State of New Jersey
Department of Community Affairs
Division of Codes and Standards
PO Box 802
Trenton, New Jersey 08625-0802

Chris Christie
Governor

Kim Guadagno
Lt. Governor

Charles A. Richman
Commissioner

Date: **July 2003**
Revised: **December 2015**

Subject: **Wind Speed Map**

Reference: **N.J.A.C. 5:23-3.14, Building Subcode Sections 1603.1.4, 1609, Figures 1609.3(1), (2) and (3) and Table 1604.5; N.J.A.C. 5:23-3.21 One- and Two-Family Dwelling Subcode Section R301.2.1, Figures R301.2(4)A and B**

To arrive at the design wind load for a structure to be built under the IBC, all applicable factors provided in IBC Section 1609 in conjunction with ASCE 7-10 must be considered. In the IRC, use the wind speed in the map with the applicable sections and tables to calculate the wind loads. However, the maps in both codes are small and hard to read. A suggested means for obtaining wind data follows:

The Applied Technology Council (ATC) provides a web-based application to determine basic wind speed. If you would like to take advantage of this application, please visit http://windspeed.atcouncil.org/ (direct link); or click on "Design Loads" at https://www.atcouncil.org/. This application uses the design wind load for a structure to be built as per Section 1609 of the IBC and Section R301.2.1 of the IRC, as applicable. To find the wind speed for a specific area in New Jersey, select one the following methods:

1 -- Click the radio button for address and enter the desired address; Select "Find" to auto-populate the latitude and longitude fields and select "Get Windspeed;" or

2 -- Find the site on the map, right click the mouse and the latitude and longitude will be displayed in decimals. Click the radio button for decimal and then the coordinates auto-populate in the decimal location. Select "Get Windspeed."

Wind speeds are site-specific for the GPS coordinates provided and are found by interpolation to the nearest 1-mph. An example of the results, based on ASCE 7-10, is provided on the following page.

Windspeed Website Information

The purpose of the "Windspeed Website" is to provide users with a site-specific windspeed that are used in the determination of design wind loads for buildings and other structures. On this website, users can obtain windspeeds compatible with ASCE 7-10, ASCE 7-05, and ASCE 7-93. Windspeeds are also provided for serviceability purposes for 10-, 25-, 50-, and 100-year return periods when using ASCE 7-10. Users are cautioned to be sure to use the correct windspeed associated with the edition of ASCE 7 being used in the design. Without providing too much detail, the design windspeeds are different because the basis for wind design was service-level, fastest mile windspeeds in ASCE 7-93, service-level, 3-second gust windspeeds in ASCE 7-05 and strength-level, 3-second gust windspeeds in ASCE 7-10. It is assumed that the users of this site have competency to understand how to calculate and apply design wind loads to structural models of buildings or other structures.

The reason this utility is needed is that the spatial resolution of the windspeed maps that are displayed in ASCE 7 are not sufficient to determine a site specific windspeed. There are no reference city or town locations on the ASCE 7 windspeed maps and while county boundaries are shown, the resolution is affected when the maps are expanded large enough to distinguish the boundaries and approximate the city locations.

◉ Decimal (Enter Decimal Value)

Latitude	Longitude
40.218798	-74.764751999

○ Address (Enter Complete Address Below)

101 S Broad St, Trenton, NJ 08608, U: [Find]

○ US Virgin Islands

○ Guam

○ American Samoa

○ Hawaii

[Get Windspeed]

Search Results

Query Date: Mon Nov 16 2015
Latitude: 40.2188
Longitude: -74.7648

ASCE 7-10 Windspeeds (3-sec peak gust in mph*):

Risk Category I: 105
Risk Category II: 115
Risk Category III-IV: 120
MRI 10-Year:** 76
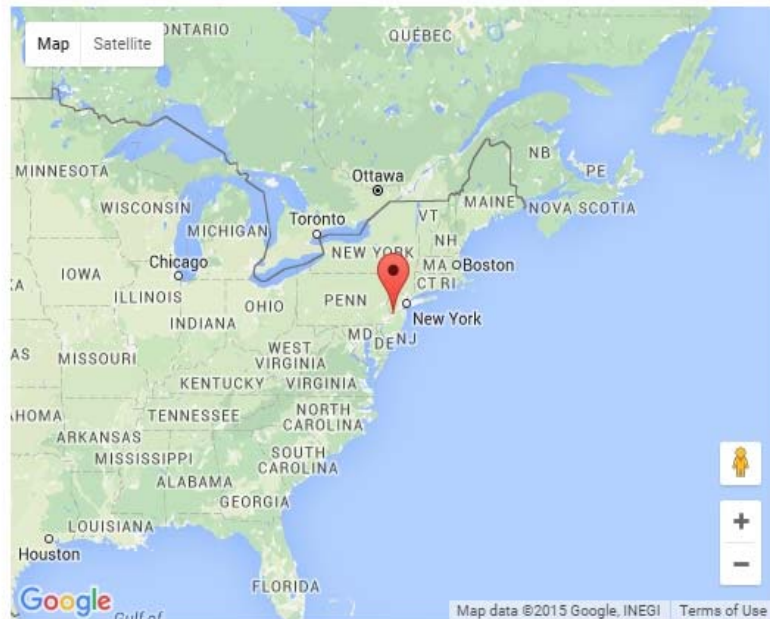**MRI** 25-Year:** 84
MRI 50-Year:** 90
MRI 100-Year:** 96

ASCE 7-05 Windspeed:
94 (3-sec peak gust in mph)
ASCE 7-93 Windspeed:
77 (fastest mile in mph)

*Miles per hour
**Mean Recurrence Interval

Users should consult with local building officials to determine if there are community-specific wind speed requirements that govern.

 Print your results

Bulletin 03-4