

California Climate

Zone 14

Reference City: Barstow
 Latitude: 35 N
 Longitude: 116.47 W
 Elevation: 1927 ft

Basic Climate Conditions

| | |
|--------------------------------|-----|
| | (F) |
| Summer Temperature Range | 30 |
| Record High Temperature (1972) | 116 |
| Record Low Temperature (1963) | 3 |

Design Day Data

| | | | | |
|--------|-------|-----|------|----|
| Winter | 99% | 26 | | |
| | 97.5% | 29 | | |
| Summer | | | | |
| | 1%: | 106 | MCWB | 68 |
| | 2.5%: | 104 | MCWB | 68 |

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 | R21 |
| Glazing U-Value | 0.38 | 0.57 |
| Maximum Total Area | 14% | 20% |



Climate

The climate of this medium to high desert is similar to neighboring cold winter zone 16 and subtropical low desert zone 15. Here, the continental mass influences this interior climate more than the ocean.

Zone 14 Climate is characterized by wide swings in temperature, both between summer and winter and between day and night. Hot summer days are followed by cool nights; freezing nights are often followed by 60F days.

| | Barstow | Trona | Palmdale | Twenty-nine Palms |
|-----|---------|-------|----------|-------------------|
| HDD | 2581 | 2492 | 2704 | 1910 |
| CDD | 4239 | 2922 | 1998 | 3064 |

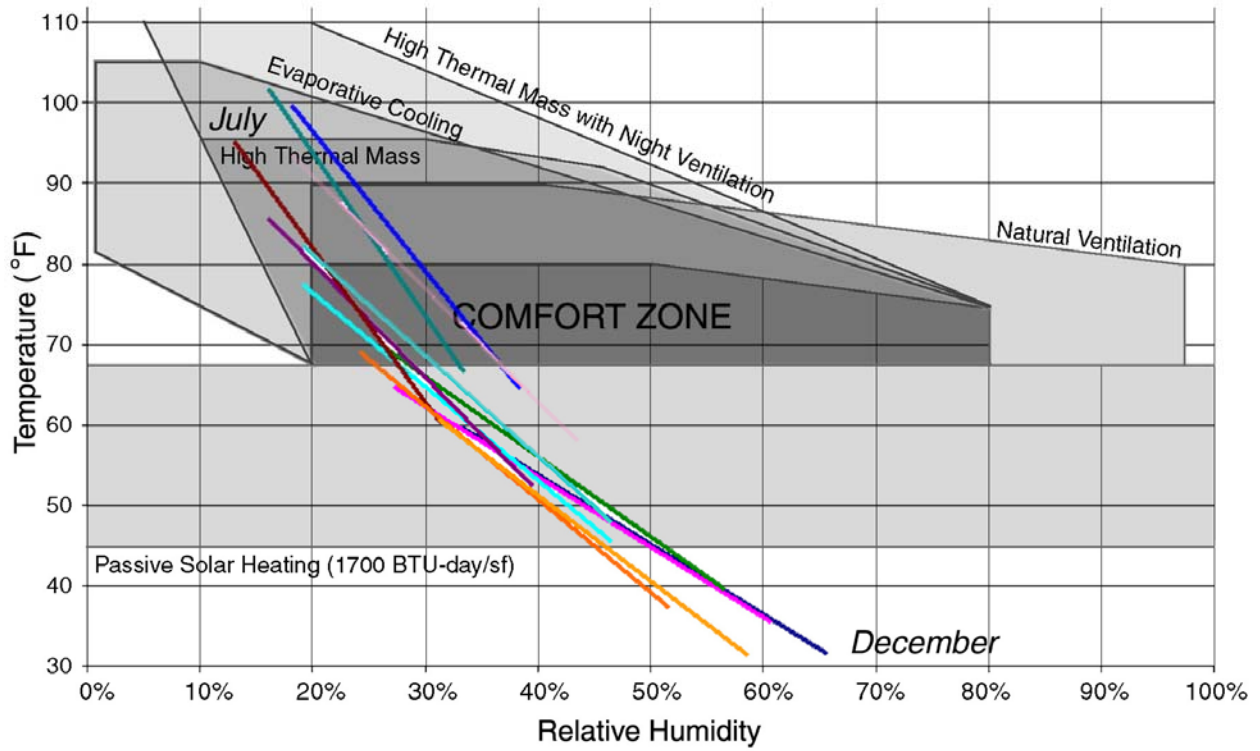
HDD = Heating Degree Days (base 65F)

CDD = Cooling Degree Days

There are almost as many CDD as HDD. The hazards of this climate to plants are late spring frosts and desert winds.

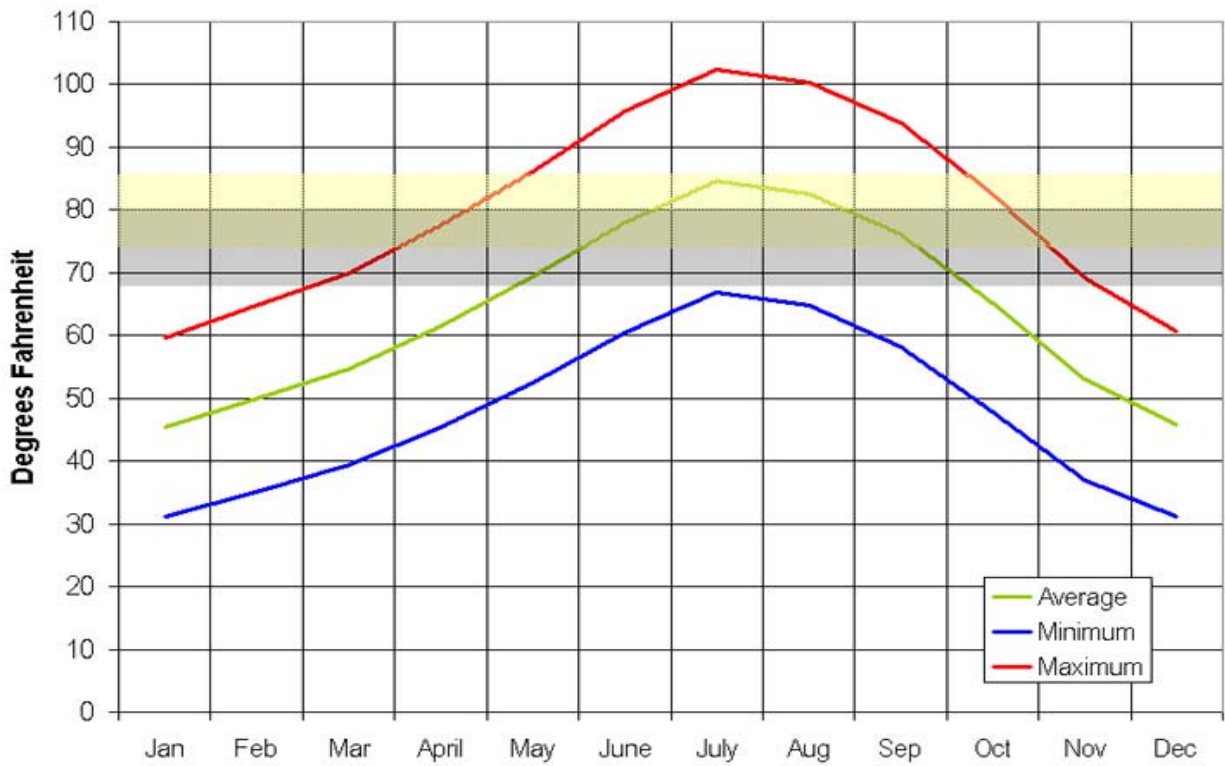
Summers are hot and dry. Does not rain (or snow) more than 1" per month. Winters are cold, especially on the slopes and hillsides where cold air drains off on winter nights. Zone 14 is a high energy-consuming climate, where cooling and heating is needed to maintain comfort.

Bioclimatic Chart

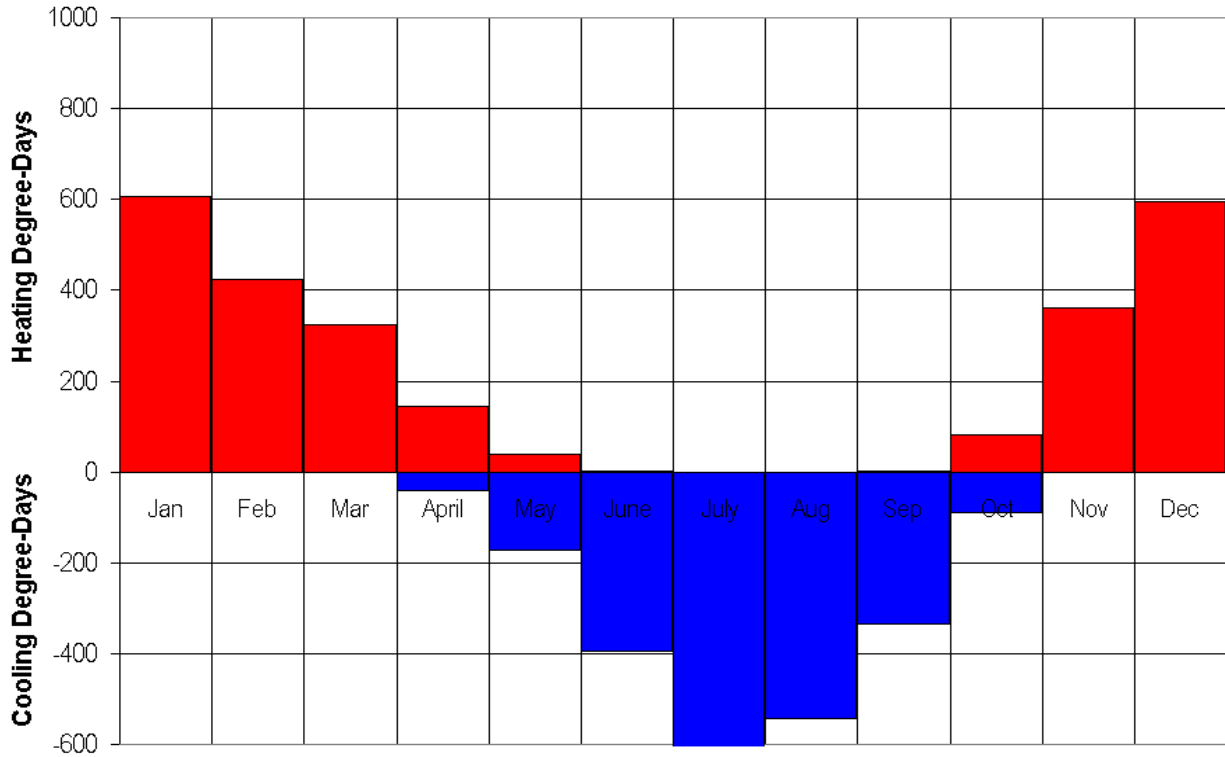


Temperature

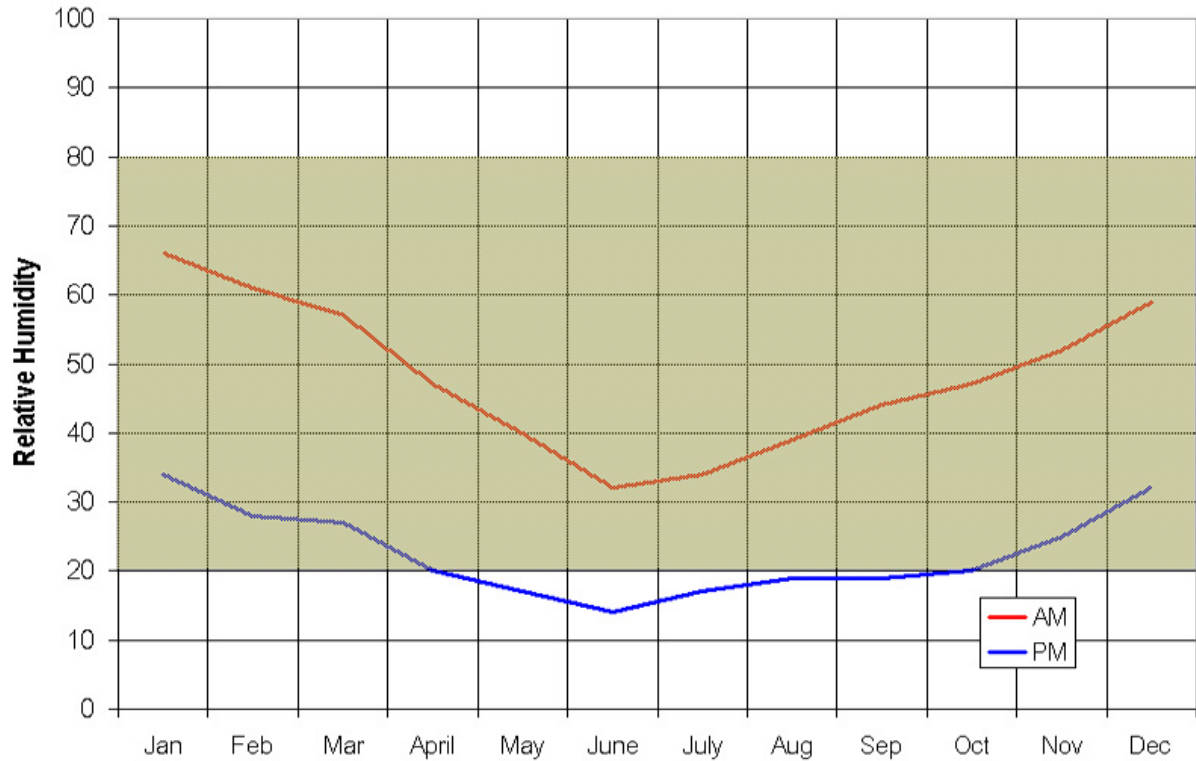
(Typical Comfort Zone: 68-80°F)



Degree Day
(Base 65°)

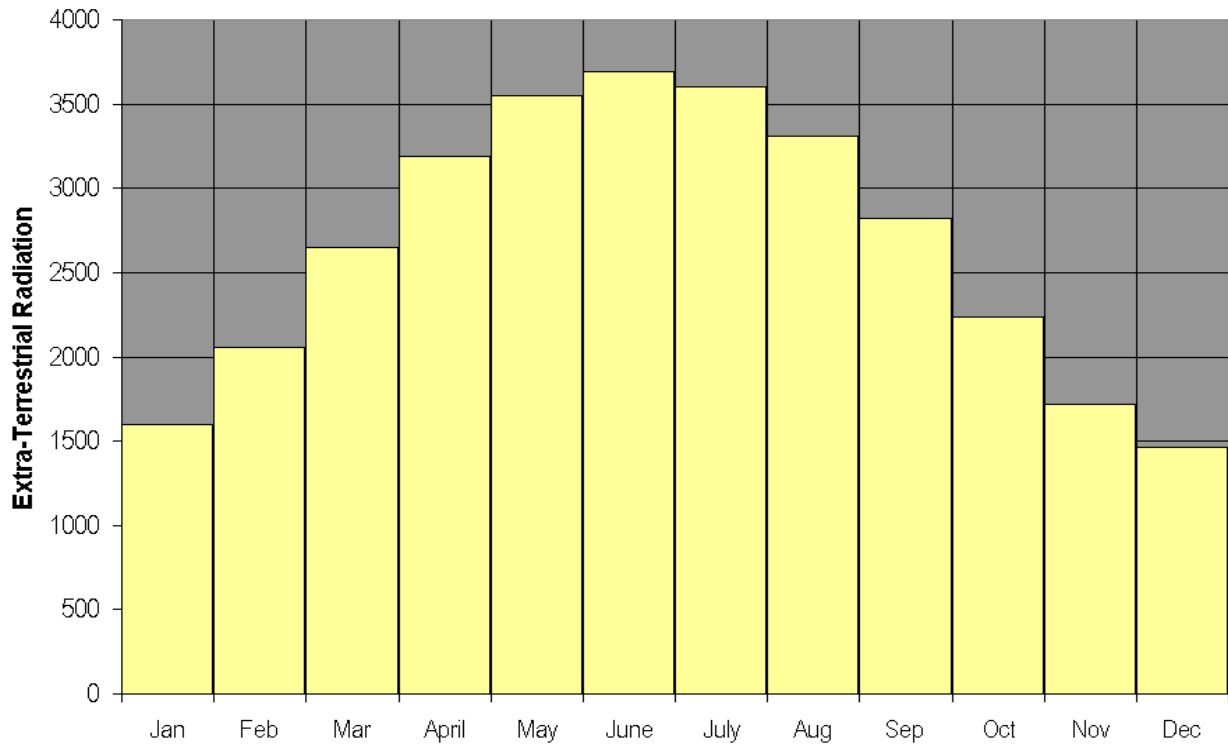


Relative Humidity
(Typical Comfort Zone: 20-80%)

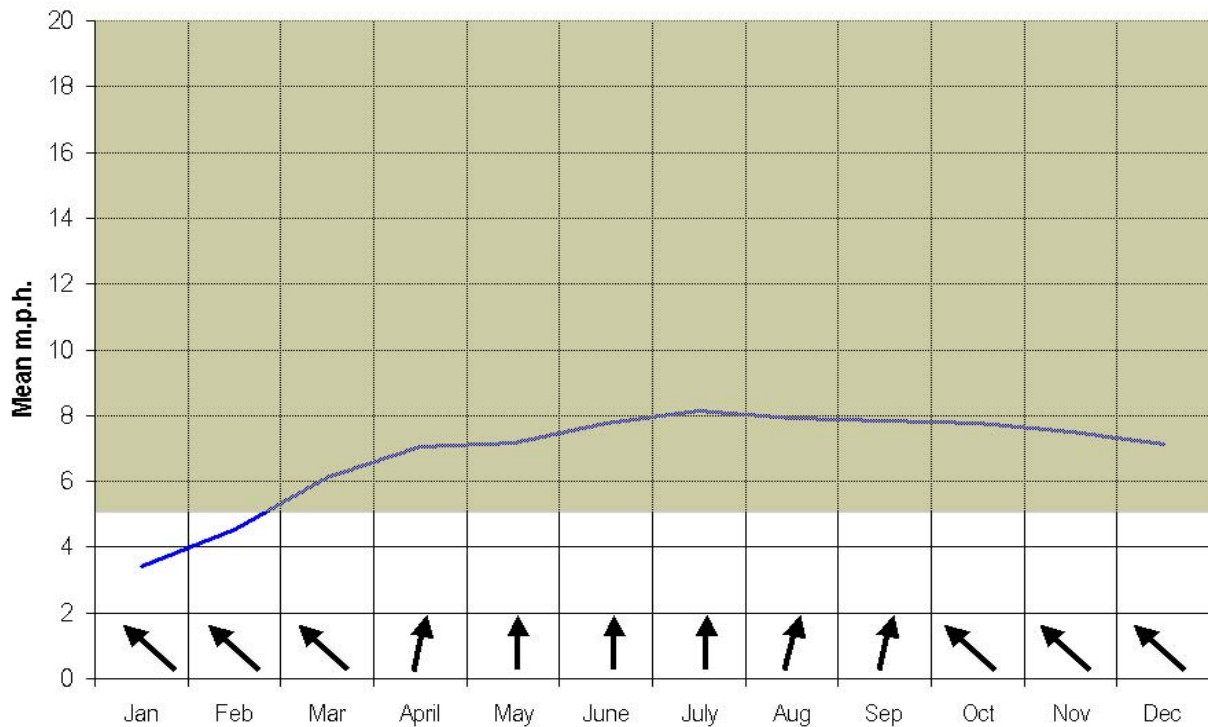


Extra-Terrestrial Radiation

Daily Mean ETR:2626



Wind Speed



Prevailing Wind Direction

Summer: W
 Winter: WNW

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