## CIMIS

California Irrigation Management Information System

2008/05/14

## What is CIMIS?

 A network of over 130 fully automated weather stations that collect weather data throughout California and provide estimates of Reference Evapotranspiration (ETo) to the users

#### station Location... 🗶

### Spatial Overview Spatial Model **View Maps** ETo Map

### Solar Radiation Map

### Station Location Map

ETo Zones Map

### Generate Report

Logon

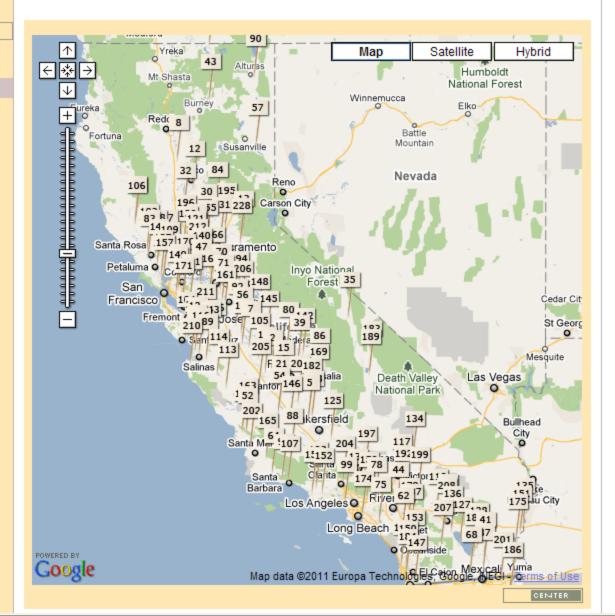
Map Reports

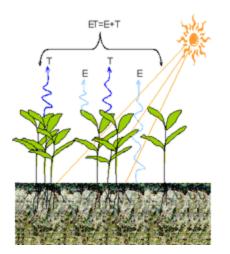
Map Reports Help

### Station Focation Map

### Мар

The Station Location Map is created by overlaying geographic markers for each CIMIS station on top of Google maps. You can zoom in and out to see the exact station locations and you may also click the station marker for more detailed information.





## What is CIMIS?

CIMIS calculates estimates of grass reference evapotranspiration (ETo)

Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indicator of how much water your crops, lawn, garden, and trees need for healthy growth and productivity.

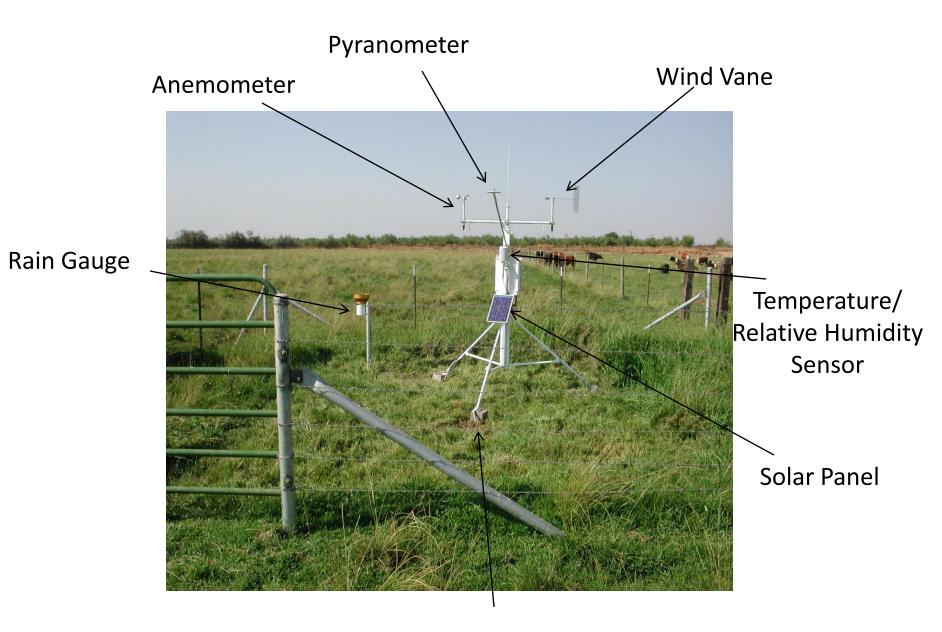
## What is CIMIS?

# CIMIS was designed to assist with efficient water and energy use.

CIMIS helps agricultural growers and landscape managers administering parks, golf courses and other landscapes develop water budgets for determining when to irrigate and how much water to apply.

## Who uses CIMIS data?

- Growers.
- Consultants.
- Water agencies.
- Public agencies.
- Home owners.
- Researchers.
- Firefighters.
- Investigators



Soil Temperature Probe



## How does CIMIS work?

- Dataloggers poll the sensors every minute.
- Solar radiation (Rs), air temperature (Ta), wind speed (U2), and Relative Humidity (RH) data is collected. Additionally precipitation (P), soil temperature (Ts) and wind direction are measured.
- Sixty minute-by-minute readings are averaged/totaled.

## How does CIMIS work?

- Daily maximum, minimum, average, and total values are calculated by the end of each day.
- Hourly and daily values are stored in the dataloggers.
- The CIMIS computer calls stations every 6 hours and retrieves data.
- Data goes through quality control (QC) procedures.
- Measured and calculated parameters are stored in the CIMIS database.
- Reference evapotranspiration (ETo) is calculated.
- Final data is posted on the CIMIS website.

http://wwwcimis.water.ca.gov/cimis/data.jsp

Monthly

* <u>m</u> Calif	ORNIA THE G	OLDEN STATE		CALIFORNIA HOMEPAGE	GOVERNOR'S HOMEPAGE				
WELCOME INFO CENTER	CALIFO CIMIS DATA RESOURCE CENTER	RNIA IRRIGATION MANAGEMENT DEPARTMENT OFFICE OF My CIMIS SPATIAL CIMIS	CIN INFORMATION SYSTEM OF WATER RESOURCES WATER USE EFFICIENCY	IS	NT'				
Welcome Back DWR-SAN	CIMIS Data								
Log Off									
Hourly	The CIMIS Data page enal	ples users to:		110100	100101				
Daily Daily ETa Variance	<ul> <li>View daily and mo</li> </ul>	nthly sample reports;		010010	010110: 0001010				
Daily ETo Variance Monthly		Create and edit a user account;							
Monthly Average ETo	Retrieve CIMIS data;     Read important information on CIMIS quality control;								
Quality Control	<ul> <li>Read detailed information on CIMIS data types, formats, and sizes;</li> <li>View the weather station list.</li> </ul>								
QC Overview Current Flag Summary Current Hourly Flags Current Daily Flags Former Flag Summary Former Hourly Flags Former Daily Flags	CIMIS data can be accessed and retrieved free of charge. Although membership is not a requirement, access to data for Unregistered Users is limited to the Sample Reports. Registered Users have the privilege of accessing the entire CIMIS data set. Registration information is confidential and used by CIMIS staff for statistical reports and to provide better services. Therefore, we encourage users to register and create a CIMIS user account. Note: CIMIS Date Ranges defaults to seven days (starting from yesterday) for hourly and daily reports, and twelve months (starting from last month) for monthly reports. These defaults can be changed by going into the My CIMIS tab								
More Info	and changing your preferences. These new preferences will become your defaults for all data reports generated afterwards, from both the Data and My CIMIS tabs.								
Station List									
Data Types	Welcome Back DW								
Data Formats	Log Off	Clicking on Log Off will disconne	ect your computer from the	CIMIS databas	e.				
Data Size	Hourly	Hourly provides standard hourly and hourly by sensor data reports for selected weather station(s) and date range specified.							
	Daily	Iy Daily provides standard daily and daily by sensor data reports for selected weather station(s) and date range specified.							
	Daily ETo Variance	The Daily ETo Variance provide station(s) and date range specifi		To variance fo	or selected				

Monthly provides standard monthly data reports for the weather station(a) and data

🟉 Daily F	eport - Windows Internet Explorer
00	Ittp://www.cimis.water.ca.gov/cimis/dailyReport.do
<u>Eile E</u> dit	<u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp
Google	😪 🛃 Search 🔹 🛅 ॰ 🖶 ॰ 🔯 Share ॰ 🔯 ॰ 🛛 🚣 Check ॰ 🙇 Translate ॰ 🍠 AutoFill ॰ 🥖
🚖 🏘	🔠 🔻 😒 National Weather Service - N 🥜 Daily Report 🛛 🗙

CIMIS (California Irrigation Management Information System)

### Daily Report

Rendered in English Units. April 6, 2011 - April 12, 2011 Printed on April 13, 2011

### FivePoints - San Joaquin Valley - Station 2

Date	CIMIS ETo (in)	Precip (in)	Sol Rad (Ly/day)	Avg Vap (mBars)	Air	Min Air Temp (°F)	Avg Air Temp (°F)	Max Rel Hum (%)	Min Rel Hum (%)	Avg Rel Hum (%)	Dew Pt (°F)	wSpd	Wnd Run (miles)	Avg Soil Temp (°F)
04/06/2011	0.24	0.25	546	9.2	75.5	49.5	62.0	76	26	48	42.2	10.5	254.3	60.9
04/07/2011	0.05 R	0.30	182	8.2	53.9 Y	35.5 Y	47.4	94	48	74	39.4	7.0	168.8	59.6
04/08/2011	0.10	0.01	413	7.0	55.4 Y	34.9 Y	43.5	97	41	72	35.3	5.1	123.9	57.1
04/09/2011	0.17	0.00	553	7.0	63.4	34.2 Y	49.3	92	34	58	35.3	5.0	119.5	56.5
04/10/2011	0.17	0.00	557	7.4	68.6	36.3	52.5	87	31	55	36.8	3.9	94.8	57.1
04/11/2011	0.17	0.00	490	9.0	67.7	45.6	55.0	80	39	61	41.9	7.7	186.8	57.7
04/12/2011	0.18	0.00	557	9.4	71.0	43.8	56.4	86	39	60	42.9	6.1	146.9	58.4
Tots/Avgs	1.08	0.56	471	8.2	65.1	40.0	52.3	87	37	61	39.1	6.5	156.4	58.2

Flag Legend								
A - Historical Average	I - Ignore	R - Far out of normal range						
C or N - Not Collected	M - Missing Data	S - Not in service						
H - Hourly Missing or Flagged Data	Q - Related Sensor Missing	Y - Moderately out of range						
	Conversion Factors							
Ly/day/2.065=W/sq.m	inches * 25.4 = mm	(F-32) * 5/9 = c						
mph * 0.447 = m/s	mBars * 0.1 = kPa							

🖉 Hourly	🖉 Hourly Report - Windows Internet Explorer									
$\bigcirc$	Ittp://www.cimis.water.ca.gov/cimis/hourlyReport.do									
	<u>V</u> iew F <u>a</u> vorites <u>I</u> ools <u>H</u> elp									
Google	🔽 🚰 Search 🔹 🖮 🗉 📲 🔹 🛃 Share र 🧟 र  🤷 Check र 🝇 Translate र 🅑 AutoFill र 🤌									
🚖 🍄	6 Hourly Report									

### Hourly Report

Rendered in METRIC Units. April 6, 2011 - April 12, 2011 Printed on April 13, 2011

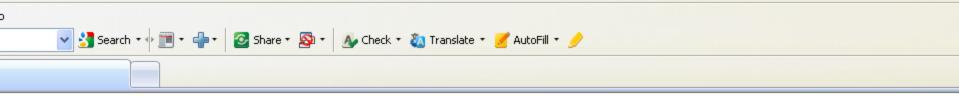
### FivePoints - San Joaquin Valley - Station 2

Date	Hour	ETo (mm)	Precip (mm)	Sol Rad (W.sq.m)	Vapor Pressure (kPa)	Air Temp (°C)	Rel Hum (%)	Dew Point (° C)	Wind Speed (m/s)	Wind Dir (0- 360)	Soil Temp (°C)
04/06/2011	0100	0.02	0.00	0	1.1	13.7	69	8.0	3.4	307.6	16.3
	0200	0.02	0.00	0	1.0	13.2	69	7.7	3.9	304.5	16.2
	0300	0.02	0.00	0	1.0	13.8	63	6.9	3.4	293.1	16.1
	0400	0.01	0.00	0	1.0	12.8	65	6.4	2.9	284.7	16.0
	0500	0.02	0.00	0	0.9	12.1	65	5.8	3.7	294.7	15.9
	0600	0.01	0.00	3	0.9	10.2	74	5.8	4.2	303.6	15.8
	0700	0.06	0.00	121	1.0	10.6	76	6.6	3.7	304.3	15.7
	0800	0.20	0.10	303	1.0	15.0	59	6.9	3.5	298.6	15.6
	0900	0.37	0.70 Y	485	1.0	16.6	53	7.1	5.7	311.8	15.5
	1000	0.50 Y	1.20 Y	643	1.0 Y	17.8	49 Y	6.9 Y	6.0	321.3	15.5
	1100	0.61 Y	1.00 Y	759	1.0 Y	19.1	45 Y	6.9 Y	6.1	311.8	15.5
	1200	0.67	0.70 Y	824	1.0	20.5	43	7.4	5.9	314.2	15.5
	1300	0.71 Y	1.00 Y	828	0.9 Y	21.8	35 Y	5.5 Y	5.9	313.9	15.6
	1400	0.67 Y	1.40 Y	769	0.9 Y	22.3	34 Y	5.8 Y	5.7	324.7	15.7
	1500	0.60	0.30 Y	659	0.9	23.5	30	4.7	5.4	328.0	16.0
	1600	0.49	0.00	501	0.8	23.9	27	4.0	5.3	341.5	16.2
	1700	0.37	0.00	318	0.8	23.3	26	2.9	5.6	347.0	16.4
	1800	0.22	0.00	133	0.8	21.8	31	3.9	4.8	346.1	16.5
	1900	0.12	0.00	8	0.8	18.9	37	4.0	5.2	325.0	16.6
	2000	0.09	0.00	0	0.8	16.5	45	4.5	4.9	313.5	16.6
	2100	0.07	0.00	0	0.9	15.1	52	5.4	4.9	313.7	16.6
	2200	0.05	0.00	0	0.8	13.8	53	4.3	4.0	318.1	16.6
	2300	0.06	0.00	0	0.8	12.8	54	3.7	5.0	325.1	16.5
	2400	0.04	0.00	0	0.8	11.9	58	3.8	3.8	331.8	16.4
Tots/Avgs		6.00	6.40	265	0.9	16.7	51	5.6	4.7	315.8	16.1

## Whats new?

Hourly data updated every 6 hours **Spatial CIMIS** My CIMIS Email scheduler

### .gov/cimis/data.jsp



* <u>m</u> Calif	ORNIA THE GO	LDEN STATE	CALIFORNIA GOVERNOR'S HOMEPAGE HOMEPAGE						
WELCOME INFO CENTER	CALIFOR CIMIS DATA RESOURCE CENTER	NIA IRRIGATION MANAGEMENT INFORMATION ST DEPARTMENT OF WATER RESOL OFFICE OF WATER USE EFFIC MY CIMIS SPATIAL CIMIS	JRCES						
Welcome Back DWR-SAN	CIMIS Data								
Hourly Daily Daily ETo Variance Monthly Monthly Average ETo	<ul> <li>The CIMIS Data page enables users to:</li> <li>View daily and monthly sample reports;</li> <li>Create and edit a user account;</li> <li>Retrieve CIMIS data;</li> <li>Read important information on CIMIS quality control;</li> </ul>								
Quality Control	<ul> <li>Read detailed information on CIMIS data types, formats, and sizes;</li> <li>View the weather station list.</li> </ul>								
QC Overview Current Flag Summary Current Hourly Flags Current Daily Flags Former Flag Summary Former Hourly Flags	CIMIS data can be accessed and retrieved free of charge. Although membership is not a requirement, access to o for Unregistered Users is limited to the Sample Reports. Registered Users have the privilege of accessing the ent CIMIS data set. Registration information is confidential and used by CIMIS staff for statistical reports and to provide better services. Therefore, we encourage users to register and create a CIMIS user account. <b>Note:</b> CIMIS Date Ranges defaults to seven days (starting from yesterday) for hourly and daily reports, and twelve								
Former Daily Flags	months (starting from last month) for monthly reports. These defaults can be changed by going into the My CIMIS tab and changing your preferences. These new preferences will become your defaults for all data reports generated afterwards, from both the Data and My CIMIS tabs.								
More Info	and wards, non both the ba								
Station List	Welcome Back DWR-	Welcome Back DWR-SAN							
Data Types Data Formats	Log Off	Clicking on Log Off will disconnect your computer fr	om the CIMIS database.						
Data Size	Hourly Hourly provides standard hourly and hourly by sensor data reports for s weather station(s) and date range specified.								

## Necessary to select the end date as today's date. Default setting is yesterday's date.

(IS - [ Hourly ] - Windows Internet Explorer		
🕥 👻 🙋 http://www.cimis.water.ca.gov/cimis/logon.do?forwardURL=/front	HourlyReport8selTab=data	Google
Edit View Favorites Tools Help		
gle 🚽 🚰 Search 🔹 🖓 🏢 🗧	📲 🔹 🖉 Share 🛪 🔊 🛪 🕼 Check 🛪 🍇 Translate 🛪 🍯 AutoFill 🔹 🍠	🦴 🗸 🌙 Sign In 🔹 🌪 🚽
CIMIS - [ Hourly ]		🏠 👻 🔜 👻 🖶 Page 👻 🎯 T <u>o</u> ols 🔹 💥
	Check the following checkbox to see the sensor list. Selecting a sensor(s) from this list overrides the default standard report format and produces report by sensor. Skip this section if your intention is to generate standard reports. Select Sensors Hours Default 24 hours. Check the following checkbox to select hours. Skip this section if you want all 24 hours included in your report. Select Hours Units Select Hours Units Select unt. Unit: Metric V Date Bande Select yours Date Bande Select your compare the default setting for date range is the previous 7 days. Start Date: April V 25 V 2011 V End Date: May V 1 V 2011 V Reporting Method Select reporting methods the bane for defaults Verb Report Or CSV with readers CSV with readers CSV with readers CSV with readers (non-report format) Xult Network Report	

🖉 Hourly	Report - W	/indow	/s Inter	net Exp	lorer							
00	🕶 🥫 http:	://wwwc	imis.wate	er.ca.gov,	/cimis/ho	urlyRep	oort.do				Google	P •
<u>File E</u> dit	View Fav	/orites	Tools	Help								
Google					-	- 3	Search	• •	•	💽 si	are * 🔕 * 🛛 🗛 Check * 🙇 Translate * 🍠 AutoFill * 🤌	🦴 t 🥥 Sign In 🔹 🌪 👻 🗣
🛠 🏟	6 Hourly R	eport									🕅 * 🔊	- 🖶 - 🔂 Page - 🍥 T <u>o</u> ols - 🎽
	1800 0.25	0.00	198	0.5	24.1	15	-3.9	3.5	311.9	18.1		~
	1900 0.09	0.00	26	0.5	20.7	21	-2.7	2.0	322.0	16.2		
	2000 0.04	0.00	0	0.5	16.9	28	-1.6	1.4	319.4	16.3		
	2100 0.05	0.00	0	0.5	13.6	34	-2.1	2.2	254.5	16.3		
	2200 0.04	0.00	0	0.5	13.2	33	-2.9	1.9	255.1	16.2		
	2300 0.03	0.00	0	0.5	11.2	36	-3.2	1.6				
<b>T</b> 1 11	2400 0.02	_	0	0.5	9.2	44	-2.6	1.6				
Tots/Avgs	6.82	0.00	311	0.5	16.3	30	-2.5	2.8	273.0	15.5		
FivePoi	nts - San	Joad	uin Va	llev - S	tation	2						
Date	Hour ETo		Sol	Vapor	Air	Rel	Dew			Soil		
	(mm)	(mm)	Rad (W.sq.m		Temp (°C)	Hum (%)	Point (* C)		d Dir (0- 360)			
05/02/2011	0100 0.02	0.00	0	0.5	8.8	48	-2.1	1.8	174.8	15.9		
	0200 0.01	0.00	0	0.5	7.9	50	-1.9	1.3	198.8	15.8		
	0300 0.01	0.00	0	0.6	7.4	53	-1.4	1.3	226.2	15.7		
	0400 0.01	0.00	0	0.5	6.7	50	-3.0	1.2	209.0	15.5		
	0500 0.01	0.00	0	0.5	6.0	52	-3.2	1.2	220.5	15.4		
	0600 0.02	0.00	42	0.5	6.3	57	-1.5	1.0		15.3		
	0700 0.11	0.00	209	0.7	11.8	48	1.2	0.8	168.9	15.2		
	0800 0.24 0900 N	0.00 1 N	397 1 M	0.7 M	17.3 M	37 M	2.3	0.8 1 N	118.1 ИМ	15.1 M		
	1000 - N			M	M	M				M		
	1100 N			M	M	M				M		
	1200 - N	1 N	4 M	M	M	M	- M	1 N	и – м	M		
	1300 - N	1 N	4 M	M	M	M	M	1 N	M N	M		
	1400 - N	1 - N	4 - M	M	M	M	M	1 N	M N	M		
	1500 - N	1 - N	4 - M	M	M	M	M	1 N	M N	M		
	1600 N			M	M	M				M		
	1700 - N			M	M	M				M		
	1800 N			M	M	M				M		
	1900 N			M	M	M				M		
	2000 N 2100 N			M M	M M	M M				M M		
	2100 N 2200 N			M	M	M				M		
	2300 - N			M	M	M				M		
	2400 - N			M	M	M				M		
Tots/Avgs	0.43	0.00	81	0.6	9.0	49	-1.2	1.2	180.3	15.5		×
Done											😜 Inter	net 🔍 100% 🔻 💡

### Spatial cimis

wwwcimis.water.ca.gov/cimis/cimiSatModel.jsp

## Spatial CIMIS

- Because of California's diverse landmass and climate, many locations within the state lack a representative CIMIS station
- CIMIS initiated a project with the UC Davis to explore the potential for using remotely sensed data for the estimation of ETo (to mitigate the spatial data gap).
- Geostationary Operational Environmental Satellites (GOES) were selected..

 The Department of Water Resources (DWR) formed an advisory committee comprised of individuals with expertise in remote sensing, GIS, modeling, and water management from DWR and UCD. The committee met, on an as needed basis, to discuss new developments and plan future actions. After thorough research, the team decided to use combinations of data derived from satellites and interpolated between CIMIS station measurements to estimate ETo at a 2 km spatial resolution.

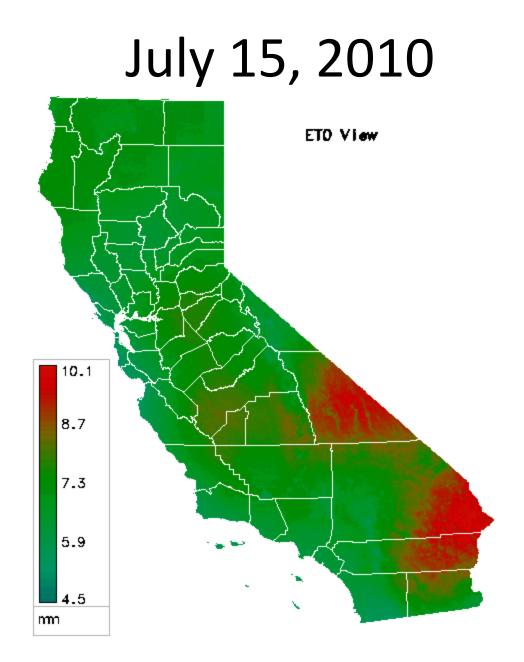
 Daily reference evapotranspiration (ETo) at 2 km spatial resolution was calculated statewide using the American Society of Civil Engineers version of the Penman-Monteith equation (ASCE-PM). Required input parameters for the ASCE-PM ETo equation are solar radiation (Rs), air temperature (Ta), relative humidity (RH), and wind speed at two meters height (U2). These parameters are estimated at each pixel (2 km square grid) using various methods.

 Daily Rs (solar radiation) is generated from the visible band of the National Oceanic and Atmospheric Administration's (NOAA) Geostationary Operational Environmental Satellite (GOES) using the Heliosat-II model.  Air temperature, relative humidity, and wind speed values at each pixel were obtained by interpolating between point measurements from the CIMIS stations. Two interpolation methods, DayMet and Spline, were selected based on accuracy of results, code availability, and computational efficiency.

- Daily Rs from GOES
- Air Temperature (Ta), Relative Humidity (RH), Wind speed (U2) collected from CIMIS weather stations. (Interpolated)

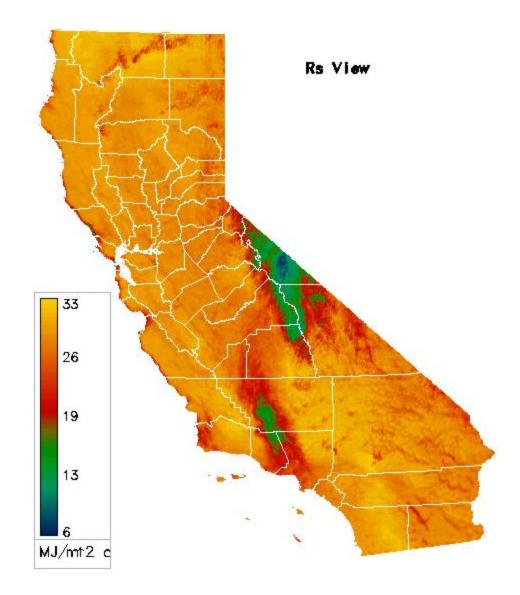
• Spatial CIMIS ET<sub>o</sub>

## Daily CIMIS ET<sub>o</sub> Map

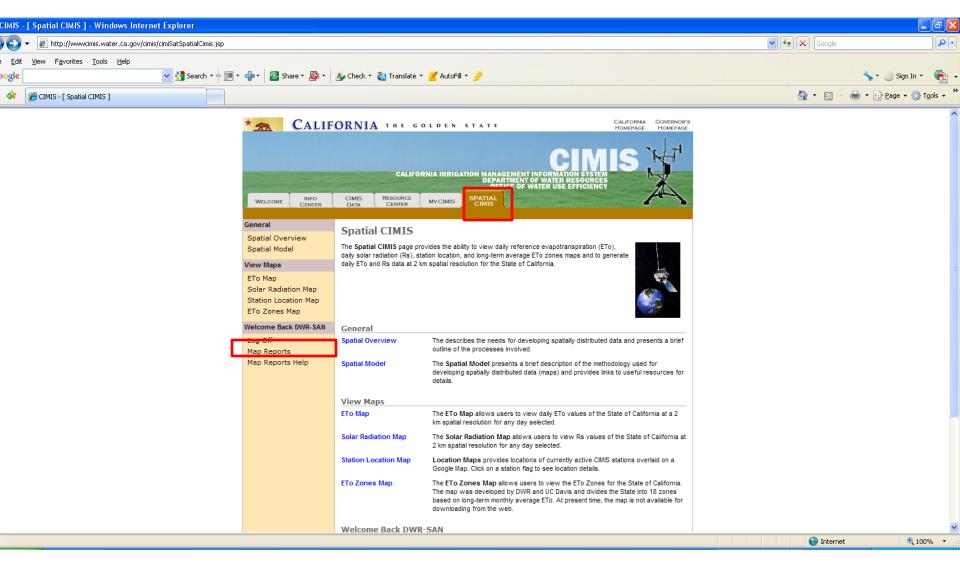


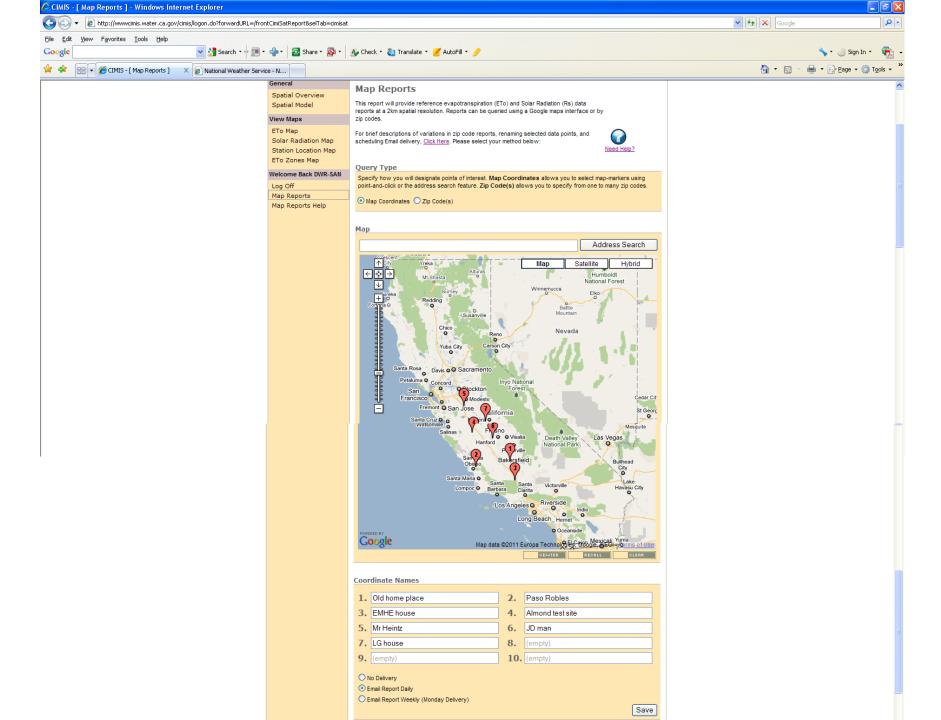
### Daily solar radiation map

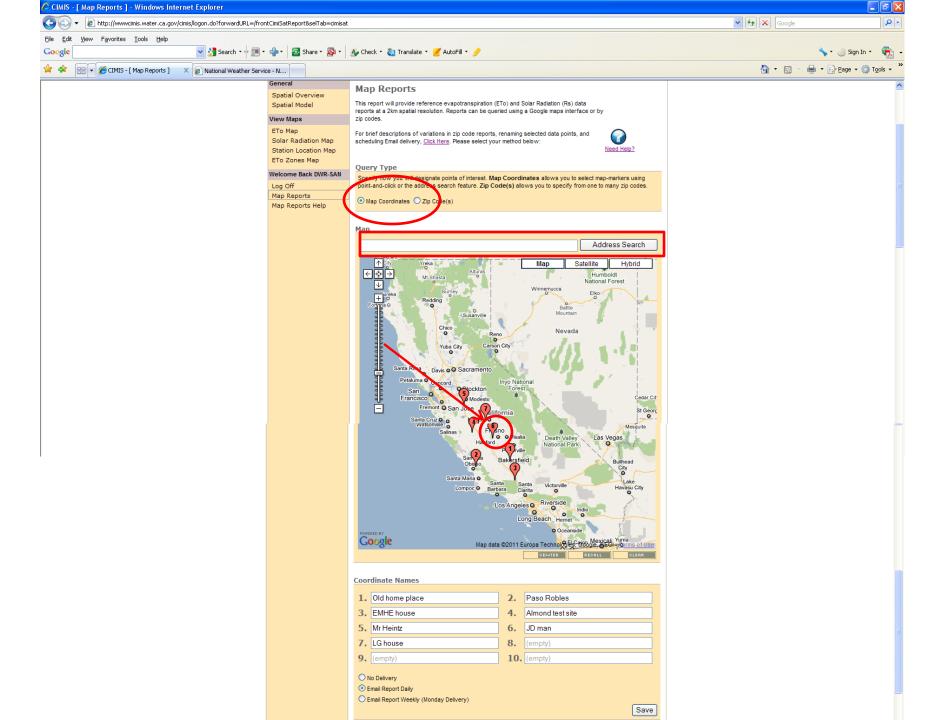
## July 16, 2010

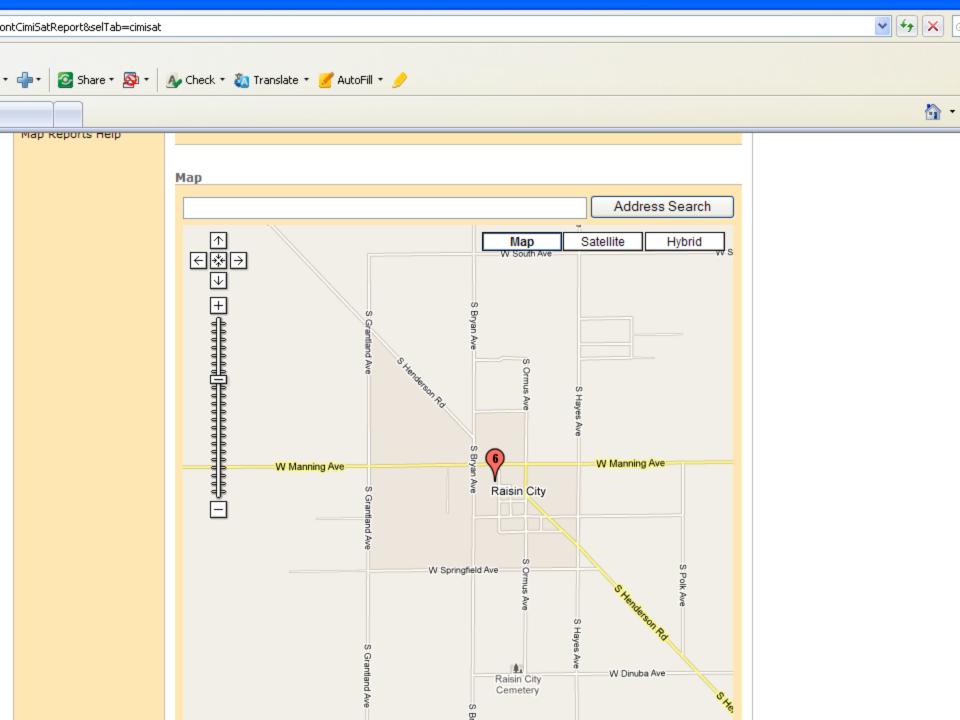


## Spatial CIMIS Map Report









Coordinate Names								
1. Old home place	2.	Paso Robles						
3. EMHE house	4.	Almond test site						
5. Mr Heintz	6.	JD man						
7. LG house	8.	(empty)						
9. (empty)	10.	(empty)						
<ul> <li>No Delivery</li> <li>Email Report Daily</li> <li>Email Report Weekly (Monday Delivery)</li> </ul>								
Units Select unit.								
Unit: Metric V Or english								
Date Range								
Specify date range. The default setting for date range								
Start Date: April 💙 2	20 🔺 20	11 👻						
End Date: April 💙 2	26 🔽 20	11 🕶						
Reporting Method								
Select reporting method. Click here for details.								
Web Report								
CSV with Headers								
		Submit Reset						

🧭 Spatial CIMIS Report - Windows Internet Explorer								
COO - 🙋 http://www.cimis.water.ca.gov/cimis/cimiSatReport.do								
<u>F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp								
Google Search 🔹 🛅 🗧 📲 🔹 🤷 Share ד 🧟 ד 🦓 Check ד 🧞 Translate ד 🍠 AutoFill ד 🏈								
🛠 🛠 😬 🗸 🏈 Spatial CIMIS Report 🛛 🗙 🕞 Communications: Wireless, r								

## Point #1 - (35.8594, -119.2059) Date ETo Rs (in/day) (Ly/day) 07/14/2010 0.28 690.77

07/15/2010 0.30 686.21 07/16/2010 0.26 564.07 Totals/Avgs 0.84 647.02

### Point #2 - (35.6595, -120.5750)

· · · ·		
Date	ETo (in/day)	Rs (Ly/day)
07/14/2010	0.27	720.89
07/15/2010	0.29	713.69
07/16/2010	0.29	703.92
Totals/Avgs>	0.84	712.83

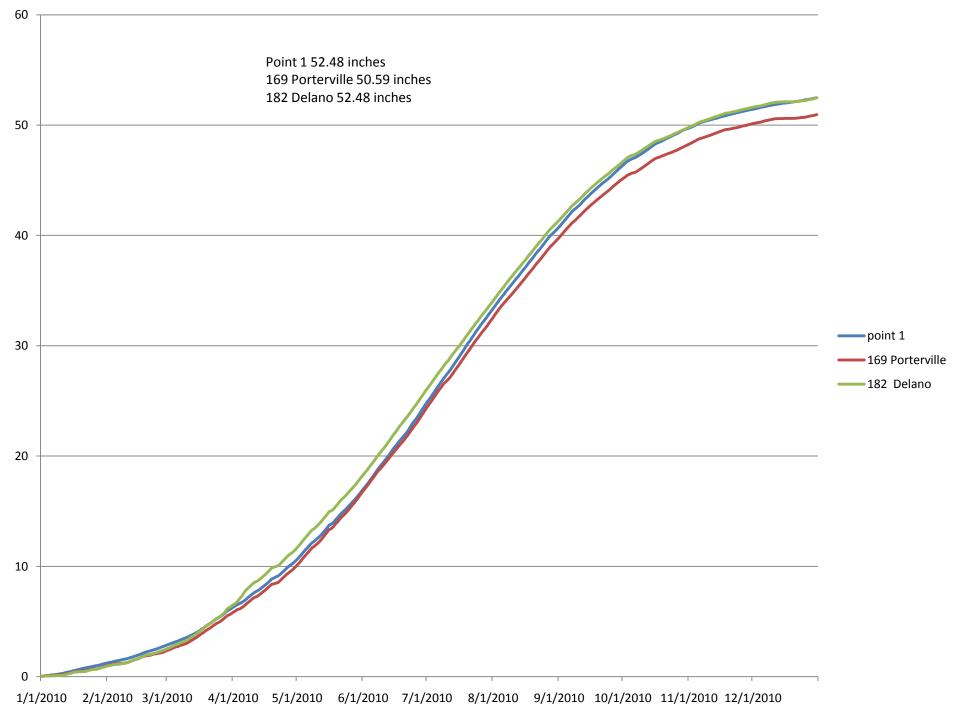
### Point #3 - (35.2170, -119.0033)

Date	ETo (in/day)	Rs (Ly/day)
07/14/2010	0.26	690.65
07/15/2010	0.27	688.84
07/16/2010	0.21	409.64
Totals/Avgs	0.75	596.38

### Point #4 - (36.7832, -120.7455)

Date	ETo (in/day)	Rs (Ly/day)
07/14/2010	0.28	705.06
07/15/2010	0.29	668.94
07/16/2010	0.30	654.09
Totals/Avos	0.87	676.03

Point	Lat	Long	Date	CIMIS ETo (in) (in/day)	Sol Rad (Ly/day)
	1 35.86	-119.21	7/14/2010	0.28	690.77
	1 35.86	-119.21	7/15/2010	0.3	686.21
	1 35.86	-119.21	7/16/2010	0.26	564.07
	2 35.66	-120.58	7/14/2010	0.27	720.89
	2 35.66	-120.58	7/15/2010	0.29	713.69
	2 35.66	-120.58	7/16/2010	0.29	703.92
	3 35.22	-119	7/14/2010	0.26	690.65
	3 35.22	-119	7/15/2010	0.27	688.84
	3 35.22	-119	7/16/2010	0.21	409.64
	4 36.78	-120.75	7/14/2010	0.28	705.06
	4 36.78	-120.75	7/15/2010	0.29	668.94
	4 36.78	-120.75	7/16/2010	0.3	654.09
	5 37.71	-121.14	7/14/2010	0.27	689.35
	5 37.71	-121.14	7/15/2010	0.29	688.81
	5 37.71	-121.14	7/16/2010	0.29	681.51
	6 36.6	-119.91	7/14/2010	0.3	688.66
	6 36.6	-119.91	7/15/2010	0.32	687.96
	6 36.6	-119.91	7/16/2010	0.32	681.71
	7 37.24	-120.26	7/14/2010	0.29	684.39
	7 37.24	-120.26	7/15/2010	0.3	690.48
	7 37.24	-120.26	7/16/2010	0.31	652.22



• Woodville

169 Porterville

Poplar-Cotton Center

• Pixley

• Terra Bella

Earlimant

Point 1

182 Delano

Image USDA Farm Service Agency Image © 2011 DigitalGlobe © 2011 Google Ducor

14

## My CIMIS

] - Windows Internet Explorer		
/www.cimis.water.ca.gov/cimis/myCimis.jsp		🖌 🗲 🗙 Google
rites Iools Help		
🔽 🛃 Search 🔹 🧰 🗧 📲 🔹 🔯 Share ד 🔯 ד 🛛 👧 Check ד 🝇 Translate ד 🅑 AutoFill ד 🎐		<b>*</b> *
Ay CIMIS ]		🏠 • 🗟 - 🖶 • 🗗
* CALIFORNIA THE GOLDEN STATE	California Governor's Homepage Homepage	
	N T	

				PRNIA IRRIGA	DEPAR	CIMIS OF WATER RESOURCES
WELCOME	INFO CENTER	CIMIS DATA	RESOURCE CENTER	MY CIMIS	SPATIAL CIMIS	
Account Mana Logon Registration	gement	selecting re CIMIS will k If you have account by ready to er User Name	provides simple sport preference eep track of this e not yet created completing a br ijoy the ease an and Password. Manageme	es, develop cus s profile for you i a user accour ief registration d convenience . Once logged i <b>nt</b> The Logo name and activity for <b>Registrat</b> information	tom reports, ai r next visit. at, click on the I form. After cre of My CIMIS. R n, users can m n page allows password. You 10 consecutiv ion allows use of members v only. You can 6	an customize your own profile including and create station lists preferences. My e Registration link below and create an reating a CIMIS user account, you ar Registered CIMIS users can simply click on Logon and enter mange their user account, including changing the password. s you to access the CIMIS database by entering your user ou will be disconnected from the CIMIS database if there is no ive minutes. sers to create their own user names and passwords. Personal will not be compromised in any way and is used for statistical n edit your Registration and change your password in the My
Back to	Тор	At	oout Us	Co	ntact Us	Site Map

Conditions of Use | Privacy Policy | Comments or Suggestions? © 2009 State of California.

	terne		
s m		- F X	

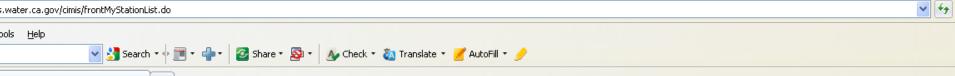
<b>~</b>	<b>7</b> ×	G
----------	------------	---

.ca.gov/cimis/logon.do?forwardURL=/fron	ntMyReport&selTab=my.cimis					💌 🗲 🗙 Go
Help 🔀 Search 🔹 🖓 🏹	• 👍 • 👩 Share • 🔊 •	📣 Check 🔹 👸 Translate 🔹 🍠 AutoFill 🍷 🤞	•			
						🗿 🔹 (
	and the second se	CALIFORNIA IRRIGATION	MANAGEMENT INFORMATIO DEPARTMENT OF WATER RI OFFICE OF WATER USE E	ON SYSTEM ESOURCES	07	
	WELCOME INFO CENTER	CIMIS RESOURCE MY CIMIS SF	OFFICE OF WATER USE E	FFICIENCY	A	
	Welcome Back DWR-SAN					
	My Reports	My Reports				
1	My Station Lists	The My Reports allows you to perform single				
	My Preferences	reports. There are three station lists (List 1, Lis A list must contain at least one station before e				
	Account Management	from the list by clicking on Create/Change Stati	on Lists and clicking on Remove.			
1	Log Off	on a station number will provide detailed inform	ation about the station.			
	Edit Registration Change Password	After specifying Station Lists, you can generat by clicking on the list number to the right (list 1, listed at the bottom of the Station Lists. Prefere Preferences at the bottom of the Station Lists. parameters), to be reported.	list 2, or list 3). These reports an ences for Quick Reports can be o	re generated using the f changed by clicking on (	Preferences Change	
		Quick Reports		My Station Lists		
		Report Options		List 1 List 2		
1		Standard Hourly (using prefs)	list 1   list 2   list 3	056 002	005	
		Standard Daily (using prefs)	list 1   list 2   list 3	071 007	015	
		Standard Daily ETo Variance (using prefs) Standard Monthly (using prefs)	list 1   list 2   list 3 list 1   list 2   list 3	092 033 148 039	021 054	
		Standard Monthly (using prets) Standard Monthly Average ETo (using prefs)	list 1   list 2   list 3 list 1   list 2   list 3		125	
				161 086	138	
		My Custom Reports		166 105	146	
		Report Options		167 124	169	
		sewert sewert2	list 1   list 2   list 3   customize	168 142 145	182 190	
		sewert2 sewert3	list 1   list 2   list 3   customize list 1   list 2   list 3   customize			
		sewert4	list 1   list 2   list 3   customize			
				Ny Preferences		
		Tip: Custom reports allow you to name your ov	wn	Name Zip Codes	Value 95616	
		very specific report styles. You can choose th		Zip Codes Units	Metric	
		report type, unit, date range, and even the field		Output	WEB Report	
		that will appear in your report. Property values specified as "report preferences" will not be us		Hourly Report	7 Days	
		in custom reports.	500	Daily Report Monthly Report	7 Days 12 Months	
				Monthly Report Change F	Preferences	
	Peak to Ten	About Us Contact	11-	Site Map		
	Back to Top	About US Contact	US	Site Map		

Conditions of Use | Privacy Policy | Comments or Suggestions?

### - Windows Internet Explorer

#### water.ca.gov/cimis/frontMyStationList.do



Lists ]

Account Management		Manage Statior	Lists	My Reports
Log Off	-9-	List 1	List 2	List 3
Edit Registration Change Password		056   remove	002   remove	005   remove
Change Password		071   remove	007   remove	015   remove
		092   remove	033   remove	021   remove
		148   remove	039   remove	054   remove
		155   remove	080   remove	125   remove
		161   remove	086   remove	138   remove
		166   remove	105   remove	146   remove
		167   remove	124   remove	169   remove
		168   remove	142   remove	182   remove
	In the second between the low		145   remove	190   remove

To place stations under any of the three lists, simply click the "Add" option for the desired "list" and "station". Clicking the Add option will immediately add the seleted station to the appropriate list above. Stations from the list above may be removed by clicking the "Remove" option.

#### \* Station is Currently Inactive

Station	Name	County	Add to List 1	Add to List 2	Add to List 3
001*	Fresno/F.S.U. USDA	Fresno	(add 001)		
002	FivePoints	Fresno	(add 002)	(included)	
003*	Beach /Santa Cruz CO	Santa Cruz	(add 003)		
004*	Webb /Santa Cruz CO	Santa Cruz	(add 004)		
005	Shafter/USDA	Kern	(add 005)		(included)
006	Davis	Yolo	(add 006)		
007	Firebaugh/Telles	Fresno	(add 007)	(included)	
008	Gerber	Tehama	(add 008)	-	
00 <b>9 *</b>	Lamont	Kern	(add 009)		
010 *	Bakersfield/Greenlee	Kern	(add 010)		
011 *	Bakersfield/Bonanza	Kern	(add 011)		
012	Durham	Butte	(add 012)		
013	Camino	El Dorado	(add 013)		
014 *	Orland	Glenn	(add 014)		
015	Stratford	Kings	(add 015)		(included)
016 *	San Juan	Monterey	(add 016)		-
017 *	El Centro	Imperial	(add 017)		
018 *	Westmorland	Imperial	(add 018)		
019	Castroville	Monterey	(add 019)		
020 *	Corcoran	Kings	(add 020)		
021	Kettleman	Kings	(add 021)		(included)
022 *	Caruthers	Kings	(add 022)		
172 *	King City	Monterev	(add 022)		

	terne		
s m		- F X	

~	47	X	Goo
---	----	---	-----

.ca.gov/cimis/logon.do?forwardURL=/frontMyReport&selTab=my.cimis				🔽 🛃 🔀 🖸 Goo
Help 😽 🎦 Search 🔹 🖓 🖛 🚽 🖓 Share र 🧟 🗸	🗛 Check 🔹 🗞 Translate 🔹 🧭 AutoFill 🔹 🥠			
				🟠 • E
	CALIFORNIA IRRIGATION MANAGEMENT INFORMATIO DEPARTMENT OF WATER RE OFFICE OF WATER USE EI		0	
the second s	OFFICE OF WATER USE EI	FFICIENCY	2	
WELCOME INFO	CIMIS RESOURCE MY CIMIS SPATIAL CIMIS		the state	
VIELCOME CENTER	DATA CENTER CIMIS CIMIS			
Welcome Back DWR-SAN				
My Reports	My Reports			
My Station Lists	The My Reports allows you to perform single-click reporting, select report pre	ferences, and prepare cu	stom	
My Preferences	reports. There are three station lists (List 1, List 2, and List 3) and each list can A list must contain at least one station before executing reports from this page.			
A	from the list by clicking on Create/Change Station Lists and clicking on Remove.			
Account Management	on a station number will provide detailed information about the station.		, ,	
Log Off	After specifying Station Lists, you can generate a report in any one of the repo	rt ontione lieted under Oui	ck Penorte	
Edit Registration	by clicking on the list number to the right (list 1, list 2, or list 3). These reports an			
Change Password	listed at the bottom of the Station Lists. Preferences for Quick Reports can be c		-	
	Preferences at the bottom of the Station Lists. Custom reports allows the user t parameters), to be reported.	o select the options (clima	itic	
	Quick Reports	My Station Lists		
	Report Options	List 1 List 2	List 3	
	Standard Hourly (using prefs) list 1   list 2   list 3	056 002	005	
	Standard Daily (using prefs) list 1   list 2   list 3 Standard Daily (Using prefs) list 4   list 2   list 3	071 007	015	
	Standard Daily ETo Variance (using prefs)     list 1   list 2   list 3       Standard Monthly (using prefs)     list 1   list 2   list 3	092 033 148 039	021 054	
	Standard Monthly Average ETo (using prefs) list 1 list 2 list 3	155 080	125	
		161 086	138	
	My Custom Reports	166 105	146	
	Report Options	167 124	169	
	sewert list 1   list 2   list 3   customize	168 142	182	
	sewert2 list 1   list 2   list 3   customize	145	190	
	sewert3 list 1   list 2   list 3   customize sewert4 list 1   list 2   list 3   customize	Create/Change Sta	tion Lists 🕨	
	sewert4 list 1   list 2   list 3   customize	My Preferences		
		Name	Value	
	Tip: Custom reports allow you to name your own very specific report styles. You can choose the	Zip Codes	95616	
	report type, unit, date range, and even the fields		Metric	
	that will appear in your report. Property values		WEB Report	
	specified as "report preferences" will not be used		7 Days	
	in custom reports.		7 Days 12 Months	
		Change Pre	ierences 🖡	
Back to Top	About Us Contact Us	Site Map		

🖉 CIMIS - [ My Preferences ] - Windows Internet Explorer		
G + Ittp://www.cimis.water.ca.gov/cimis/frontReportPref.do		Google
Eile Edit View Favorites Iools Help		
Google Search • 🖓 📲 • 🖉 Share • 📓	🔹 💩 Check 🔹 🍇 Translate 👻 🥑 AutoFill 👻 🥜	🦴 + 🌙 Sign In + 🛛 🌪 -
😭 🏟 🎉 CIMIS - [ My Preferences ]		🟠 🔹 🗟 🕤 🖶 Page = 🎯 T <u>o</u> ols = 🎽
Welcome Back DWR-S           My Reports           My Preferences           Account Management           Log Off           Edit Registration           Change Password	My Preferences My Pr	
Done		Turternet Turk Turk Turk

	terne		
s m		- F X	

.ca.gov/cimis/logon.do?forwardURL=/frontMyReport&selTab=my.cimis

*	47	×	Goo
---	----	---	-----

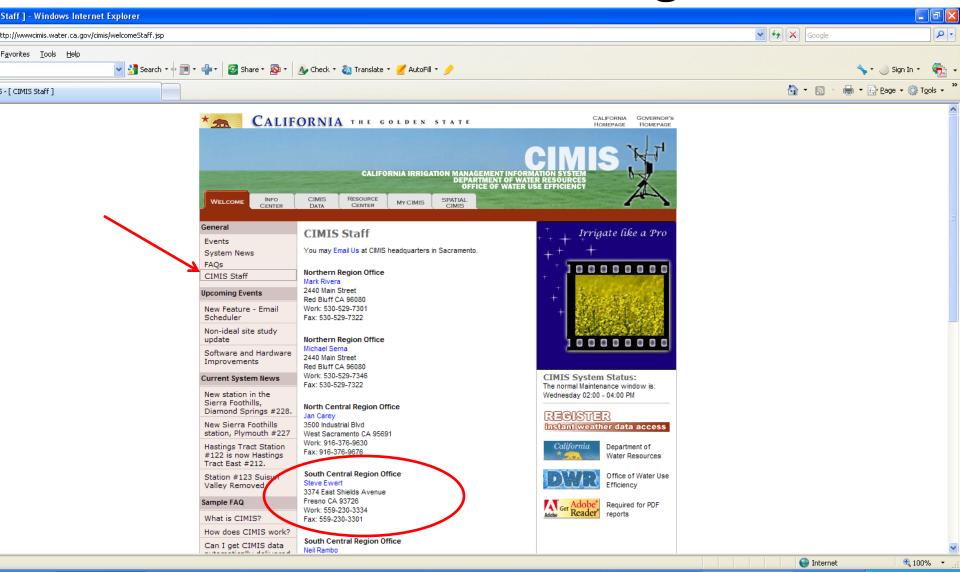
logon.dostorwardokc=/rronknykeportoserrab=my.cimis			
🗸 🛃 Search • 🖗 🛅 • 🖣 • 🛛 🐼 Share • 🔊 •	🔍 Charle e 🦛 Typodoto e 🥣 AutoFill e 🥠		
	My Check · 🔬 Iransiale · 🦉 Autonii · 🍠		
Contraction of the second second	CALIFORNIA IRRIGATION MANAGEMENT INFORM DEPARTMENT OF WATE	R RESOURCES	
and the second	OFFICE OF WATER U	SE EFFICIENCY	
WELCOME INFO	CIMIS RESOURCE MY CIMIS SPATIAL	the second secon	
WELCOME CENTER	DATA CENTER CIMIS CIMIS		
Welcome Back DWR-SAN			
	My Reports		
My Reports		t f and prepare quatern	
My Station Lists	The My Reports allows you to perform single-click reporting, select report reports. There are three station lists (List 1, List 2, and List 3) and each list		
My Preferences	A list must contain at least one station before executing reports from this p	· · · · · · · · · · · · · · · · · · ·	
Account Management	from the list by clicking on Create/Change Station Lists and clicking on Ren		
-	on a station number will provide detailed information about the station.		
Log Off	After specifying Station Lists, you can generate a report in any one of the	report options listed under Quick Reports	
Edit Registration	by clicking on the list number to the right (list 1, list 2, or list 3). These report		
Change Password	listed at the bottom of the Station Lists. Preferences for Quick Reports can		
	Preferences at the bottom of the Station Lists. Custom reports allows the	user to select the options (climatic	
	parameters), to be reported.		
	Quick Reports	My Station Lists	
	Report Options	List 1 List 2 List 3	
	Standard Hourly (using prefs) list 1   list 2   Standard Daily (using prefs) list 4   list 2		
	Standard Daily (using prefs)     list 1   list 2         Standard Daily ETo Variance (using prefs)     list 1   list 2		
	Standard Daily LTO Vanance (dailing prets) list 1   list 2   Standard Monthly (using prefs) list 1   list 2		
	Standard Monthly Average ETo (using prefs) list 1   list 2		
		161 086 138	
	My Custom Reports	166 105 146	
	Report Options	167 124 169	
	sewert list 1   list 2   list 3   custor		
	sewert2 list 1   list 2   list 3   custo sewert3 list 1   list 2   list 3   custo		
	sewert3 list 1   list 2   list 3   custo sewert4 list 1   list 2   list 3   custo		
	admott	My Preferences	
		Name Value	
	Tip: Custom reports allow you to name your own	Zip Codes 95616	
	very specific report styles. You can choose the report type, unit, date range, and even the fields	Search Units Metric	
	that will appear in your report. Property values	Output WEB Report	
	specified as "report preferences" will not be used	Hourly Report 7 Days	
	in custom reports.	Daily Report 7 Days Monthly Report 12 Months	
		Change Preferences	
Back to Top	About Us Contact Us	Site Map	

Conditions of Use | Privacy Policy | Comments or Suggestions?

🖉 CIMIS - [ Custom Report ] - Windows Internet Explorer			
COO - E http://www.cimis.water.ca.gov/cimis/frontEditCustomReport.d	o?reportId=1		Soogle
File Edit View Favorites Iools Help			
	🛨 📇 T 🐼 Share T 🚳 T	🔬 Check 🔻 🍇 Translate 👻 🥑 AutoFill 👻 🍠	an a
2 CIMIS - [ Custom Report ]			🟠 👻 📾 👻 📑 Tools 🗸
	My Reports My Station Lists	Custom Report	
	My Preferences	Custom Reports allow you to define your very own report. Give your report a name and customize the report by	
	Account Management	specifying your preferences. You can choose the type of report and even the sensors that will appear in the repo You must check at least one sensor type.	t.
	Log Off		
	Edit Registration	My Reports Specify Report Parameters	
	Change Password	Report Name: sewert	
		Report Name: sewert	
		Report Type: O Hourly	
		Daily	
		O Monthly	
		Unit: Metric 🗸	
		Output Method: O Web Report	
		O PDF	
		CSV with Headers     XML	
		↓ XML	
		Date Range (in Days): 7	
		Select Sensor Types	_
		Solar Radiation Wind Rose (Daily Only)	
		Net Radiation     Precipitation	
		Soil Temperature Relative Humidity	
		✓ Air Temperature         ✓ Dew Point           ✓ Vapor Pressure         ✓ CIMIS ETo	
		Wind Speed PM ETo	
		* Misc. Wind Factors	
		* Misc. Wind Factors for Daily and Monthly Reports include: wind cubed and wind run Hourly Reports include: resultant wind, wind direction, wind direction standard deviation, and wind gust.	
		Schedule to be Emailed	
		* Requirements: You must have a valid email address in your registration. XIML and CSV are the only reports currently available for scheduling. Scheduled reports are generated and emailed about 6 AM, for the prior day's data back to the number of days in the "Date Range", so you may want to adjust the "Date Range" accordingly. T unregister from this scheduled service return to this page and deselect this option.	0
		Schedule this Report Station List 3	J
		Frequency (Default: Weekly/Monday):	
		Weekly Report	
		Sunday <u>Weekly frequency</u> schedules a report to be emailed on the     day of the week chosen.	
		Monday     Tuesday <u>Monthly frequency</u> schedules a report to be emailed on the	
		Wednesday         2nd of the month, to make sure all data is in the database.           * If the "Date Range" is greater than 29 days, the report will	
		Thursday end on the last day of the previous month.	
		Friday <u>Annual frequency</u> schedules a report to be emailed on the	
		Saturday     Saturday     Zind of the year, to make sure all data is in the database.     "If the "Date Range" is greater than 29 days, the report will	
		Annual Report     Annual Report	
		Delete This Custom Rej	ort
		Save	t
Done			S Internet 🔍 100% 🕶

93	<b>9</b> • (* • ) •							export1home	cimisCimisMail	outputDWRSJD_DAY_E	NG_12 - Microsoft (	Excel				-	. 🗆 X
$\sim$	Home Insert	Page Layo	out Form	mulas Da	ita Revi	ew Viev	w ASAP Utilities	Acrobat									- = ×
	👗 Cut	Calibri	* 11	· A A	= = =	- 8/	🚽 Wrap Text	General	*		Normal	Bad G	Good	- <b>-</b>	Σ AutoSum	* 🚁 🏔	
Paste	🖹 Сору	D 7 II					Merge & Cente	r - <b>\$</b> - %	• • • • • • • •	Conditional Format	Neutral	Calculation	Check Cell	Insert Delete	Eormat	Sort & Find &	
-	I Format Painter	DIU			= = -					Formatting * as Table *					👻 📿 Clear 🔻	Filter * Select *	
	Clipboard 💿		Font	Gi.		Alignm	ient	Nu	mber 🕞		Style	25		Cells		Editing	
	A2 -	(	<i>f</i> <sub>*</sub> 2														*
	A B	С	D	E	F	G	H I	-	K	L M	N O	P Q	R S		U V	W X	
1 St			qc	Sol Rad(Ly	qc	Net Rad(L			Min Soil T qo	·				Air Tn qc	Max Vap Fqc	Min Vap P qc	A۱
2	2 FivePoint:			480		251		2.8	60.6	61.7	74	47		59.7	13	7	
3	2 FivePoints			612		319		2.2	60.4	61.2	72.4	43		58.5	8.8	4.1	
4	2 FivePoint:			607		319		2.2	59.4	60.8	76.3	40		59.6	9.6	4.2	
6	2 FivePoint: 2 FivePoint:			603 621 \	,	323 317		3.2 2.5	60.1 60.2	61.6 61	69.6	48		61.7 57.2 Y	14.1 6.7 Y	2.6 Y	
7	2 FivePoint: 2 FivePoint:			631		324		2.5 61	58.8	59.9	73.4	43		58.6	8.2	3.4 Y	
8	2 FivePoint:			641		324	6	1.4 Y	58.5 Y	59.9	78.5			61.3	8.5	3.6 Y	
9	7 Firebaugh			446		230		5.3	61.3	63.2	73.7	48		59.8	15.4	7.2	=
10	7 Firebaugh			650		333		4.9	60.5	62.7	71.3	42		57.7	9.4	5.6	
11	7 Firebaugh			649		331	6	6.1	60.3	63	76.8	44	.1	61.5	10.4	4.2	
12	7 Firebaugh	4/28/2011		644		340	6	6.6	61.6	64	76.3	48	.7	62	14	6.1	
13	7 Firebaugh	4/29/2011		674		331	6	4.5	60.2	62	69.3	46	.1	57.8	7.6	3.3	
14	7 Firebaugh	4/30/2011		672		334	6	3.7	58.6	61	73.5	47	.2	60.2	7.9	4	
15	7 Firebaugh	5/1/2011		679		337	6	4.7 Y	58.5 Y	61.5	79.6	39	.2	61.9	9.5	4.3	
16		4/25/2011		486		257	7	2.9	61.1	66.4	73.1	50	.8	61.5	13.5	8.5	
17		4/26/2011		641		334	7	3.5	60.4	66.2	71.5	48	.3	59.6	10.8	5.8	_
18		4/27/2011		637		334		5.4	59.5	66.7	76.5	42		60.4	10.6	6.1	
19		4/28/2011		628		335		6.5	61.3	68.3	77.6	45		63.3	12.5	6.9	_
20		4/29/2011		665		336		4.9	61.5	67.4	70.1	44		56.5	9.5	4.4	_
21		4/30/2011		660		337		4.9	59.7	66.6	72.6	39		56.8	10.3	5.1	
22	39 Parlier	5/1/2011		663		338		6.6	60.3	67.6	78.1			61.4	11	4.5	
23	80 Fresno Sta		0	479	_	254		2.8	60.2	61.4	72.2	51		60.1	13.1	8.2	
24 25	80 Fresno Sta			676 F		333 335		3.1 2.7	59.9	61.5	70.8	47		58.2 60	10.7	4.9	
25	80 Fresno Sta 80 Fresno Sta		n	672 F 663	1	335		2.7 3.1	59.2 59.2	61.1	75.5	42		61.8	10.6	4.1 6.4	
20	80 Fresho Sta		R	695 F	2	338		3.1 2.7	59.2	61.1	69.7	43		56.3	8.5	0.4 3.5 Y	
28	80 Fresno Sta			690 F		330		62	58.4	60.2	72	37		57.2	8.3	3.8	
29	80 Fresno Sta			691 F		339	6	1.7	58.1 Y	60	78.8	41		61.1	13.1 Y	4.2 Y	
30	86 Lindcove			472		247		9.1	66.7	67.9	74		46	61	13.9	8.8	
31	86 Lindcove			620		336		9.2	67	68.2	72.4	47		57.8	12.3	6.7	
32	86 Lindcove			624		331		9.4	66.2	67.9	76.7	41		59.9	13	8	-
	N export1home	imisCimisM	lailoutput	2			i					i	i	i		in the second	
Ready																00% 😑 🔍 🛡	•

### sewert@water.ca.gov

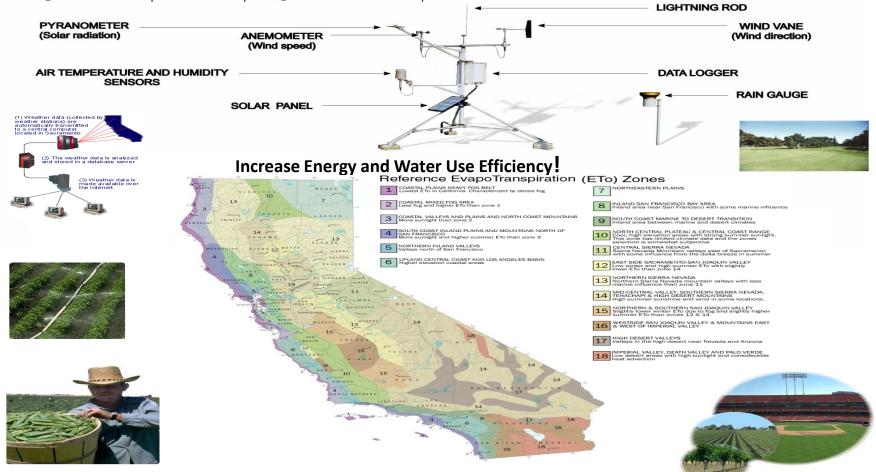


CALIFORNIA THE GOLDEN STATE

### California Irrigation Management Information System

### Irrigation Management Tool And More!

What is CIMIS? CIMIS? CIMIS is a network of automated and computerized weather stations located at key agricultural and urban areas of the state. The stations collect climatological data and transmit it to a main computer. After quality control of the data, irrigated grass water requirements or a reference evapotranspiration is calculated for each station. The data then is available to the agricultural and urban water users for irrigation of agronomic crops, landscapes, golf courses, and parks.



For More Information: call 1-800-922-4647 Or Visit Us Online At: www.cimis.water.ca.gov