

Arizona's Climate

THE COCORAHS 'STATE CLIMATES' SERIES

Arizona – A State of Mild Temperatures as well as Extremes

By Nancy Selover, Arizona State Climatologist

Arizona is topographically divided into the southwest desert and the Colorado Plateau by the Mogollon (mug-ee-yun) Rim, which runs from the northwest to the southeast across the state. In the low deserts of southwestern Arizona, winter air temperatures average in the 40s (degrees Fahrenheit) at night to the 60s and 70s in the daytime, which is quite mild compared to the rest of the continental U.S. Summer air temperatures range from the 70s and low 80s at night to over 110oF in the daytime. The highest air temperatures are found along the lower Colorado River border between California and Arizona, frequently exceeding 115F, and often characterized as the highest in the nation at Bullhead City or Lake Havasu City. The northern half of the state, which is at a much higher elevation, has wintertime average nighttime air temperatures well below freezing, and daytime air temperatures in the mid 40s to lower 50s. Flagstaff, at 7000 feet elevation, has nighttime air temperatures below freezing from October through April. Summertime air temperatures are generally down into the 40s or 50s at night and in the 80s and 90s in the daytime, which again is quite mild relative to the southern half of the state. If it's too hot, or too cold, there's always somewhere in the state where the temperature is just right.

The southwestern and northeastern thirds of the state are both arid, receiving between 3 and 11 inches of rainfall per year. Yuma, in the southwest corner, receives less than 3 inches of rain a year, with more than 50% of that often coming in a single day. The highest elevations, including areas along the Mogollon Rim itself, receive between 29 and 45 inches of precipitation each year, with significant snowfall in the winter, particularly during El Niño years. Precipitation comes in two seasons. During winter, storm systems and associated cold fronts move down from the northern Pacific Ocean and Pacific Northwest regions and sweep across the western United States; and the summer, when the westerly winds shift to southerly, bringing moisture northward from Mexico and the Gulf of California to occasionally produce severe thunderstorms, heavy rainfall and widespread flash flooding. The southern half of the state receives most of its precipitation in the summer, while the northern half of the state receives more of its precipitation in winter than in summer. In general, the precipitation regime statewide is comprised of long periods of dry weather punctuated by flash flooding. The longest stretch of days with no measureable rainfall in Phoenix was 143 days from October 18, 2005 to March 11, 2006. Though rainfall is not frequent in the arid southwest, precipitation is so localized statewide that we can never have too many CoCoRaHS observers.

For more information on Arizona's Climate please visit the Arizona State Climate Office at: <http://azclimate.asu.edu/>