool for irrigation scheduling

The key to efficient irrigation is knowing when crops are most likely to absorb water. CIMIS measures all the climatological factors that influence irrigation, analyzes data and provides information in a highly accessible manner via telephone and modem or through the Internet. Whether the irrigator is a farmer, turf manager, park administrator or golf course operator, CIMIS offers the information needed to develop fiscally sound water budgets. The water district owns and supervises two CIMIS weather stations in Santa Clara County, one at the University of California field station in downtown San Jose, and the other at Live Oak High School in Morgan Hill. Both these stations, as well as others around the state, are connected to a central computer run by DWR in Sacramento.



*CIMIS benefits both agricultural and urban irrigators.*

## How does CIMIS work?



*Analyzing CIMIS data for irrigation scheduling*

CIMIS weather stations gather data on air temperature, solar radiation, vapor pressure, wind speed and wind direction. After the data is analyzed for accuracy, the CIMIS computer estimates the amount of water evaporated from the soil (evaporation) and the amount used by irrigated grass (transpiration) at the weather station site. This combined value is called "reference evapotranspiration" or "ET<sub>o</sub>."

To determine the amount of water that will be used by a given grass or crop,

CIMIS computers use ET<sub>o</sub> and a conversion factor, either a landscape coefficient or crop coefficient, depending on the plant to be watered. Using a plant's conversion factor and ET<sub>o</sub>, irrigators can estimate the amount of water specific plants will absorb into their root systems on a given day at a given time.

## Accessing CIMIS

CIMIS data is free and available to the public. You can access CIMIS either by telephone using a computer modem, or through the Internet. Log onto the district's home page at [www.scvwd.dst.ca.us](http://www.scvwd.dst.ca.us), and click on Water Conservation. Or visit the CIMIS site at [www.ceresgroup.com/col/weather/cimis/sc\\_daily.shtml](http://www.ceresgroup.com/col/weather/cimis/sc_daily.shtml). Daily CIMIS data also is available through a water district hotline at (408) 267-3127.



**For information on how to use CIMIS data to prepare both agricultural and urban irrigation schedules, please contact Hossein Ashktorab of the water district's Water Conservation Unit at (408) 265-2607, extension 2291.**

Santa Clara Valley Water District  
5750 Almaden Expressway  
San Jose Ca 95118-9985



*CIMIS Weather Stations—  
Helping Irrigators Make  
Every Drop Count*

# California Irrigation Management Information System

Santa Clara Valley  
Water District

