

Vermont's Climate

THE COCORAHS 'STATE CLIMATES' SERIES

Oh, the Maple Sweetness of Vermont's Climate

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Mark Twain once said, "If you don't like the weather in New England, just wait a few minutes." Vermonters can certainly identify with that! Vermont's weather regime alternates between fair, overcast and stormy conditions. These flip-flops can be abrupt; yet, despite Vermont's reputation for changeable or dramatic weather, tornadoes or hurricanes tend to be infrequent occurrences. Conditions vary widely during a given season as well as from one year to the next in the same season. For 2010 alone, record high temperatures in early April and late May sandwiched at least 2" of snow on 27-28 April. Vermont's weather can even fluctuate dramatically from one day to the next. The lowest temperature on record was -50°F on December 30, 1933, with the highest temperature on record of 105°F on July 4, 1911.

What accounts for the erratic changes in weather in Vermont? A lot of it has to do with geography. Average temperatures vary according to factors such as elevation, slope, and local features such as urbanization. This is because differences in elevation and proximity to waterways (such as Lake Champlain and the Atlantic Ocean) can also influence the weather in a particular area. Wind patterns also influence the state's weather and climate. Located in the zone of the prevailing westerlies, Vermont also lies at the exit region of a number of air trajectories across North America. As such, we can receive cold, dry air from the North American subarctic; warm, moist air from the Gulf of Mexico; and cool, damp air from the North Atlantic Ocean. The meeting of these air systems, in conjunction with the "prevailing westerlies," can combine to create storm systems. This accounts for Vermont's proclivity for rain and snow. It also is a factor in the unpredictable nature of the weather here, since the air system blowing through today may not be the same as that which comes in tomorrow.

Yet despite being a humid, continental climate, Vermont is known for its hydrometeorological extremes, often occurring in the same year. For example, the November 1927 flood (which remains the flood of record today) brought a swift end to a severe, year-long drought. Similarly, in 1999, the remnants of Tropical Storm Floyd reversed the 18-month drought that had set in following the wet summer and the Ice Storm of January 1998.

Autumn is considered by many people to be the most beautiful season in the state, with sugar maples leading the way in transforming the landscape into a canvas of brilliant reds, oranges, and yellows. Fall will usually be marked by an "Indian summer"—a period of dry, moderate weather that follows the first frost of the season and can last for several days. The weather in autumn is usually temperate to cool, with average temperatures during the day ranging in the 50s. However, evening lows can sink to below-freezing temperatures, and it is not entirely uncommon for chilly weather to overtake many days in the mid- to late fall season. About six months later, in March-April, these diurnal fluctuations from warm spring days to cold nights will be marked by sap flow from the same sugar maples — the sugaring season that is a rite of passage for spring.

For more on the wild and wacky Vermont weather and climate, please visit the Vermont State Climate Office website at <http://www.uvm.edu/~ldupigny/sc>.