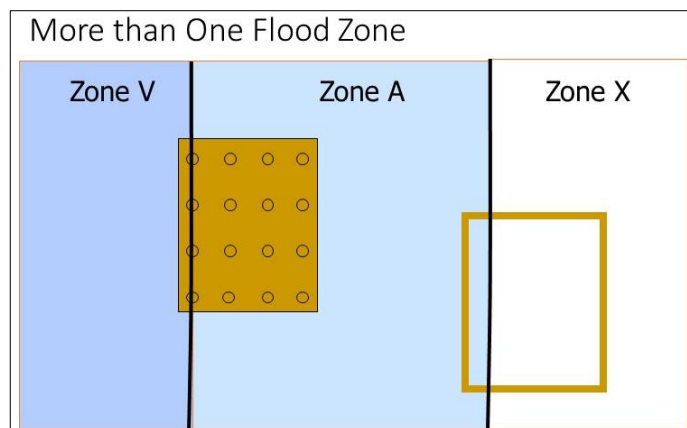


By Rebecca Quinn, CFM

Have you issued a permit for a building that is positioned to be in more than one flood zone? This could happen if the building straddles the line between the Zone V and Zone A, if it straddles the line between the floodway and the floodway fringe, or if it is partly in the Special Flood Hazard Area and partly in Zone X (shaded or unshaded). Long-time floodplain managers know the building has to comply with the most restrictive requirements. How do they arrive at that interpretation?

When looking into questions like this, I always start with the NFIP regulations at 44 CFR §60.3 (and definitions in §59.1). The regulations are silent on this specific issue—you won't find exact language that addresses a building in more than one flood zone.

But let's keep in mind that the regulations do more than give us the specifics. The regulations also contain a performance statement for how buildings should perform when exposed to flooding (look at §60.3(a)(3)). What this suggests is that without specifics, we have to interpret how to make sure that a building in more than one flood zone will perform as expected. It seems to me that gives us a pretty clear answer—the building has to meet the more restrictive requirements in order to perform adequately. But let's do a bit more research.



When researching questions and interpretations I check FEMA's guidance documents, of which there are many. Between the NFIP Technical Bulletins, several reference manuals, and many documents that address specific issues, there is plenty of material to help us interpret the best application of the rules. [FEMA 480, A Study Guide and Desk Reference for Local Officials](#), covers many, but not all, of the questions that people ask, making it a valuable resource. However, for the question about multiple zones, I did several word searches and didn't discover any specific guidance.

The FEMA Elevation Certificate anticipates this situation. The form expects users to complete Item B8 with "Flood Zone(s)" and Item B9 with "Base Flood Elevation(s)"—note both are plural. The instruction for B8 directs entering the "flood zone, or flood zones, in which the building is located" and the instruction for B9 states all appropriate BFEs are to be listed "[i]f the building is located in more than one flood zone." ECs are used by insurance agents to issue flood insurance policies, which surely means data on multiple zones are used for insurance determinations. And that leads me to check the [Flood Insurance Manual](#). Sometimes that's a daunting prospect. However, this time I quickly found the following in General Rules, X Special Rating Situations:

"D. Buildings in More Than 1 Flood Zone/BFE. Buildings, not the land, located in more than 1 flood zone/BFE must be rated using the more hazardous zone/BFE."

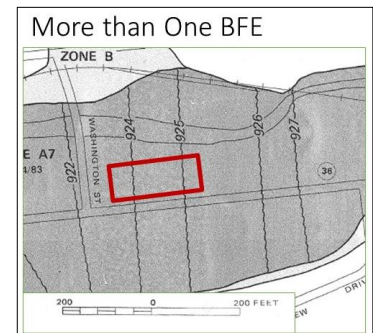
Please note I'm generally very cautious about dipping into the *Flood Insurance Manual* when researching questions about compliance. We regulate development to reduce future damage and risk to people and property, not just to qualify for good insurance rates. Whether some element or aspect of a building and contents is or isn't covered by NFIP flood insurance doesn't come into play when we have to decide what is and isn't compliant. But it is

helpful to know, in this case, that buildings in more than one flood zone or affected by more than one BFE are rated for flood insurance based on “the more hazardous flood zone/BFE.” This reinforces and is consistent with the interpretation we get from considering the performance statement in §60.3(a)(3).

The very clearest answer is in the *International Building Code* and the *International Residential Code*, and it shouldn’t be a surprise to anyone to learn it’s in there to settle questions raised over the years:

- **IBC 1612.1:** Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazard and flood loads. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.
- **IRC 322.1** Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

A variation of a building straddling more than one flood zone is a large building on a site affected by more than one BFE. Most places I’ve seen this are along riverine waterways where the topography is steep and the water surface elevations drop several feet in a short distance (see graphic). I ran into this many years ago in western Maryland, when a developer wanted to put a long, narrow building parallel to the stream, and the BFE at the downstream end of the site was 4 or 5 feet lower than the BFE at the upper end. He tried to convince me the solution was to have a “stepped” building, with each stepped part above the BFE.



Nice try, but I was not persuaded. The discussion revolved around whether each stepped part could be considered a separate building that just happens to be very (very!) close to an adjacent building. While in theory that approach could be taken if each building has a separate foundation, I reminded the developer of three things: (1) that floodplain mapping is not as precise as he’d like to think and mountainous streams typically have heavy sediment and debris loads; (2) that his engineer would have to demonstrate that the flood loads exerted on each “building” would not transfer loads to the others; and (3) that each “separate building” would require separate ECs and separate flood insurance policies. It still took a bit of convincing, but as the permit official, I stood firm in my interpretation. At the end of the day he gave up on the project altogether. That was more than 20 years—and at least one significant flood—ago. I wonder if the idea ever came up again.

Submit your own items or suggestions for future topics to column editor Rebecca Quinn, CFM, at rcquinn@earthlink.net. Comments welcomed!

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