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BULLETIN 19-1

(Supersedes Bulletins 94-8, 03-4 and 05-2)

Issued: September 2019 Revised: September 2022
Subject: Design Loads for Ground Snow, Wind and Seismic
Reference: N.J.A.C. 5:23-3.14, Building Subcode, Chapter 16; N.J.A.C. 5:23-3.21,
One- and Two-family Dwelling Subcode, Chapter 3

Previously, the Department has issued independent bulletins related to specific design loads. In an effort to simply information, the bulletins for ground snow, wind and seismic loading have been consolidated here. Site-specific hazard information to determine design loads for buildings and other structures can be obtained from the Applied Technology Council's website at <https://hazards.atcouncil.org/>; alternatively, one may use the American Society of Civil Engineer's website at <https://asce7hazardtool.online/>. Based on the information provided, either website will provide similar maps that were found in the previous bulletins.

The websites assume that users have competency to understand how to calculate and apply the information provided to determine design loads to structural models of buildings or other structures.

These websites will only return values provided by the indicated reference documents from the building subcode and one- and two-family dwelling subcode. In the case that the website does not provide the information required to proceed with the design, please contact the local authority having jurisdiction

Values are site-specific for the location entered and may be dependent upon the elevation of the site, depending on the hazard of interest. Users should provide the most accurate location for the building or structure site by specifying either the known street address, city and state or the latitude and longitude to at least five (5) decimal places. *Note: If only the name of the city/state or zip code is provided, the website will return data for the centroid of the city or zip code and could underestimate the values that should be used for the site of interest.*

The above websites should be applied to design loads as such:

- **Snow (Ground)** per the building subcode, Section 1608, Figure 1608.2 and Table 1604.5 or per the one-and two-family dwelling subcode, Section R301.2.3 and Figure R301.2(6).
 - If the website returns with "case study (CS)," one may use withdrawn Bulletin 94-8 values for the following counties: Sussex, 50 psf; Warren, 35 psf; Hunterdon, 35psf; Passaic, 40 psf; Morris, 35 psf; Somerset, 30 psf. All other counties should generate a load number.

- **Wind** per the building subcode, Section 1609, Figures 1609.3(1) through (4) and Table 1604.5 *or* per the one- and two-family dwelling subcode, Section R301.2.1 and Figures R301.2(5)A and B.
- **Seismic (Earthquake)** per the building subcode, Section 1613 and Figures 1613.2.1(1) and 1613.2.1(2). This design load criteria is not applicable to the one- and two-family dwelling subcode.

Being that the websites provides information from multiple editions of the ASCE 7 referenced standard, information should be applied from the edition listed in Chapter 35 of the building subcode or Chapter 44 of the one- and two-family dwelling subcode. In terms of Risk Category, Table 1604.5 of the building subcode contains that information. Lastly, Site Class can be found in Chapter 20 of the ASCE 7.