PATTERNS OF CLIMATE, WATER PER CAPITA, WATERGY, & SUN: PASADENA, CA

CLIMATE

AVERAGE HIGH & LOW TEMPERATURES: 1893-2010 *Source: wrcc.dri.edu*

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
66.4	67.8	69.9	73.3	76.3	81.7	88.5	89.2	87.1	80.6	73.8	67.2	76.8	°F HIGH
42.5	44.0	45.8	48.7	52.1	55.7	59.9	60.2	58.4	53.3	47.1	43.1	50.9	°F LOW
19.1	19.9	21.1	22.9	24.6	27.6	31.4	31.8	30.6	27.0	23.2	19.6	24.9	°C HIGH
5.8	6.7	7.7	9.3	11.2	13.2	15.5	15.7	14.7	11.8	8.4	6.2	10.5	°C LOW

HIGHEST TEMP ON RECORD: 113 °F | 45.0 °C | June 17, 1917 *Source: wrcc.dri.edu*

LOWEST TEMP ON RECORD: 17 °F | -8.3 °C | February 21, 2003

WATER PER CAPITA

AVERAGE RAINFALL: 1893-2010 *Source: wrcc.dri.edu*

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
4.45	4.57	3.38	1.39	0.43	0.14	0.03	0.09	0.37	0.68	1.67	3.04	20.24	INCHES
113.0	116.1	85.9	35.3	10.9	3.6	0.8	2.3	9.4	17.3	42.4	77.2	514.1	mm

WETTEST YEAR'S RAINFALL: 48.47 INCHES | 1231.1 mm | 1983 *Source: wrcc.dri.edu*

DRIEST YEAR'S RAINFALL: 5.37 INCHES | 136.4 mm | 1947

LONGEST PERIOD W/O MEASURABLE PRECIPITATION: 222 days (April-November 2007) *Source: see note # 1*

AREA: 23.20 SQ MILES; *Wikipedia* 60.1 km^2

POPULATION: 143,667 *Source/Year: census.gov / 2009 est*

RAINFALL INCOME: 155.6 GPCD; 589 ℓpcd

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:[2]	19%	2005
% of CA's annual natural gas consumption used for water-related purposes:[2]	32%	2005
# of gallons of diesel fuel used annually in CA for water-related purposes:[2]	88 mil	2005

MUNICIPAL USE: 175.0 GPCD; 662 ℓpcd *Source/Year: see note # 3 / 2009*

SUN

LATITUDE: 34 *Source: Google Earth*

ELEVATION: 851 FT; 259 m

WINTER-SOLSTICE SHADOW RATIO:* 1:1.57

	ON MAR 21	ON JUN 21	ON SEP 21	ON DEC 21
[A] DEGREES N or S of DUE E THE SUN RISES:	0	29N	0	29S
[A] DEGREES N or S of DUE W THE SUN SETS:	0	29N	0	29S
[B] # of DEGREES SUN IS ABOVE THE SOUTHERN HORIZON AT NOON:	56	79	56	33

To find current magnetic declination for location: HarvestingRainwater.com/books/volume1/volume-1-resource-pages-appendix-6/#magdec

**Object height:length of shadow cast at 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. Michelle Breckner, Service Climatologist, WRCC, via phone 3/7/2010 // 2. California Energy Commission, Final Staff Report on California's Water-Energy Relationship, 2005. These figures include energy consumption for supply & treatment, agricultural use, end-users & wastewater // 3. City of Pasadena, Green City Indicators Report 2009, p 15 // A. 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)