

# Hurricane damage zooms as wind speeds increase

Damage levels from Hurricane Ivan correlate mainly to wind speed. For example a wind speed increase from a 74 mph Category 1 storm to a 111 mph Category 3 more than doubles the wind's force. Increasing wind speeds also create higher storm surge, which is water a hurricane pushes ashore.

## Category wind speeds and pounds per square foot (psf) of wind pressure:



**Tropical storm**  
Winds: **39 mph**  
psf: **6.1**



**Category 1**  
Winds: **74 mph**  
psf: **21.9**



**Category 2**  
Winds: **96 mph**  
psf: **36.9**



**Category 3**  
Winds: **111 mph**  
psf: **49.3**



**Category 4**  
Winds: **131 mph**  
psf: **68.6**



**Category 5**  
Winds: **155 mph**  
psf: **96.1**

Note: Based on the formula in C. Donald Ahrens, *Meteorology Today*: Wind speed in miles per hour multiplied by itself and then by 0.004 gives wind's pressure in pounds per square foot. Figures are rounded to one decimal point.