

# PATTERNS OF CLIMATE, WATER PER CAPITA, WATERGY, & SUN: PT REYES STATION, CA

<b>CLIMATE</b>	AVERAGE HIGH & LOW TEMPERATURES: <span style="border: 1px solid black; padding: 2px;">Unspecified period of record</span> <span style="float: right;">Source: <a href="http://www.weather.com">www.weather.com</a></span>													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	58	63	65	70	74	79	83	83	82	77	66	58	71.5	
	39	41	42	44	47	50	52	52	52	48	42	38	45.6	
	14.4	17.2	18.3	21.1	23.3	26.1	28.3	28.3	27.8	25.0	18.9	14.4	21.9	
	3.9	5.0	5.6	6.7	8.3	10.0	11.1	11.1	11.1	8.9	5.6	3.3	7.6	
	HIGHEST TEMP ON RECORD: <span style="border: 1px solid black; padding: 2px;">110</span> <span style="margin-left: 20px;">°F</span> <span style="margin-left: 20px;">43.3</span> <span style="margin-left: 20px;">°C</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">August 1, 1972</span></span> <span style="margin-left: 20px;">Source: <a href="http://www.weather.com">www.weather.com</a></span> LOWEST TEMP ON RECORD: <span style="border: 1px solid black; padding: 2px;">18</span> <span style="margin-left: 20px;">°F</span> <span style="margin-left: 20px;">-7.8</span> <span style="margin-left: 20px;">°C</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">February 1989</span></span>													
<b>WATER PER CAPITA</b>	AVERAGE RAINFALL: <span style="border: 1px solid black; padding: 2px;">Unspecified period of record</span> <span style="float: right;">Source: <a href="http://www.weather.com">www.weather.com</a></span>													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	
	5.41	5.31	3.85	1.40	0.62	0.15	0.05	0.08	0.29	1.37	3.52	3.80	25.85	
	137.4	134.9	97.8	35.6	15.7	3.8	1.3	2.0	7.4	34.8	89.4	96.5	656.6	
	WETTEST YEAR'S RAINFALL: <span style="border: 1px solid black; padding: 2px;">31.37</span> <span style="margin-left: 20px;">INCHES</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">796.8</span></span> <span style="margin-left: 20px;">mm</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">1941</span></span>			DRIEST YEAR'S RAINFALL: <span style="border: 1px solid black; padding: 2px;">7.32</span> <span style="margin-left: 20px;">INCHES</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">185.9</span></span> <span style="margin-left: 20px;">mm</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">1923</span></span>			Source: <a href="#">see note #1</a>							
LONGEST PERIOD W/ NO MEASURABLE PRECIPITATION: <span style="border: 1px solid black; padding: 2px;">184 days (4/04 – 10/5/1924)</span> <span style="float: right;">Source: <a href="#">M. Breckner, WRCC, email 7/18/2011</a></span>														
AREA: <span style="border: 1px solid black; padding: 2px;">3.62</span> <span style="margin-left: 20px;">SQ MILES</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">9.4</span></span> <span style="margin-left: 20px;">km<sup>2</sup></span>		POPULATION: <span style="border: 1px solid black; padding: 2px;">818</span> <span style="margin-left: 20px;">Source/Year: <a href="#">census.gov / 2000</a></span>		RAINFALL INCOME: <span style="border: 1px solid black; padding: 2px;">5,440</span> <span style="margin-left: 20px;">GPCD</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">20,594</span></span> <span style="margin-left: 20px;">¢pcd</span>		MUNICIPAL USE: <span style="border: 1px solid black; padding: 2px;">178</span> <span style="margin-left: 20px;">GPCD</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">674</span></span> <span style="margin-left: 20px;">¢pcd</span>		Source/Year: <a href="#">see note #2 / 1995–2004</a>						
<b>WATERGY</b>	# of kWh used by NMWD in FY2011 to pump & treat water for Pt Reyes: <sup>3</sup> <span style="border: 1px solid black; padding: 2px;">210,645</span>		# of avg CA homes that could be powered with that energy: <sup>4</sup> <span style="border: 1px solid black; padding: 2px;">392</span>											
	Source/Year: <a href="#">see note #2 / 1995–2004</a>													
<b>SUN</b>	LATITUDE: <span style="border: 1px solid black; padding: 2px;">38</span> <span style="margin-left: 20px;">WINTER-SOLSTICE SHADOW RATIO:<sup>*</sup></span>		<span style="border: 1px solid black; padding: 2px;">1: 1.84</span>		ON MAR 21		ON JUN 21		ON SEP 21		ON DEC 21			
	Source: <a href="#">Google Earth</a>		ELEVATION: <span style="border: 1px solid black; padding: 2px;">33</span> <span style="margin-left: 20px;">FT</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">10</span></span> <span style="margin-left: 20px;">m</span>		<sup>A</sup> DEGREES N or S of DUE E THE SUN RISES:		0		30N		0		30S	
	Source: <a href="#">Google Earth</a>		ELEVATION: <span style="border: 1px solid black; padding: 2px;">33</span> <span style="margin-left: 20px;">FT</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">10</span></span> <span style="margin-left: 20px;">m</span>		<sup>A</sup> DEGREES N or S of DUE W THE SUN SETS:		0		30N		0		30S	
Source: <a href="#">Google Earth</a>		ELEVATION: <span style="border: 1px solid black; padding: 2px;">33</span> <span style="margin-left: 20px;">FT</span> <span style="margin-left: 20px;"><span style="border: 1px solid black; padding: 2px;">10</span></span> <span style="margin-left: 20px;">m</span>		<sup>B</sup> # of DEGREES SUN IS ABOVE THE SOUTHERN HORIZON AT NOON:		52		75		52		29		
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. [www.wrcc.dri.edu](http://www.wrcc.dri.edu), limited period of record (1914-1943). // 2. Ten-year average of North Marin Water District, 2010 Urban Water Management Plan, page 3-3, downloaded from [www.nmwd.com](http://www.nmwd.com) on 7/17/2011 // 3. Robert Clark, Operations/Maintenance Superintendent for North Marin Water District (NMWD) via phone on 7/28/2011. // 4. Per <http://www.eia.gov/cneaf/electricity/esr/table5.html>, accessed 7/28/2011, the average annual household energy consumption for California is 537 kWh.

A. Rainwater Harvesting for Drylands & Beyond, Vol 1, or [www.esrl.noaa.gov/gmd/grad/solcalc/](http://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)