

California Climate

Zone 13

Reference City: Fresno
 Latitude: 36.46 N
 Longitude: 119.43 W
 Elevation: 328 ft



Basic Climate Conditions

	(F)
Summer Temperature Range	34
Record High Temperature (1980)	111
Record Low Temperature (1963)	19

Design Day Data

Winter	99%	28		
	97.5%	30		
Summer				
	1%:	102	MCWB	70
	2.5%:	100	MCWB	69

Climatic Design Priorities

Winter: Insulate
 Reduce Infiltration
 Passive Solar

Summer: Shade
 Use Evaporative Cooling
 Use High Thermal Mass with
 Night ventilation

Title 24 Requirements

Package	C	D
Ceiling Insulation	R49	R38
Wood Frame Walls	R29	R19
Glazing U-Value	0.38	0.57
Maximum Total Area	16%	20%

Climate

California's Central Valley in this southern location is an ideal place to farm citrus trees. Summer daytime temperatures are high, sunshine is almost constant during growing season, and growing season is long.

Summer humidity is higher here, than in other parts of the Central Valley, making cooling energy consumption higher in comparison. Winter rains fall between November and April on average 1.5"(+) per month. The winter cold can be quite intense, and piercing north winds can blow for several days at a time in the winter. Tule fog (extremely thick low fog) blankets the region for days in the winter.

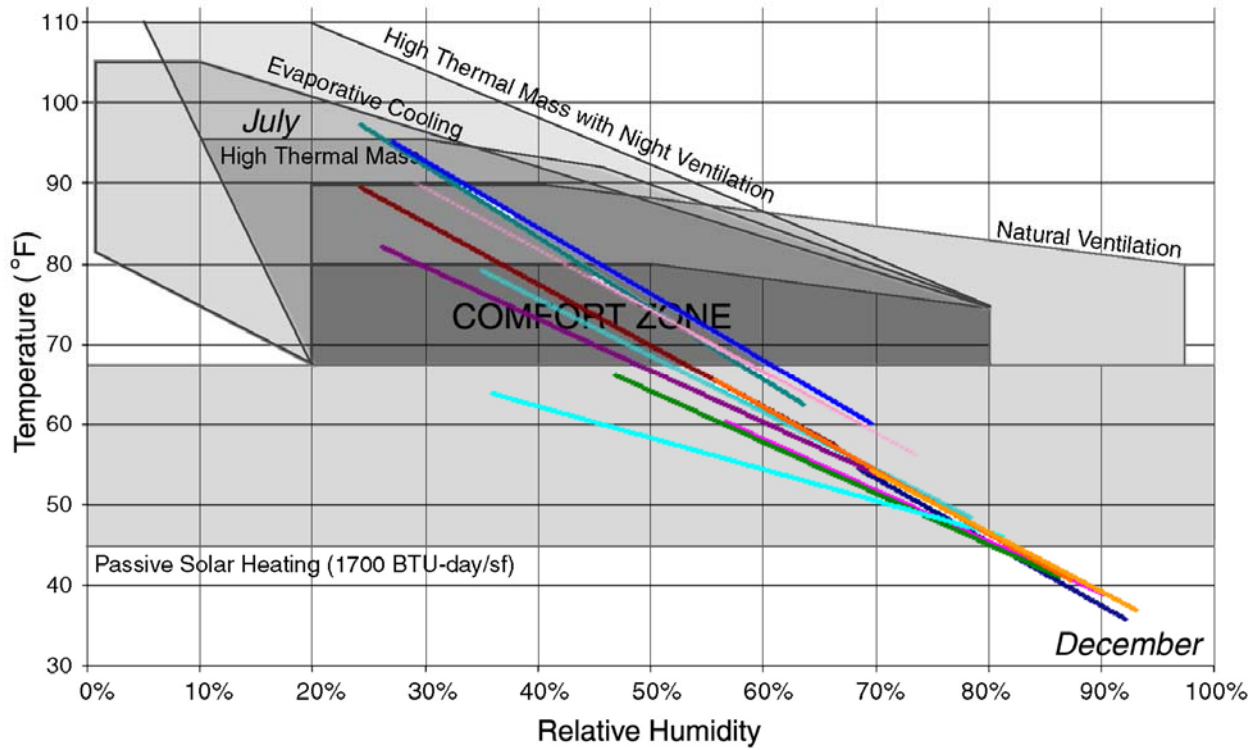
	Fresno	Bakers -field	Visalia	Porter- ville
HDD	2702	2430	2588	2053
CDD	1470	995	1685	2246

HDD = Heating Degree Days (base 65F)

CDD = Cooling Degree Days

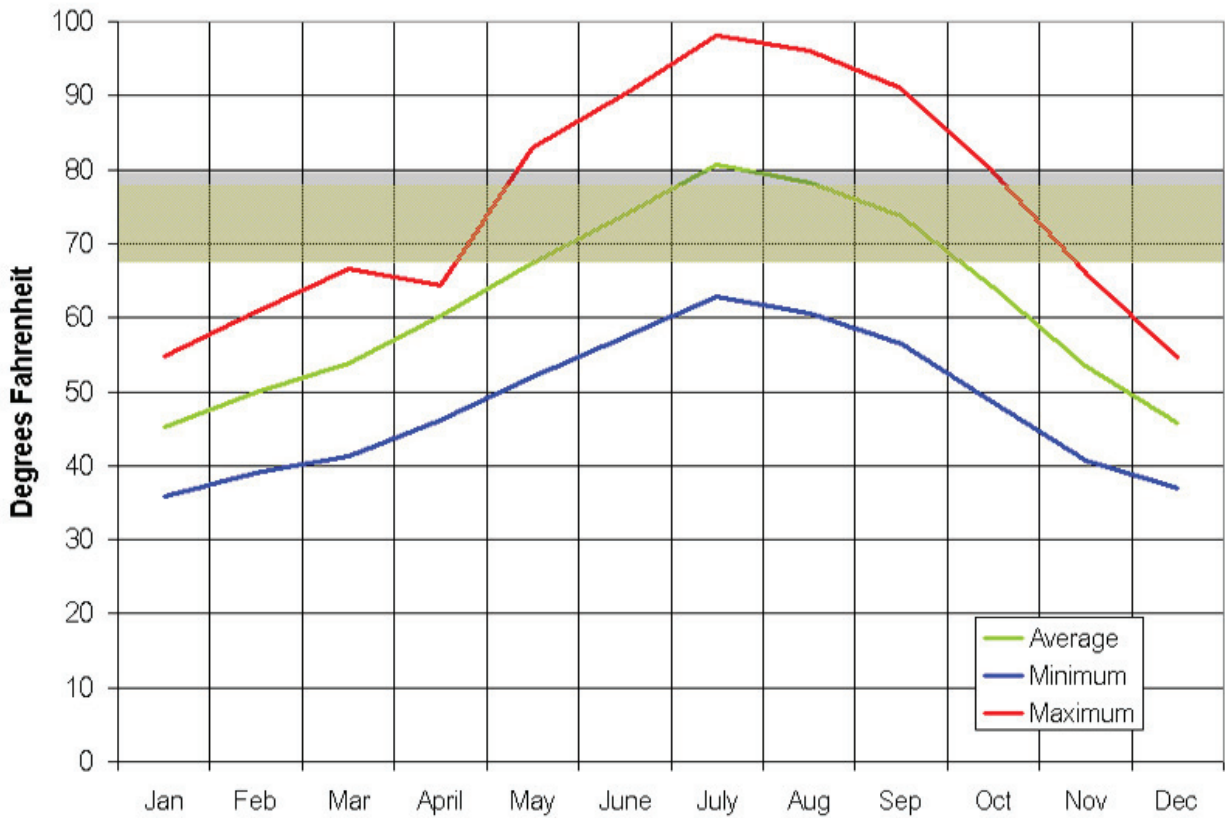
There are almost as many CDD as HDD in this high energy consuming Climate Zone 13.

Bioclimatic Chart

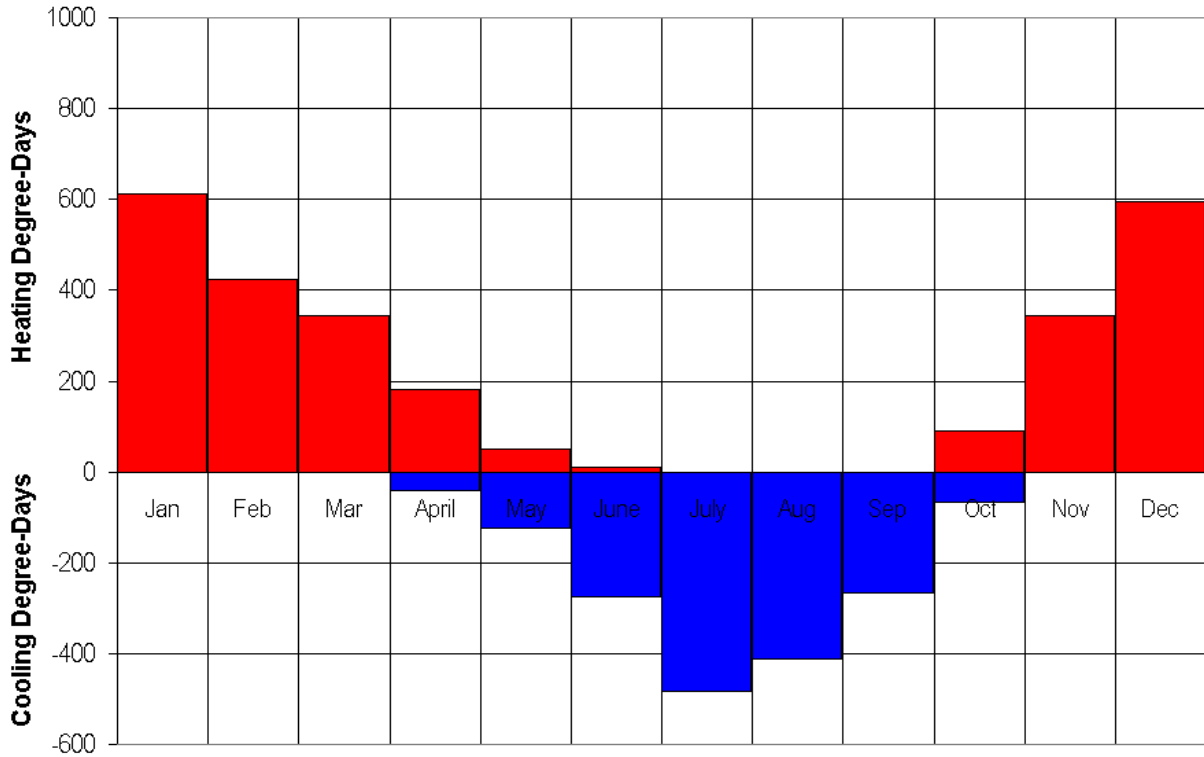


Temperature

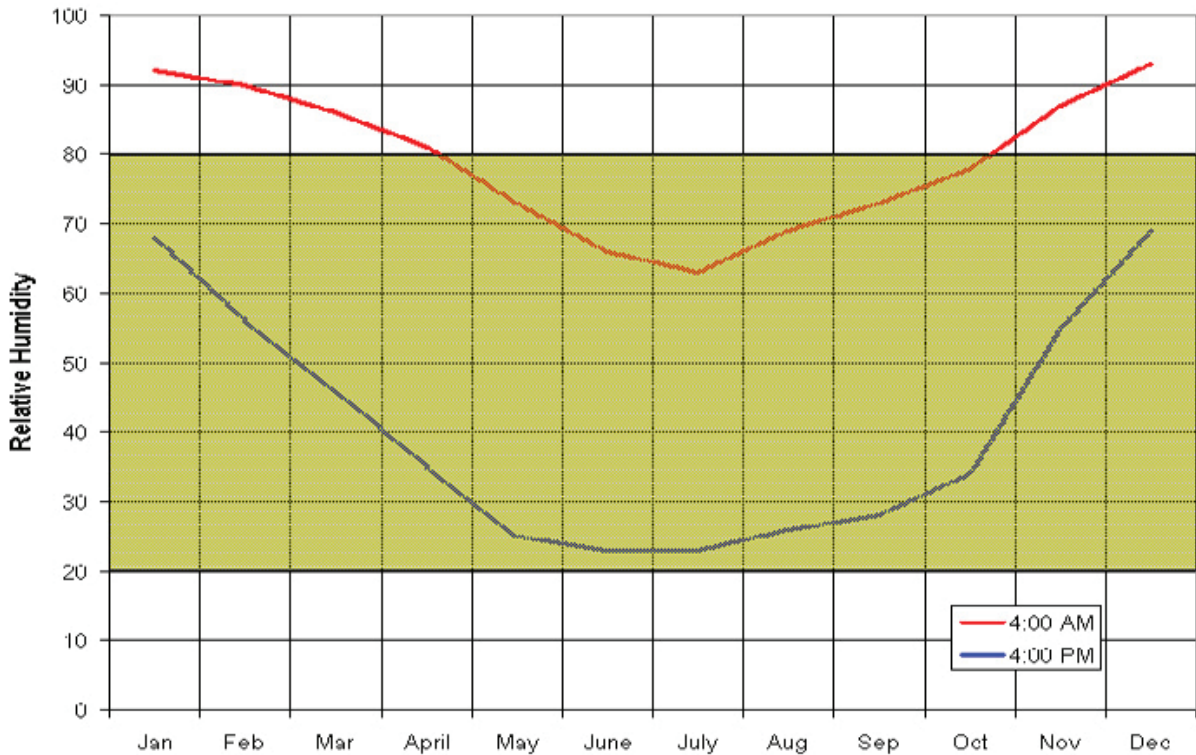
(Typical Comfort Zone: 68-80°F)



Degree Day
(Base 65°)

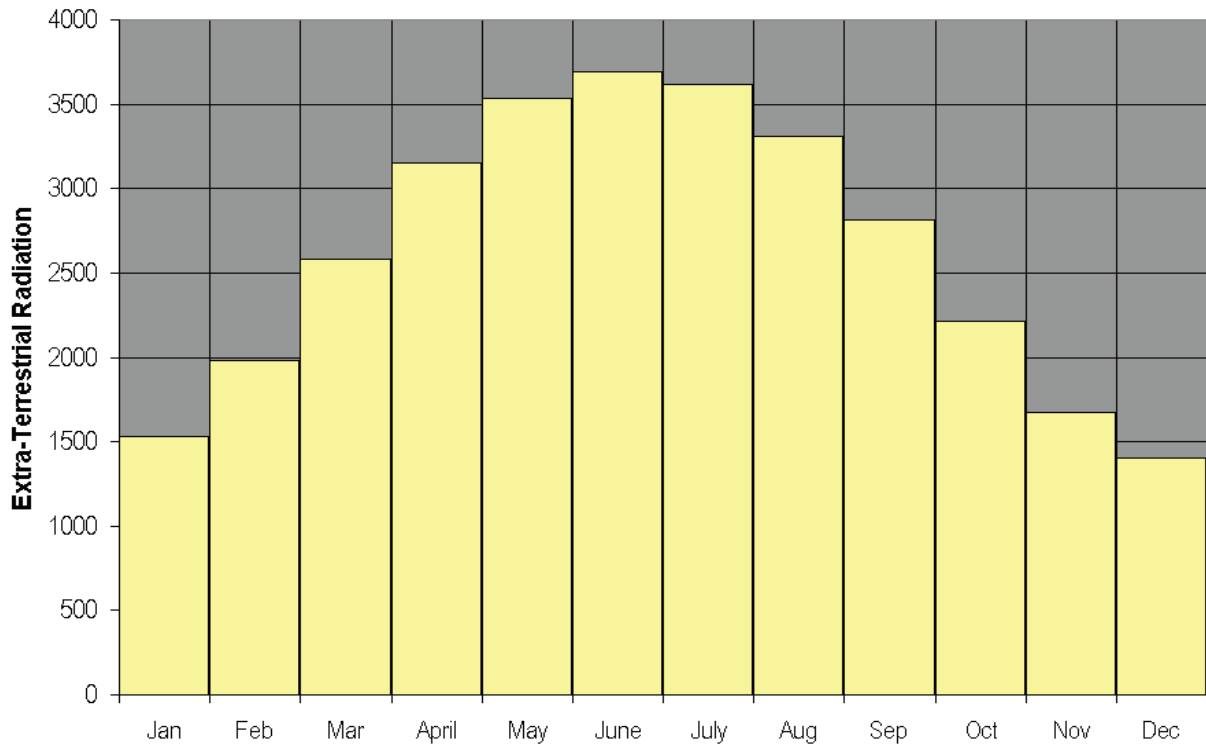


Relative Humidity
(Typical Comfort Zone: 20-80%)

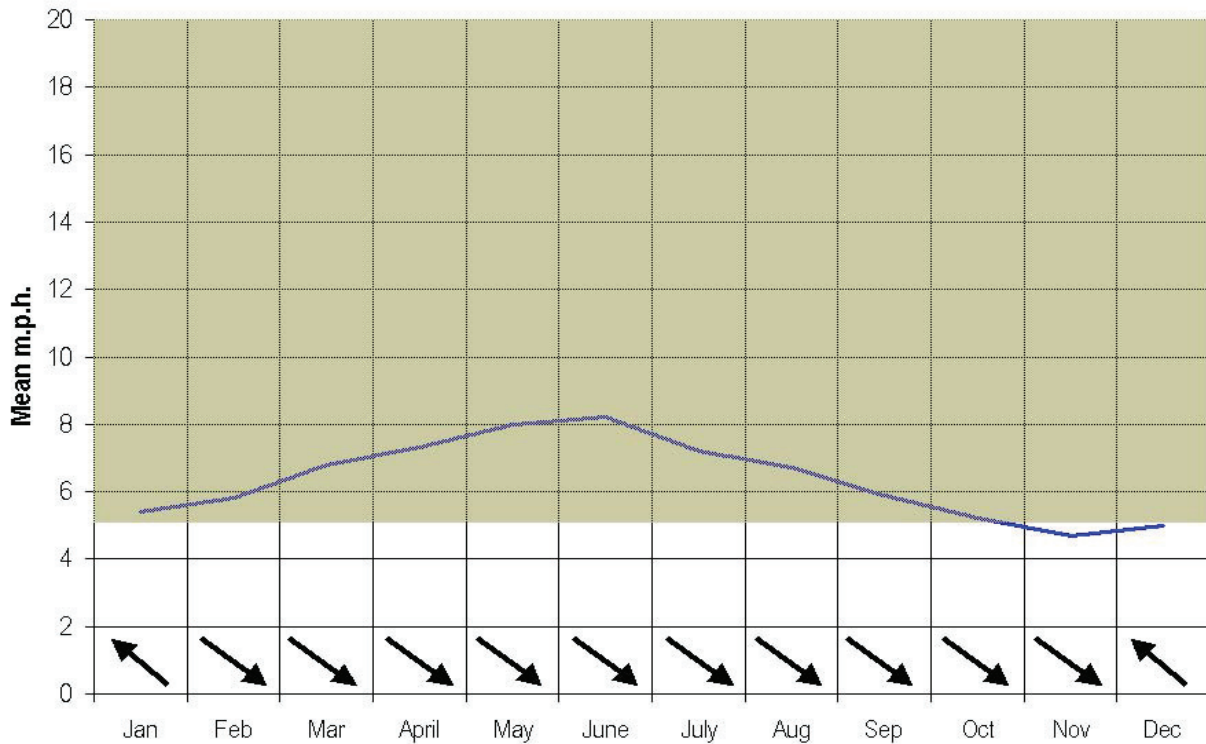


Extra-Terrestrial Radiation

Daily Mean ETR: 2594



Wind Speed



Prevailing Wind Direction

Summer: WNW
 Winter: E

Natural Ventilation is most effective when wind speed is 5 mph or greater.