



Connecticut DOT
Office of Engineering

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ENGINEERING BULLETIN

Transportation Division Chief, Bridges

Precipitation Frequency Estimates

The Hydrometeorological Design Studies Center of the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) released updated precipitation frequency estimates for the Northeastern States including Connecticut, on September 30, 2015. The precipitation frequency estimates are published in NOAA Atlas 14 Volume 10: Precipitation-Frequency Atlas of the United States, Northeastern States.

The NOAA Atlas 14 precipitation frequency estimates supersede the estimates published in NWS HYDRO-35(1977), Technical Paper No. 40 (1961), Technical Paper No. 49 (1964), and therefore, the rainfall data provided in Appendix B of the Department's Drainage Manual. This directive also supersedes General Memorandum No. 14-04, "Interim 24-hour Precipitation Rates."

Please use the NOAA Atlas 14 data in all applications where the Drainage Manual data would have been used. The Atlas 14 data can be accessed through the NOAA [Precipitation Frequency Data Server - PFDS](#). NOAA Atlas 14 does not apply to the current USGS Regression Equations (StreamStats application).

Projects that have already advanced into Final Design using the older data should be assessed on a case-by-case basis to determine whether any revisions to the design and/or analyses are warranted using the NOAA Atlas 14 data. Regulatory agencies will likely require the use of Atlas 14 data for projects involving hydraulics and storm water design and requiring environmental permits.

If there are any questions as to whether this change is to be applied to an active project assignment, please discuss with the appropriate Department project manager.