

How to Calculate the 500 year Flood Elevation in a FEMA Designated Coastal Flood Hazard Area For the Purposes of Obtaining a Flood Management Certificate from DEEP

In the State of Connecticut activities, such as the construction of schools, hospitals, residential structures and the storage of hazardous or contaminated material in a floodplain are considered to be a critical activity. Critical activities are regulated to the 500 year Base Flood Event (BFE) when applying to the Department of Energy & Environmental Protection (DEEP) for a Flood Management Certification (FMC).

The Federal Emergency Management Agency (FEMA) has recently updated the Flood Insurance Studies (FIS) and Flood Insurance Rate Maps (FIRMS) for the state of Connecticut. The new FIS, that were published for Connecticut's coastal communities calculate only the still water elevation for the 500 year storm event in coastal flood hazard areas. The still water elevation does not include the wave crest elevation and therefore is not considered to be the 500 year BFE in a coastal flood hazard area.

DEEP, Inland Water Resources Division (IWRD) is recommending to applicants that they calculate the 500 year BFE in a coastal flood hazard area by following FEMA's Technical Fact Sheet 1.6 *Designing for Flood Levels Above BFE* dated December 2010. FEMA Technical Fact Sheet 1.6 suggests that the elevation for the 500 year flood event in a coastal flood hazard area can be approximated by multiplying the elevation of the 100 year BFE by 1.25. In the event an applicant may feel that using this method is inaccurate or too conservative, the applicant is at liberty to contact FEMA for a copy of the most recent coastal flood model and revise this model accordingly in order to obtain a more accurate 500 year BFE. Model revisions and analysis must be prepared by a Licensed Professional Engineer familiar with coastal storm surge and flood modeling, and using the most recent and best available data and science. The IWRD reserve the right to review and either approve or contest revised model results.