

Effects of Wind & Solar Radiation

For the effects of wind, solar radiation, and barometric pressure on sultriness, see the following article:

Steadman, R. G. 1979. The Assessment of Sultriness. Part II: Effects of Wind, Extra Radiation and Barometric Pressure on Apparent Temperature. *Journal of Applied Meteorology, July 1979*.

In this article, Steadman derives an apparent temperature scale in which any likely combination of summer temperature, humidity, wind, and extra radiation can be expressed. Radiation (direct and indirect sunlight, terrestrial and sky radiation) has the most effect on sultriness. Wind effects in summer are slight. The direct effect of altitude (barometric pressure) is negligable. Maps record the summer-noon apparent temperatures across North America.

To obtain a copy of the article, you can (1) check your local library and interlibrary loan, (2) contact the American Meteorological Society at

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