



By Rebecca Quinn, CFM

Nearly 30 states, the District of Columbia, and all US territories adopt building codes at the state level and mandate local enforcement. Thousands of communities in other states voluntarily adopt building codes. FEMA estimates nearly 70 percent of communities in the NFIP enforce building codes (that's about 15,400 of the slightly more than 22,000 participating communities). Almost without exception, codes that govern the design and construction of buildings are based on the International Codes® (I-Codes). FEMA deems the flood provisions of the 2015, 2012, and 2009 editions of the I-Codes meet or exceed the minimum requirements of the NFIP for buildings and structures (see related story on p. 12).

In many communities the floodplain administrator is also the building official, but in many others, the two positions are held by different people, sometimes in different departments. I-Codes have included flood provisions for more than a decade. It's past time for floodplain and building professionals to come together to do what FEMA calls "coordinating." There are several benefits to relying on building codes to meet NFIP requirements, laid out in detail in Chapter 2 of the latest edition of [Reducing Flood Losses Through the International Codes: Coordinating Building Codes and Floodplain Management Regulations](#) and summarized at the end of this column.

The description of the importance of this coordination is prefaced with what is, in my opinion, an understatement: "As a rule, having multiple regulatory instruments govern the same thing can be problematic." Two reasons are given: wording differences may be interpreted to be meaningful and there are differences in requirements. The I-Codes have several provisions that exceed the NFIP minimums and many that are more detailed than NFIP regulations. Importantly, Chapter 3 of *Reducing Flood Losses* lays out the differences in considerable detail.

Perhaps the most important reason to "coordinate" isn't explicitly addressed in that publication: liability. I understand each state may have differences in how professional responsibility is set forth in statute or regulation, and every state probably has case law bearing on liability for enforcement of building codes and local regulations. But let's lay aside those possible differences and consider liability in a broader sense.

I've met many local floodplain managers who were unaware their mandated building codes include flood provisions (to be fair, I've met plenty of building officials in the same boat!). My guess is they've been handling applications to build in flood hazard areas the way they always have – applying locally adopted regulations. Of course, unless an owner has a knowledgeable design engineer or architect, that could mean some buildings don't comply with the building code. By itself, that might expose the building official – or the community – to some liability.

Let's consider a scenario that happens to be based on a real situation, although I won't identify the community or the state. Consider "Shoreville," a community with floodplain management regulations that require buildings to meet the NFIP minimum elevation requirements (i.e., no freeboard). Shoreville is also required to enforce the state building codes.

Not long ago Shoreville's building department issued multiple permits for large buildings in the special flood hazard area and all were constructed with the lowest floors at the BFE. Unfortunately, the code that governs buildings other than 1- and 2-family dwellings (i.e., the International Building Code) refers to ASCE 24 for elevation requirements. And those elevations are higher than what's called for in the city's regulations.

If you haven't already checked out ASCE 24, you may not know its minimum elevation requirement is BFE plus 1 foot (and even more freeboard depending on the importance of the building). FEMA posts *Highlights of ASCE 24* (in the 2005 and 2014 editions) on the [Building Code Resources](#) webpage.

So, Shoreville has differences between two regulatory instruments and, as illustrated in FEMA's documents comparing NFIP and I-Codes, some of those differences are meaningful. Thus, designers, buildings and owners who meet local flood rules by placing the lowest floor of a commercial building at the BFE violate the building code. In my opinion, the building official shares some responsibility.

I'm not sure how the situation came to light, but an investigative body found misconduct on the part of Shoreville's structural plans reviewer and the building official for wrongly approving permits that didn't meet the flood zone requirements in the state building code. One was quoted saying he'd not been aware of the building code requirements. Neither is still employed with Shoreville and the findings were referred to the state's professional licensing board.

A good question might be why would an owner get upset if the community didn't require BFE plus 1 foot, which, after all, costs at least marginally more than building at the BFE? My guess is the owners of the buildings in Shoreville raised the issue because they were just as concerned (if not more so) with not qualifying for lower flood insurance premiums due to that "plus one foot" as they were with not complying with the code.

The lessons? Clearly one lesson is local officials should pay attention to the specifics of their requirements. But the bigger takeaway is simple. I encourage NFIP state coordinators to read *Reducing Flood Losses*, look at their state model ordinances, and work through the Chapter 4 questions related to coordinating I-Codes and floodplain management regulations. Local officials can do the same, especially in those states that don't mandate enforcement of building codes. As more communities start paying attention to the benefits of relying on the flood provisions in building codes, there will likely be a growing demand for code-coordinated model ordinances – FEMA's model ordinance is a good place to start. In conjunction with the Florida State Floodplain Management Office, I helped develop such a [model in 2013](#). More than half of Florida's 468 NFIP communities have adopted it and the rest are expected to do so in the next two years.

**Model Code-Coordinated Ordinances.** *Reducing Flood Losses* links to three versions of a code-coordinated model ordinance prepared by FEMA.

Before adopting ordinances based on these models, States Coordinators should ask for FEMA assistance, and communities should ask for state assistance.

See Chapter 2 of *Reducing Flood Losses* to read the advantages of relying on building codes to govern the design and construction of buildings in SFHAs, among them:

- Fewer conflicts (or no conflicts) between two sets of regulations – eliminating burdens on owners, engineers, architects, builders, and local officials who no longer need to identify and resolved differences;
- All hazard-related building requirements are in one place, making it easier on designers;
- Improved construction quality;
- Codes have some "higher standards" and some more specific provisions than the NFIP;
- Strengthened enforcement, because enforcement procedures and authority are established in building codes;
- Effective, routine inspections, because building departments conduct multiple inspections at different times during construction; and
- Improved compliance with requirements for existing buildings.

*Submit your own items or suggestions for future topics to column editor Rebecca Quinn, CFM, at [rcquinn@earthlink.net](mailto:rcquinn@earthlink.net). Comments welcomed!*