

# PATTERNS OF CLIMATE, WATER PER CAPITA, WATERGY, & SUN: RANCHO CUCAMONGA, CA<sup>1</sup>

CLIMATE	AVERAGE HIGH & LOW TEMPERATURES: 1893-2010												Source: <a href="http://wrcc.dri.edu">wrcc.dri.edu</a>	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	65.4	67.7	70.1	74.1	77.8	84.1	91.0	91.1	88.4	80.7	73.3	66.4	77.5	°F HIGH
	38	40.2	42.2	45.5	49.9	53.4	57.7	57.9	55.1	49.7	42.5	38.3	47.5	°F LOW
	18.6	19.8	21.2	23.4	25.4	28.9	32.8	32.8	31.3	27.1	22.9	19.1	25.3	°C HIGH
3.3	4.6	5.7	7.5	9.9	11.9	14.3	14.4	12.8	9.8	5.8	3.5	8.6	°C LOW	
HIGHEST TEMP ON RECORD:		117	47.2	June 17, 1917				LOWEST TEMP ON RECORD:		21	-6.1	January 7, 1913		
		°F	°C							°F	°C			
		Source: <a href="http://wrcc.dri.edu">wrcc.dri.edu</a>												

WATER PER CAPITA	AVERAGE RAINFALL: 1893-2010												Source: <a href="http://wrcc.dri.edu">wrcc.dri.edu</a>	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	3.62	3.54	2.85	1.23	0.35	0.10	0.01	0.07	0.26	0.77	1.57	2.73	17.10	INCHES
	91.9	89.9	72.4	31.2	8.9	2.5	0.3	1.8	6.6	19.6	39.9	69.3	434.3	mm
	WETTEST YEAR'S RAINFALL:		39.97	1015.2	1978				DRIEST YEAR'S RAINFALL:		6.10	154.9	1989	
		INCHES	mm							INCHES	mm			
	LONGEST PERIOD W/O MEASURABLE PRECIPITATION: 203 days (March-October 1992)												Source: <a href="#">see note #2</a>	
AREA:	40.20	SQ MILES	POPULATION:		170,714	RAINFALL INCOME:		191.7	GPCD					
<a href="#">Wikipedia</a>	104.1	km <sup>2</sup>	Source/Year: <a href="#">census.gov / 2006 est</a>					726	¢pcd					

WATERGY	Note: the percentages below are per energy source, and are not to be combined for percent of total energy consumption.											
	% of CA's annual electricity consumption used for water-related purposes: <sup>3</sup>		19%	2005	MUNICIPAL USE:		269.0	GPCD				
	% of CA's annual natural gas consumption used for water-related purposes: <sup>3</sup>		32%	2005			1018	¢pcd				
	# of gallons of diesel fuel used annually in CA for water-related purposes: <sup>3</sup>		88 mil	2005	Source/Year:		<a href="#">see note #4 / 2008</a>					

SUN	LATITUDE:	34	WINTER-SOLSTICE SHADOW RATIO:*	1:1.57	ON MAR 21	ON JUN 21	ON SEP 21	ON DEC 21
	Source: <a href="#">Google Earth</a>				0	29N	0	29S
	ELEVATION:	1207	FT		0	29N	0	29S
		368	m	<sup>B</sup> # of DEGREES SUN IS ABOVE THE SOUTHERN HORIZON AT NOON:	56	79	56	33
	To find current magnetic declination for location: <a href="http://HarvestingRainwater.com/books/volume1/volume-1-resource-pages-appendix-6/#magdec">HarvestingRainwater.com/books/volume1/volume-1-resource-pages-appendix-6/#magdec</a>							

\*Object height:length of shadow cast at solar noon (Dec 21's is longest noontime shadow of year). The ratio is 1:x, where x = 1/(tangent(90-(latitude+23.44)))

Notes: 1. All rainfall & climate data are for Pomona, CA, as advised by Michelle Breckner of WRCC as Rancho Cucamonga has limited historical weather data // 2. M. Breckner, Service Climatologist, WRCC, via phone 3/7/2011 // 3. CA Energy Commission, Final Staff Rpt on CA's Water-Energy Relationship, 2005. Figures include energy for supply & treatment, ag use, end-users & wastewater // 4. GPCD figures for Cucamonga Valley Water District as reported in Inland Empire Reg'l Water Use Efficiency Interim Business Plan 2009-10. A. [www.esrl.noaa.gov/gmd/grad/solcalc](http://www.esrl.noaa.gov/gmd/grad/solcalc) B. Mar 21: 90-latitude, Jun 21: 90-(lat-23.44), Sept 21: 90-lat, Dec 21: 90-(lat+23.44)