



By Rebecca Quinn, CFM, and Tom Leatherbee, CFM, City of Del City, OK.

With each passing year I spend more and more time in front of a monitor, with most of my “hands on” experience gained by talking to front line floodplain managers. Just like formal education, “book learning” only goes so far. The NFIP regulations and the flood provisions of the International Codes can’t cover every situation. And, despite the breadth and quality of FEMA’s many guidance publications, they also can’t cover every situation.

But sometimes real-life problems (and solutions) can trigger clarification and changes, not only in guidance documents but in building code requirements.

At an ASFPM conference several years ago, Tom Leatherbee gave a presentation on dealing with dilapidated buildings. It stuck with me. Tom, the building official for the City of Del City, OK, was a reviewer during FEMA’s development of the Substantial Improvement/Substantial Damage Desk Reference ([FEMA P-758](#)). That’s why at least some guidance on the subject is now available. The issue is how to handle buildings in flood hazard areas that have been neglected to the point where the work necessary to make them safe, sanitary, and livable, might constitute SI/SD.

Representing the Oklahoma Floodplain Managers Association, Tom recently worked with the FEMA Building Science Branch on a proposal for the International Property Maintenance Code. If the proposal is successful, communities that enforce the IPMC will have yet another tool to reduce exposure of buildings to flooding. Because many buildings subject to the IPMC are low- and moderate-income rental housing, it will also mean fewer economically vulnerable families will be exposed to flooding. The purpose of the IPMC is to ensure public health, safety and welfare by establishing minimum maintenance standards.

As we all know, the NFIP requirements and the flood provisions of the IBC, IRC, and IEBC apply to buildings in flood hazard areas if a local official determines proposed improvements are "substantial improvement" or if buildings have incurred "substantial damage." Making these determinations requires a comparison of costs to building market value. Substantial damage may be triggered by damage of any cause, and most damage results from sudden events, such as fire, tornado, earthquake, or flood. When applied to structures that have been neglected and become dilapidated and unsafe over time, the basic substantial damage and substantial improvement requirements can be undermined by an existing provision in the substantial improvement definition that allows exclusion of costs to correct identified code violations (for detailed guidance, see the [SI/SD Desk Reference](#)). Once a structure has been cited under the IPMC, it's conceivable that most if not all costs to correct cited conditions could be excluded.

Another aspect of the definition for substantial damage is problematic when applied to neglected, dilapidated buildings, and that is the determination of market value. When a building is damaged by a sudden event, it is relatively straightforward to determine the market value "before the damage occurred." It is not straightforward when damage has occurred over time – what date should be used to determine the market value "before the damage occurred"?

The proposal to modify the IMPC has two objectives, achieved in part by proposing definitions differ from those in the NFIP regulations and the I-Codes:

- The proposed definition for Substantial Damage makes clear that the market value of the structure is the date of the code official's order pursuant to the IPMC. Without this clarification, an owner may claim

the market value should be the value of the building before maintenance starting being neglected, which could be many years in the past (and typically not easy to determine). The market value as of the date of an order is likely be a higher market value (therefore raising the 50 percent threshold) than the market value as of the date an application for a permit to perform repairs is received (which may be a year or more after the citation is issued), as recommended in FEMA guidance in Section 4.5 of the SI/SD Desk Reference.

- The proposed definition for Substantial Improvement removes the provision that allows exclusion of certain costs, thus requiring the costs of all work to be included in the calculation.

The IPMC has a section that lists conditions that can prompt a code official to order an owner to demolish a building or board it up until it is repaired. The proposal to modify the IPMC adds structures determined to have incurred substantial damage to the list of conditions that warrant such an order. If future repair is pursued by the owner, the substantial damage determination means the repairs would have to bring the building into compliance. One result of this change is that many more owners are likely to consider demolition, in which case, replacement structures would have to comply not only with flood requirements, but all building code requirements, resulting in many benefits such as resistance to wind and seismic loads, improved fire safety, and better energy efficiency.

The proposal adds a new provision to the IPMC section that specifies general requirements. It would make it clear all cost to correct cited conditions of the interior and exterior of a structure (terms used in the IPMC) are included when substantial improvement is determined, and emphasizes that all costs of all repairs and improvements necessary to correct existing cited violations must be included.

Tom, a long-time ASFPM member, brought his experience to the table to illustrate the merits of the proposal. He writes:

Del City, OK has more than its share of flood hazard areas, mostly filled with aging residential neighborhoods. I've used the IPMC a number of times to require property owners to repair or remove dilapi-



dated buildings in flood hazard areas. Several years ago I had to order demolition of a dilapidated apartment complex that had been damaged by flooding and left unrepaired for several years (see photographs above). Pursuant to the building code and the community's floodplain management regulations, I determined that the structures were substantially damaged. At the same time, I issued a demolition order pursuant to IPMC because the structures were unsafe, unsanitary, and unreasonable to repair.

The owner initially proposed to repair the buildings and applied for a remodel permit. I denied the permit because I determined the work covered by the application was substantial improvement and the owner didn't propose bringing the buildings into compliance with our flood requirements. The owner

appealed my decision, challenging the SI/SD determinations because virtually all of the proposed repairs would be to correct cited violations of the IPMC. The owner claimed those costs should be excluded from the determination.

Had the city's appeals board allowed the costs to correct cited violations to be excluded, overturning my determinations, the apartments could have been repaired without compliance. The structures, and future residents, would have been left at continued risk for flooding. Luckily, before the appeals board ruled on the issue the property entered foreclosure and was sold to a developer. The apartment buildings were eventually demolished and the land redeveloped with commercial buildings after a significant flood mitigation project was completed.

Although this specific situation was resolved before the appeal was decided, it came so close that Tom and other members of the Oklahoma Floodplain Managers Association decided to pursue a change to the IPMC. OFMA offers a course on dealing with flood damage through building codes and using the IPMC is always a hot topic. Tom's hands-on experience illustrates the value of being committed to mitigating flood risk and sharing with others – in this case with FEMA. That, in turn, may lead to a solution that would be available to all communities that enforce the IPMC.

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



The White House announced Jan. 16 new steps that federal agencies are taking to bring private sector capital and expertise to bear on improving our nation's roads, bridges and broadband networks. Read the fact sheet [“Increasing Investment in U.S. Roads, Ports and Drinking Water Systems through Innovative Financing.”](#)

Tick tock! Tick tock! Time is running out.



For those of you who have not renewed your ASFPM membership, it is crunch time. The board election process begins Feb. 1. That means if you are not a member by the first, you won't be eligible to run or vote in the elections. Do not miss out on your chance to have a voice in our association. Contact Kevin Currie at kevin@floods.org to renew your membership, or to become a member for the first time.