



By Rebecca Quinn, CFM

Is Freeboard in Floodplain Management's Future?

If your community is one of thousands with floodplain management regulations or building codes that already require freeboard (additional height above the base flood elevation), don't stop reading just yet.

Maybe some of you are considering pitching one foot of freeboard — or even more — to your managers and elected officials. I hope many of you contribute to [ASFPM's submission](#) in response to FEMA's solicitation for comments on opportunities to update the National Flood Insurance Program's minimum floodplain management standards to help communities become safer, stronger, and more resilient.

The Basics

ASFPM, FEMA, and state and local floodplain managers have promoted freeboard for decades. Many states and communities already require buildings in mapped flood hazard areas to be one foot or higher than the NFIP minimum, which is the base flood elevation. This additional height is the most common way communities strengthen floodplain management regulations.

Freeboard provides a margin of safety against uncertainty, flood events that rise higher than the minimum 100-year (base flood) elevation, and future increases in flood depths. The evidence of increased frequency and severity of flooding abound, whether related to increased upland development, climate change, sea level rise, or subsidence

It should be obvious: the higher buildings are elevated, the less flood damage they experience. Yes, adding just one foot or several feet to a foundation does somewhat increase the up-front cost of construction, a point often raised by builders contesting freeboard. However, the long-term benefits of avoiding or minimizing damage, plus lower **annual** insurance premiums, compared to the **one-time** construction cost, make freeboard a good investment. And homes that are built higher should be attractive to future buyers. When property owners have to elevate by more than just a foot or two, sometimes they elect to raise their buildings even higher to use the area underneath for parking.

Maximize How Your Community Uses Freeboard to Reduce Future Flood Risk

While freeboard is a common higher standard applied to buildings in the mapped floodplain, much less common is applying floodplain management regulations to the land adjacent to the flood zone that is lower than the flood elevation plus freeboard. This approach is particularly appropriate where future conditions indicate increased flood risk, such as areas vulnerable to sea level rise, watersheds with significant development that will increase impervious surfaces, and areas that are already experiencing more frequent and intense storms. Remember: decreasing **future** flood vulnerability of a structure built today requires action **today**.

Consider the top graphic on the next page. House A is just "out" of the SFHA and is allowed to be constructed at grade (even with a basement). House B is "in" the SFHA and must be elevated above the base flood elevation. Now, suppose the next flood rises above the BFE, high enough to damage House A but not House B. Regulating the land below the freeboard height applies the same factor of safety to all buildings subject to flooding up to that height, providing an equal level of protection to those who develop in areas just outside the FEMA-designated floodplain.

Freeboard in Building Codes

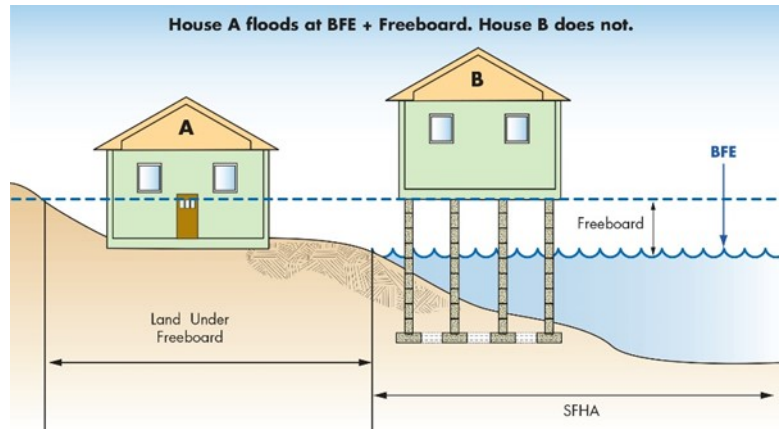
State and local building codes based on the 2015 and later editions of the International Codes require at least one foot of additional elevation above the base flood elevation, although some states have stripped this commonsense factor of safety from their building codes. Communities considering adopting freeboard should first check their building codes. Some states allow communities to modify building codes to be more restrictive, including requiring more than just one foot of freeboard.

(Continued on page 13)

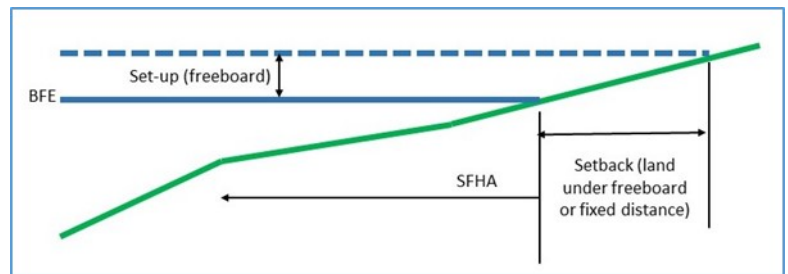
(Continued from page 12)

Putting It Into Practice

The sketch below shows how the freeboard height can be used as a “set-up.” It also illustrates a “setback,” which might be a function of the freeboard height or a fixed distance from the SFHA boundary. Many states and communities adopt setbacks (or buffers) to limit development within specified minimum distances from bodies of water. While the primary reasons may be related to water quality and riparian habitat protection, setbacks can also achieve flood loss reduction benefits by guiding development away from areas subject to erosion or deep floodwater. Depending on the objectives, setbacks may be measured from waterway centerlines, top of bank, normal high water, the floodway boundary, or the outer edge of the mapped SFHA. This approach is particularly useful in communities with waterways without mapped SFHA (typically less than one square mile drainage area) or waterways with only unnumbered Zone A without BFEs elevations or floodways.



Here’s how it works. Suppose the community adopts a freeboard of BFE plus two feet, that’s the “set-up” illustrated. And suppose it’s been determined that a 100-foot setback from the SFHA boundary is reasonable. Although a line on a map isn’t necessary to implement a fixed-distance setback, with good enough topography, that combination can be used to delineate an added “factor of safety zone” within which the floodplain management regulations apply. This approach can also be used to guide development away from the SFHA by using the set-up and setback in combination, and requiring buildings to be located landward of the location identified by either parameter. Thus, a building would have to be set back at least 100 feet from the SFHA boundary, unless the topography is such that the set-up is satisfied at a closer location.



Regulating the land under the freeboard also solves the problem of applying the “more restrictive” requirements to buildings that straddle a flood zone boundary, including the Zone AE/Zone X boundary. Currently, a building footprint that is entirely outside of the SFHA boundary, even by inches, is not regulated as floodplain development because it is not “in” the mapped SFHA. Of course, there can be spirited discussions about the exact location of a building footprint relative to the SFHA boundary.

Floodplain managers considering these and other higher standards will benefit from reviewing ASFPM’s [Understanding and Managing Flood Risk: A Guide for Elected Officials](#). Even better, share it with your elected officials even if higher standards aren’t in your community’s immediate future. It’s written in an easy-to-use Q&A format and packs a lot of basics into brief descriptions.

Amending Your Regulations

Once you’re convinced a higher standard is a good idea that will help your community achieve its flood damage reduction objectives, the next step is drafting an ordinance to amend your regulations. Check with your NFIP State Coordinator for guidance. One of the state’s primary objectives is to help communities keep their regulations in good shape and meet or exceed the minimum requirements of the NFIP.

(Continued on page 14)

(Continued from page 13)

SI/SD—Getting the Message Right

Have you ever said, or heard someone else say, some variation of “improvements on a building in the SFHA cannot exceed 50% of the value of the structure”? I get that a precise description of the substantial improvement and substantial damage requirements takes longer and may seem more complicated. But using shorthand and mischaracterizing what is already one of the most misunderstood and difficult requirements surely can lead to trouble. We can do better than that. Any owner of any existing, nonconforming building can do any amount and type of improvement. The kicker is what has to happen if the cost of the work equals or exceeds the market value of the building.

I’m not suggesting we sugarcoat SI/SD (there’s a reason it’s sometimes called the “dreaded 50% rule”). I’m suggesting we put a little more effort to be clear and correct: buildings can be improved, and buildings must be repaired after damage, but if the costs of the work are 50% or more of the market value of the building, it triggers a requirement to bring the building into compliance. And then the fun begins when you explain what that means!

Be sure to refer your citizens, elected officials, and colleagues to [Answers to Questions about Substantially Improved/Substantially Damaged Buildings](#) (FEMA 213). FEMA 213 hits all the key points about SI/SD, but for your own challenges enforcing SI/SD, you should keep a copy of [Substantial Improvement / Substantial Damage Desk Reference](#) (FEMA P-758) close at hand.

Submit your own items or suggestions for future topics to column editor Rebecca Quinn, CFM, at rcquinn@earthlink.net. Comments welcomed! Explore back issues of the [Floodplain Manager’s Notebook](#).

Call for Nominations: 2022 ASFPM Awards

We are now accepting nominations for the 2022 ASFPM Awards. These annual awards recognize the outstanding contributions made by individuals, agencies, and organizations to keep communities safe from flood loss, promote resiliency, and advance the association’s mission.

Please preview the submission form before submitting your nomination. There are different forms for [individual awards](#) and the [chapter award](#).

Winners will be honored at the 2022 ASFPM Annual Conference in Orlando.

The deadline is Feb. 10, 2022.

AWARD CATEGORIES

- Tom Lee State Award for Excellence
- James Lee Witt Local Award for Excellence
- Larry R. Johnston Local Floodplain Manager of the Year
- John R. Sheaffer Award for Excellence in Floodproofing
- Outreach/Media Award
- John Ivey Award for Superior Efforts in Certification
- Meritorious Lifetime Achievement in Floodplain Management Award
- Outstanding Chapter Award
- Goddard-White Award
- Jerry Louthain Distinguished Service Award



To learn more about the criteria for each category, [visit the ASFPM website](#). Once you’re ready to submit your nomination, [go here](#).

By Ray Carroll, MAI, SRA, CFM

Appraisal Reviews and Managing Trouble

One of my objectives for writing the MV Supplement is to empower local officials to become effective users of appraisal services. So this month, we'll talk about reviewing appraisals and managing troublesome situations involving appraisers and appraisal reports.

Compliance is local

Enforcement of floodplain management ordinances and building codes is how communities implement the NFIP. The task of the floodplain administrator is most effective if the ordinance language avoids confusion and identifies the best appraisal method. I recommend that communities:

- Define market value to be the Actual Cash Value (ACV) estimated by independent professional appraisers (starting with the estimate of what it would cost to replace or replicate the building in-kind, not to current code, then depreciating that cost to account for age, wear and tear, and neglect).
- Avoid ordinance language that promotes multiple appraisals of the same property.
- Develop an in-house policy or procedure for making SI/SD determinations and be sure to include conducting reviews of appraisal reports.
- Refer to the Substantial Improvement/ Substantial Damage Desk Reference (FEMA P-758), especially Section 4.5, Determining Market Value, as guidance for appraisers that specifies assignment requirements.

If you wonder why ACV is the best appraisal method, look up the several Market Value Supplements published since the first one in the November 2020 *Insider* (see link in text box).

Get out the word

Make it a practice to share with appraisers, contractors, and architects copies of:

- The specifics about market value and SI/SD in your ordinance or building code.
- The local official's Appraisal Review Checklist (available at the link above). There are two versions, a general checklist and one specifically for ACV appraisals.
- *The Appraisal Journal Article entitled "The 50% FEMA Rule Appraisal," authored by Patricia Staebler, SRA (available at the link above).*
- Any other information you want appraisers to know before they begin their work.

Sorting Appraisers

State-certified appraisers all receive training, but they are not all experts in cost/depreciation analyses. Few appraisers understand the special requirements of making appraisals to support SI/SD determinations. Appraisers working outside their comfort zone are likely to feel insecure and might not be good listeners. However, most appraisers really do want to do the right thing.

Floodplain administrators might sort appraisers into three groups:

- Group 1: Those who have already demonstrated competence and professionalism.
- Group 2: Those who apparently want to do the right thing but are not yet fully versed in the details of appraisals for SI/SD purposes.
- Group 3: Those about whom there are grave doubts based on previous submissions.

The object is to keep and promote those in the first group, nurture and improve those in the second, and avoid those in the third group.

Powerful relationships

The client (a property owner, contractor, architect, etc.) has the most leverage over an appraiser because the client pays the appraisal fee, the client might use the appraiser's services another time, and the client might tell others about the appraiser. Floodplain administrators have leverage over the permit applicant, who is often the appraiser's client. The user of appraisal services (in this case the floodplain administrator) is the decider of whether an appraisal report is reliable and acceptable for SI/SD determination purposes.

Resources for Floodplain Administrators and Appraisers.

I've gathered the Market Value Supplements and other handy resources on my company's web page "50% Rule Appraisal Assignments," [50 Percent Rule Appraisal Assignments - Carroll And Carroll](#)

Handing appraisal report deficiencies

As in all discussions among professionals, we should be diplomatic and impersonal. Pay attention to the results recorded on the Review Checklist and any apparent deficiencies. When evaluating appraisal reports, don't focus on the value conclusion. The value conclusion is a direct consequence of the appraisal effective date, the definition of value, assignment conditions imposed by a client or intended user, the set of facts about the building, and the application of appraisal methodology. So, the value conclusion can be wrong if the assignment elements and conditions were misunderstood, if the "facts" are in error, or if appraisal methods were misapplied. Floodplain administrators should focus on the appraisal report deficiencies revealed by application of the Checklist.

Here is an approach that will be effective:

1. Cooperate with your supervisor to outline a policy for SI/SD determinations based on effective appraisal review.
2. Use the appropriate version of the Review Checklist. The Uniform Standards of Professional Appraisal Practice (USPAP) change about every two years, so be sure you're using the current version of the Checklist.
3. If the appraisal report is good but needs only a minor change (like identifying the floodplain administrator as an intended user), call the appraiser, compliment the good work, and ask for the minor revision. Keep this appraiser firmly in Group 1.
4. If appraisal review reveals multiple report deficiencies that might be cured by revisions, or a lack of documentation that might be cured with supplementation, call the appraiser and request "clarification" to make the report acceptable. Focus on specific items revealed by the Checklist. Follow up by email with a blank copy of the Checklist, and maybe a copy of the Fall 2017 *The Appraisal Journal* article. If the appraiser listens and complies, this is a Group 2 appraiser.
5. If an appraiser refuses to listen, is uncooperative, or if the appraisal report is deeply flawed and unacceptable, contact the permit applicant informing of the intention to reject the report. Send the applicant a blank copy of the Checklist, a copy of the Fall 2017 *The Appraisal Journal* article, and maybe excerpts from Section 4.5 of the SI/SD Desk Reference. Require that the appraisal report be corrected. Refer to the specific USPAP requirements listed on the back page of the Checklist. Let the appraiser's client decide whether this appraiser can be rehabilitated.
6. If the appraiser does not make satisfactory revisions, reject the report.
7. When appraisal reports are clearly fraudulent and dishonest, reject the report and refuse to accept additional work from appraisers whose work places them firmly in Group 3.

Your objective should be to help appraisers understand what this specialized area of appraisal practice is about. Cull out the bad eggs and encourage appraisers who try to do good work. In the end, that will help you and your community properly enforce your floodplain management regulations and building codes.