

A Science Service Feature

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? WHY THE WEATHER ?

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AVERAGE SNOWFALL

For heavy snowfall, we must have not only a temperature below freezing but plenty of vapor in the air and a means of precipitating it. Looking at a map of average annual snowfall of the United States, it is of course immediately apparent that snow decreases in general from north to south, simply on account of the temperature. In the northern interior snowfall is rather light for the latitude because the air is dry. Compare the 30 inches in North Dakota with 100 inches in northern Michigan.

On the lee shores of the Great Lakes, the snowfall is particularly heavy since a wind gathers moisture in crossing a lake. The overturning above the warm waters and the slight elevation and crowding of the wind as it approaches shore help precipitate the moisture.

Mountain regions are also marked by heavy snowfall, wherever moist winds must rise to pass over a mountain barrier and it is cold enough to snow. As temperature usually decreases with altitude, precipitation which is rain on the lowlands may fall as snow on mountains. Thus in the Pacific coastal region, noted for its winter rains and relative freedom from snowfall, we find on the west slopes of the Cascades and Sierra Nevadas snowfall averaging 30 to 40 feet a year -- the greatest known in North America.

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