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

CLIMATE

AVERAGE HIGH & LOW TEMPERATURES: 1893 - 1984 *Source: wrcc.dri.edu*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	50.1	59.4	55.8	65.4	73.0	84.8	92.4	93.0	77.7	71.7	70.3	54.1	70.6	˚F HIGH
	35.9	40.2	39.5	49.9	57.5	64.5	70.2	70.4	56.1	49.8	44.8	38.1	38.1	˚F LOW
	10.1	15.2	13.2	18.6	22.8	29.3	33.6	33.9	25.4	22.1	21.3	12.3	21.4	˚C HIGH
	2.2	4.6	4.2	9.9	14.2	18.1	21.2	21.3	13.4	9.9	7.1	3.4	3.4	˚C LOW

HIGHEST TEMP ON RECORD: 104 ˚F | 40.0 ˚C | July 19, 1894 *Source: wrcc.dri.edu*

LOWEST TEMP ON RECORD: 22 ˚F | -5.6 ˚C | January 5, 1894

WATER PER CAPITA

AVERAGE RAINFALL: 1893 - 1984 *Source: wrcc.dri.edu*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	6.05	5.48	4.56	2.57	0.88	0.26	0.04	0.04	0.43	1.48	3.34	4.92	30.05	INCHES
	153.7	139.2	115.8	65.3	22.4	6.6	1.0	1.0	10.9	37.6	84.8	125.0	763.3	mm

WETTEST YEAR'S RAINFALL: 59.45 INCHES | 1510.0 mm | 1982 *Source: wrcc.dri.edu*

DRIEST YEAR'S RAINFALL: 15.63 INCHES | 397.0 mm | 1961

LONGEST PERIOD W/ NO MEASURABLE PRECIPITATION: 188 days (5/4 - 11/8/1999) *Source: see note #1*

AREA: 3.2 SQ MILES; *Wikipedia* 8.3 km^2

POPULATION: 1,373 *Source/Year: census.gov/2000 est*

RAINFALL INCOME: 3,334 GPCD; 12,622 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 ann'l 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: 250 GPCD; 946 ℓpcd

Source/Year: *see note #3 / 2010*

SUN

LATITUDE: 37.5 *Source: Google Earth*

ELEVATION: 1936 FT; 590.2 m

WINTER-SOLSTICE SHADOW RATIO:* 1: 1.8

	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:	53	76	53	29

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 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. Michelle Breckner, Service Climatologist, WRCC, via phone 3/22/2011 // 2. CA Energy Commission, Final Staff Rpt on CA's Water-Energy Relationship, 2005. These data include consumption for supply & treatment, ag use, end-users & wastewater // 3. Estimate from Mark Rowney, General Manager, Mariposa Public Utility District, 3/18/2011, via phone.

A. R'water Harvesting for Drylands & Beyond, Vol 1, or www.esrl.noaa.gov/gmd/grad/solcalc/ // B. RWHDB Vol 1, or Mar 21: 90–latitude, Jun 21: 90–(lat – 23.44), Sep 21: 90–lat, Dec 21: 90–(lat + 23.44)