

Dreaming of a White Christmas?

What are the odds that your holidays will be merry and white? We can't comment on the first criteria, but do have some information on the second.

First and foremost, it should come as no surprise that if a white Christmas is truly important to you, you're living in the wrong part of the country. To ensure the best chances of a REALLY white Christmas, Stampede Pass, Washington is the place to be: it has the greatest statistical probability in the lower 48 states for having at least 5 inches of snow on December 25 (a 100 percent chance) and also the greatest chances for being snowed-in with at least 10 inches (a 96 percent chance). Other safe bets include Marquette and Sault Saint Marie, Michigan; and Hibbing and International Falls, Minnesota—each has a 100 percent statistical chance of having at least one inch on snow on Christmas day (1).

If the Southwest is the place you'll be spending your holidays and you still want them to be white, you can increase your chances by heading for the mountains. In New Mexico, the snowiest place is Bateman Ranch, in the north-central mountains of the state, with an average of 147 inches a year. Sunrise Mountain, in the White Mountains of Arizona, has that state's highest average annual snowfall, at 243 inches (2).

Even without going to such extremes, there are places in the Southwest where your chances of seeing snowfall are pretty good. Flagstaff, Arizona, for example, is one of the snowiest cities in the United States, with an average annual accumulation of 109.8 inches (5). With a 56 percent chance of having snow on the ground on Christmas day, Flagstaff has better odds than Denver, Chicago, or Salt Lake City; and the odds are even higher on New Year's Day (3).

Albuquerque, on the other hand, has only an 8 percent chance of having at least an inch of snowfall on the

ground on Christmas day, although if you throw in the chances of either seeing snowflakes or having any snow on the ground (from previous days), the odds rise to 13 percent (4).

Figure 1 shows the odds, expressed as the percentage chance of having over one inch of snow on December 25 for five Arizona locations and six locations in New Mexico. The Arizona probabilities are based on 30-year snow-depth averages every Christmas from 1961 to 1990, and were created by the National Climatic Data Center (1). The New Mexico totals were produced by the Albuquerque office of the National Weather Service and are based on station data ranging from 43 to 108 years (4).

If your odds of having snow on December 25 aren't very high, you might have reason to expect at least some snowfall to greet the New Year. Table 1 shows the average accumulation for December, January and the year for seven Arizona and seven New Mexico locations (5).

Some of the locations in the Southwest that rarely see



Table 1. Average snowfall accumulation for December, January, and the year at various Southwest locations.

Arizona	Dec.	Jan.	Annual
Phoenix (airport)	00	0.0	0.0
Tucson	04	0.3	1.2
Flagstaff	14	23.0	109.8
Douglas/Bisbee	02	0.2	0.7
Safford	02	0.3	0.8
Show Low	52	6.3	27.4
Yuma	00	0.0	0.0
New Mexico	Dec.	Jan.	Annual
Albuquerque	26	3.1	12.0
Las Vegas	74	7.0	38.3
Raton	36	3.8	20.9
Roswell	33	3.1	11.9
Clayton	47	4.9	25.5
Tucumcari	41	4.2	16.4
Grants	24	2.1	8.1

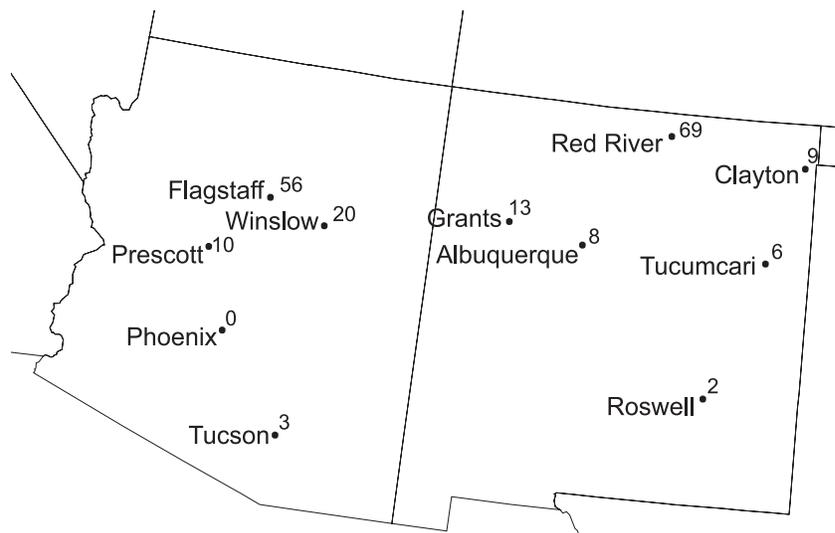


Figure 1. Percentage chance of having one inch or more of snow on December 25 at various Southwest locations.





White Christmas, cont.

snowfall reveal some surprises in their histories. For example, Tucson, Arizona received 6.8 inches of snow on December 8, 1971, making it the snowiest December on record (6). Even Phoenix has recorded an inch of snow twice, on January 20, 1933 and January 21-22, 1937 (7).

How might El Niño figure into the odds of snowfall? Charlie Liles of the Albuquerque office of the National Weather Service said he expects more precipitation this winter than last one in New Mexico. However, he notes that although the past 20 El Niño events have brought an average of 24 to 36 percent above normal precipitation to New Mexico during the September through May period, most of the additional precipitation tends to fall during autumn and spring, with winter closer to normal.

—Rebecca Carter, CLIMAS

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