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Strategic Alliance for Risk Reduction  
FEMA Region 10 Service Center  
20700 44<sup>th</sup> Avenue West, Suite 130  
Lynnwood, Washington 98036  
(425) 245-0834

# News from Region 10

## Substantial Improvements in Floodplains

**Mitch Paine, CFM – FEMA Region 10**

When the NFIP requirements were created, a decision was made to create the substantial improvement rule, where buildings must be elevated and otherwise brought into compliance when proposed improvements are valued at 50% or more of the pre-improved building's market value. This substantial improvement rule is a way to see that major investments in property in the floodplain are made safer through compliance with local floodplain management regulations. The 50% threshold was a compromise between requiring, for example, a house to be elevated to current standards for any improvements made to a building or not requiring elevation for even an entire house remodel. The most helpful resource on this topic is the *FEMA Substantial Improvement/Substantial Damage Desk Reference (FEMA P-758)*. Floodplain administrators often face the following challenges in applying substantial improvement requirements.

### **How do we determine pre-improved value?**

Establishing the value of the building before the improvements are made is the first step in the substantial improvement review process. Your community floodplain regulations' definitions section will reference "market value," and a professional

appraisal is the best way to determine the pre-improved market value. There are two other main methods: assessed value and the building's actual cash value including depreciation. The key requirement for using any method is to identify the value of only the building, not including land or any other improvements on the property.

### **What are included in costs of improvements?**

When property owners are seeking to do improvements in the floodplain, they must supply a detailed list of project costs, including the market value of all donated materials or labor. Floodplain administrators often then have to identify which costs of the project are part of the substantial improvement rules. A detailed list is found in the Desk Reference, but generally includes all work done to the house and must include all materials and labor. Generally, the project costs that can be excluded are permit fees, plug-in appliances, and outside components like swimming pools, sidewalks, or fences. There are templates for use in the Desk Reference to request specific project costs that apply to substantial improvement rules.

### **Applying the 50% Rule**

By accurately obtaining the building's market value and the correct costs of the improvements, you'll be able to calculate the percentage. The work is SI/SD if the ratio of the cost of work to the market value equals or exceeds 50 percent.

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$$\frac{\text{Cost of Improvement or Cost to Repair to Pre-Damage Condition}}{\text{Market Value of Building}} \geq 50\%$$

### Substantial Improvement, cont'd

If it falls below 50%, then the property owner does not need to elevate or otherwise bring their building into compliance. If the improvement costs are 50% or greater, then the project must include compliance measures like elevating a home, including the building utilities, or dry floodproofing if the building is nonresidential. Be sure that permits clearly indicate the percentage and all documentation supporting the conclusion is included in the permit file.



A key step to build into your community's process is inspecting the improvement project as construction is underway to ensure the property owner doesn't complete work outside of the scope of the original permit. If any changes have been made, issue a stop-work order and ask the property owner to submit updated project costs.

#### **Importance of Substantial Improvement**

While requiring a property owner to elevate their home when doing a remodel may seem burdensome, applying substantial improvement rules results in more buildings safer from flooding. The cost of elevating may be offset by flood insurance savings and reduced future risk from flooding. Communities can adopt higher standards by lowering the 50% threshold to, say, 30%, to ensure more buildings are elevated when major remodels are done or by

requiring cumulative tracking of improvements made over a course of 5 or 10 years to catch more projects done to a building.

Additionally, FEMA is trying hard to help communities understand these rules and apply them correctly. Improved buildings are a big focus of any Community Assistance Visit, the FEMA or state audit of local floodplain management programs.

Administering these requirements can be complicated and confusing, so please reach out to your State NFIP Coordinator or FEMA Region 10 staff for any technical assistance. *FEMA P-758 is an excellent resource which floodplain administrators should have handy.*

## **Thinking Beyond Flood Maps**

### **Using FEMA's Coastal Data to Reduce Risk and Build Resilience**

This year, several FEMA Regions collaborated with Resiliency Action Partners to display accessible online information to assist communities experiencing coastal flooding. The purpose of [this online storymap](#) is to highlight the resiliency actions taken by these communities, following the utilization of flood risk data.

Our coasts are home to vibrant communities, vital resources, recreational destinations, and robust economies. About 40 percent of the United States' population lives in a coastal county. The National Oceanic and Atmospheric Administration (NOAA) estimates that at least 10 million Americans moved to a coastal area in the last decade. What makes these areas so distinctive also puts them at risk. Flooding is the nation's costliest natural disaster. In the United States, 7 of the 10 most expensive disasters were caused by coastal storms. As the coastal population grows, more

people and properties are at risk from coastal storms and flooding.

Coastal environments are dynamic. They are constantly reshaped by the forces of nature. Land use changes and rising average temperatures and sea levels may increase flood risk. Many communities see flooding from high tides more often now. This can lead to road closures, overwhelmed stormwater systems, and disrupted business districts. By 2050, high tide flooding is likely to occur between 25 and 75 days per year, depending on location. It is vitally important for coastal communities to make informed decisions about planning, land use, and building codes. Doing so today will reduce their risk and increase their resiliency in the future.

In addition to information about coastal flood risk around the country, this resource provides suggestions for increasing resiliency through adopting building codes and higher standards, encouraging communities to consider land use, zoning, and siting for new critical facilities, and how to elevate buildings in high-risk areas or relocate them to areas with a lower risk. This coastal data storymap can help communities to consider resilience in new infrastructure, residential, and commercial design.

*For more information on the development of virtual storymap resources, contact Kate Skaggs: [kate.skaggs@mbakerintl.com](mailto:kate.skaggs@mbakerintl.com)*

### **Ask the Help Desk**

The Region 10 Service Center is here to help local community officials and stakeholders with technical, training, mitigation, and mapping questions.

Email [RegionXHelpDesk@starr-team.com](mailto:RegionXHelpDesk@starr-team.com).

## Next Steps in WA State’s Plan Integration

### A Project Update

In the fall of 2019, the Washington Department of Commerce and FEMA Region 10 partnered to provide local land use planners in Washington State the opportunity to help structure how natural hazard mitigation data and risk reduction strategies are integrated into Comprehensive Planning. The widespread need for more thorough guidance and examples for this integration became clear over a series of workshops held in October and November.

Through collaborative discussions, FEMA and the Department of Commerce identified two projects to support local planners in the near-term; a Resource Handbook and a Project Advisory Committee who will work to develop more in-depth guidance on plan integration.

The Resource Handbook is the result of a resource audit of current practices and guidance, from a wide range of sources, that support the integration of natural hazard information into Comprehensive Plans. It is intended to provide a summary of existing policy/planning guides developed by federal, state,

and non-profits. It also highlights specific sections that may be applicable in helping communities better incorporate hazard data into Comprehensive Plans.

The Resource Handbook was shared with those who participated in the first series of 2019 workshops, and is available for download at: <https://deptofcommerce.box.com/shared/static/tko34yapz5dkzmpthjrf0wu1hk0z5ohw.pdf>.

There will also be an Advisory Committee that will be convened in early 2021 to support the development of additional tools and products to help better integrate natural hazard data into Comprehensive Plans. The [Department of Commerce](#) will lead the committee, with FEMA supporting the efforts.

*If you would like to be kept apprised of the Advisory Committee, please email [Steve Roberg: steve.roberge@commerce.wa.gov](mailto:steve.roberge@commerce.wa.gov)*

### Newsletter Ideas?

Want to spread the word about an upcoming event or recent success story? Let us know what you want to see in future issues! Articles can be up to 500 words and may include pictures.

Email [RXNewsletter@starr-team.com](mailto:RXNewsletter@starr-team.com).

## NORFMA NEWS

### CRS Users Group Meeting – WA

Quarterly meetings are continuing virtually; the next meeting is **Thursday, January 21, 1pm-3pm** (Pacific). The Skype connection is available day-of at: <https://meet-na.atkingsglobal.com/becca.croft/229NRMHJ>

### HEC-RAS Training Opportunities

Two HEC-RAS courses hosted by NORFMA will be available virtually this spring, one focused on modeling basics, and another focused on 2D unsteady flow applications; both led by WEST Consultants. These intensive, hands-on workshops will prepare engineers and water resource professionals to use the HEC-RAS computer program in real world situations. Dates are as follows:

#### Basic Steady Flow HEC-RAS Course

March 1 – 5, 2021 (AM sessions)

#### 2D HEC-RAS Course

April 5 – 9, 2021 (AM sessions)

Seats are limited to 15 participants, so please register early if you are interested. Full details, times, and registration costs are available on NORFMA’s Event Calendar. [www.norfma.org](http://www.norfma.org).



<h3>Online Training</h3> <p>(All times Pacific)</p> <p><b>CRS: Preparing an Annual Recertification</b> January 19, 10 am Online – 1 CEC</p> <p><b>CRS: Substantial Damage Properties Management Plans</b> January 20, 10 am Online – 1 CEC</p>	<p><b>STARR: NFIP Basics</b> January 21, 10 am Online – 1 CEC</p> <p><b>CRS: The 2021 Addendum to the CRS Manual</b> February 16, 10 am Online – 1 CEC</p> <p><b>CRS: Changes to Activity 310 Elevation Certificates</b> February 17, 10 am Online – 1 CEC</p>	<p><b>STARR: Tools for Determining BFE</b> February 18, 10 am Online – 1 CEC</p> <hr/> <p>To register for online courses, visit STARR’s training site: <a href="http://j.mp/starronlinetraining">j.mp/starronlinetraining</a>, or email <a href="mailto:RXTraining@starr-team.com">RXTraining@starr-team.com</a>.</p>
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