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# Relationship between Floodplain Management and Flood Insurance

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*The National Flood Insurance Program [is] a voluntary program based on a mutual agreement between the Federal government and the local community: In exchange for adopting and enforcing a FPM ordinance, Federally-backed flood insurance is made available to property owners throughout the community.*

Emergency Management Institute, FEMA  
*Managing Floodplain Development through the NFIP*

## *Overview*

This unit discusses the relationship between floodplain management and flood insurance. This relationship is an important one—many floodplain management decisions directly impact the flood insurance rates that local property owners will pay. A noncompliant development might have to pay thousands of dollars extra for coverage each year.

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## ***A. Introduction***

There is a direct economic relationship between floodplain management and flood insurance. Flood insurance rates are based on risk of exposure to flood losses. Local floodplain management measures are designed to minimize that exposure. Therefore, *how well local floodplain management regulations are enforced affects the flood insurance rates paid by property owners and others.* Communities that do not adequately administer the minimum floodplain management provisions contained in their ordinance may be placed on probation, which causes a premium surcharge to be placed on their citizen's flood insurance policies. If the community is suspended from the National Flood Insurance Program, no new policies can be written and existing policies cannot be renewed.

This unit examines how rates are determined for construction that takes place after issuance of the Flood Insurance Rate Map and for substantial improvements to structures that were built before issuance of the map. It also examines the need for elevation and floodproofing certificates for both floodplain management and flood insurance purposes. Finally, this unit discusses how variances affect floodplain management requirements and flood insurance rates.

## ***B. Relationship between Floodplain Management and Insurance***

Floodplain management activities keep flood insurance rates at a reasonable cost. The NFIP, together with state and local regulations are designed to ensure a low insurance rate because, at a minimum, the regulations require that the lowest floor of a structure must be at the BFE, or in the case of non-residential structures, dry floodproofed to or above the BFE.

### ***Pre-FIRM Structures and Post-FIRM Construction***

The insurance rates for all structures are based on a two-tiered system. Under the Emergency Program, a first layer amount of insurance is available on all insurable structures before the effective date of the initial FIRM. The first layer of coverage available under the Regular Program for pre-FIRM structures is the lesser of either a subsidized rate or the actuarial rate when data is provided to show actual risk. The rate is actuarial for new construction and substantial improvements started after

the effective date of the FIRM. In the Regular Program (i.e., in most communities), a second layer of coverage is available at actuarial rates, up to a total of \$250,000 for a single family structure and \$500,000 for commercial structures. Contents coverage limits are \$100,000 for a residence and \$500,000 for non-residential buildings (see Table 11-1).

| <b>Table 11-1. Amount of Insurance Available</b> |                   |                        |                             |                        |
|--|-------------------|------------------------|-----------------------------|------------------------|
| BUILDING COVERAGE                                | EMERGENCY PROGRAM | REGULAR PROGRAM        |                             |                        |
|  |                   | Basic Insurance Limits | Additional Insurance Limits | Total Insurance Limits |
| Single Family Dwelling                           | \$ 35,000         | \$ 50,000              | \$200,000                   | \$250,000              |
| 2-4 Family Dwelling                              | \$ 35,000         | \$ 50,000              | \$200,000                   | \$250,000              |
| Other Residential                                | \$100,000         | \$135,000              | \$115,000                   | \$250,000              |
| Non-Residential                                  | \$100,000         | \$135,000              | \$365,000                   | \$500,000              |
| <b>CONTENTS COVERAGE</b>                         |                   |                        |                             |                        |
| Residential                                      | \$ 10,000         | \$ 15,000              | \$ 85,000                   | \$100,000              |
| Non-Residential                                  | \$100,000         | \$115,000              | \$385,000                   | \$500,000              |

Any subsidy for nonactuarial rates is paid out of the NFIP fund, which is entirely derived from flood insurance premiums. Federal tax revenues do *not* pay for the pre-FIRM subsidy. The subsidy is provided to those pre-FIRM structures that were built below BFE, in recognition that they were constructed prior to publishing the community’s first FIRM. This was usually the first formal recognition of the degree of flood threat in that locality. The subsidy defrays the very high premiums that would be charged to building several feet below BFE. Since the majority of flood claims come from pre-FIRM structures, pre-FIRM rates have been significantly increased since 1994, as directed by Congress.

The premium rates for post-FIRM (new) construction are actuarial and are based on the elevation of the lowest floor (including the basement) in relation to the base flood elevation—the higher the lowest floor level above the BFE, the lower the premium rate will be.

For pre-FIRM structures, there are no mandatory floodplain management criteria except in the case of *substantial improvement* or in the event that structures are *substantially damaged* (or a combination). The NFIP concept of substantial improvement is a compromise between the extremes of prohibiting all improvements that do not meet minimum floodplain management standards and allowing existing structures to be improved in any fashion without meeting any regulatory standards.

Prohibiting all improvements has associated with it the potential for causing hardship to those who have located in flood hazard areas without knowledge of the risk. These individuals would not be able to improve their structures as damage or age contribute to their deterioration. However, allowing existing structures to be improved without meeting any regulatory standards is also impractical because no mechanism would exist to ensure that increased investment in flood hazard areas will receive needed protection from the flood risk.

Pre-FIRM structures that are substantially improved are rated the same as new construction and are charged the full actuarial or risk rate except in the following cases:

- Replacement manufactured homes in pre-FIRM manufactured home parks
- Historic buildings which are renovated in such a manner as to retain historic integrity, as approved by the State Historic Preservation Officer (SHPO) or Certified Local Historic Preservation Board
- Lateral “additions” onto pre-FIRM buildings in A Zones which are elevated to BFE, etc., but do not trigger re-rating of the entire structure, so long as only minimal improvements are made to the original building
- Improvement to correct existing, identified cited code violations

State or local codes that require more restrictive floodplain management measures for less-than-substantial improvements may require elevating the structure, which will reduce the calculated actuarial rate for flood insurance. The inclusion of freeboard (e.g., elevation /floodproofing to one foot or more above the BFE) in state or local regulations also facilitates significantly lower flood insurance premiums as well as contribute to reducing peril to life and property and reducing the burden of increasing outlays for disaster relief and recovery.

Figures 11-1 through 11-6 illustrate how a pre-FIRM structure and post-FIRM construction are rated for insurance purposes. These rates and annual premiums are for purposes of this example; the insurance rates

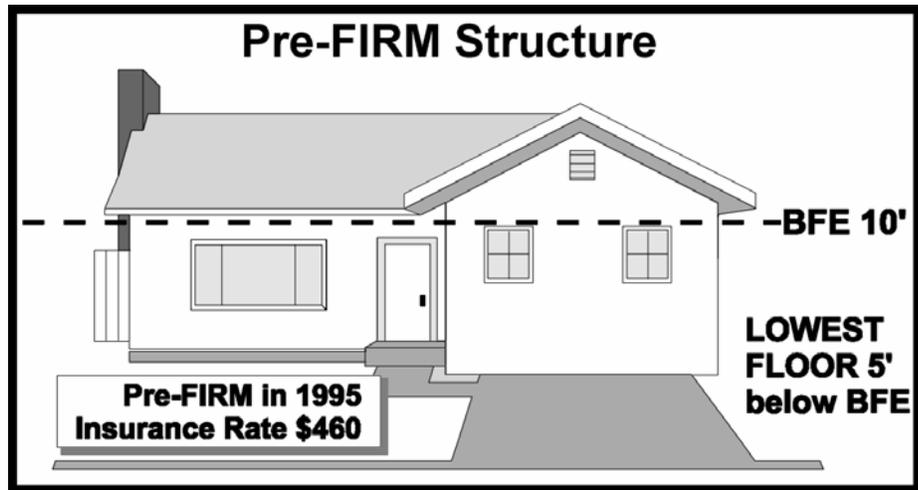


Figure 11-1

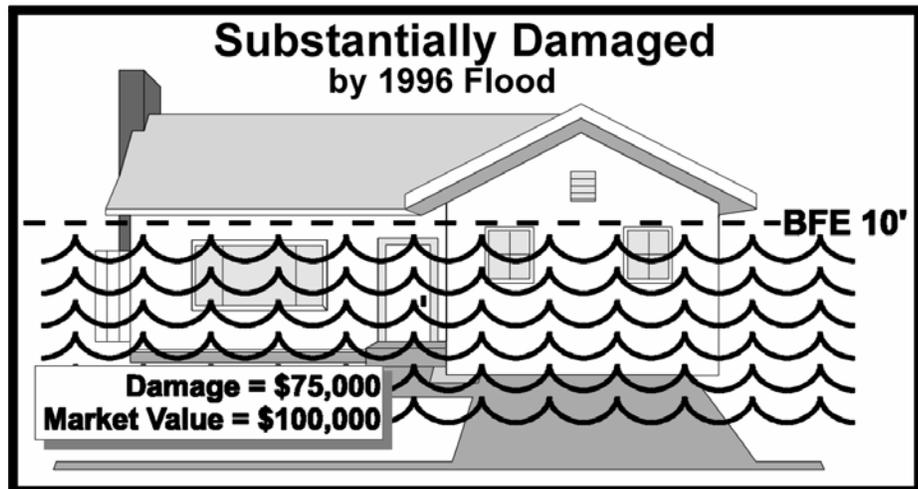


Figure 11-2

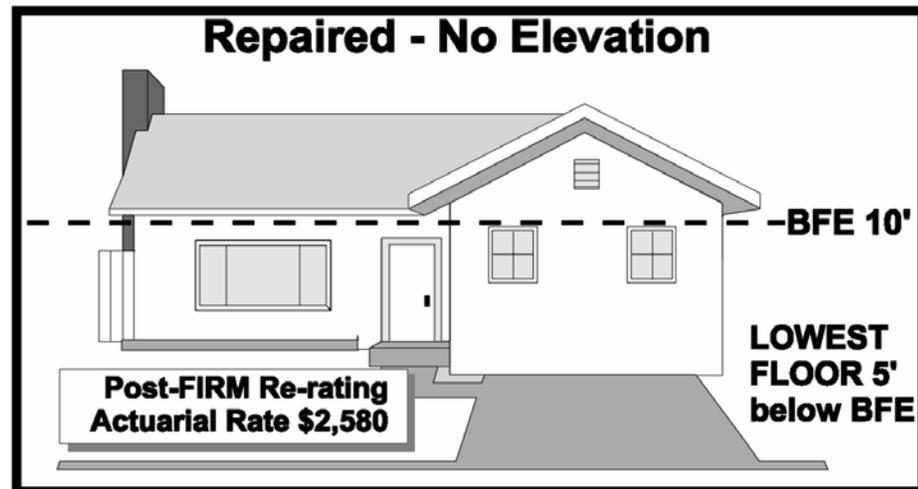


Figure 11-3

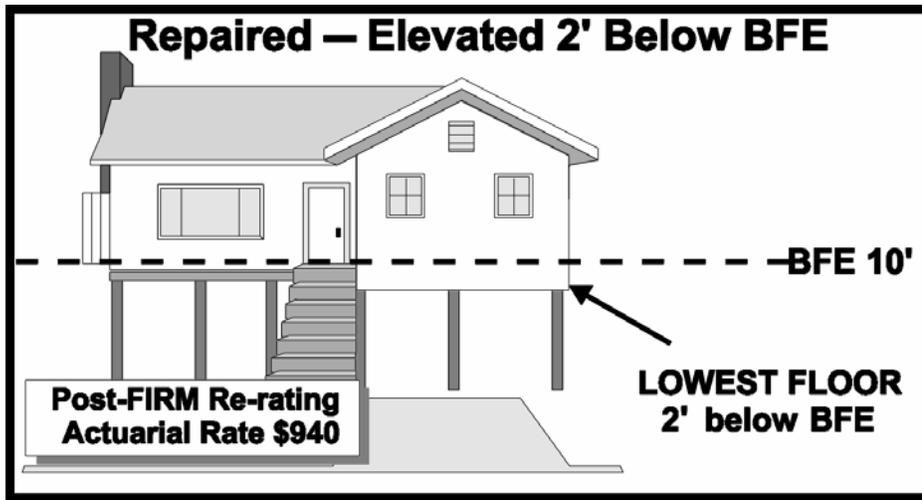


Figure 11-4

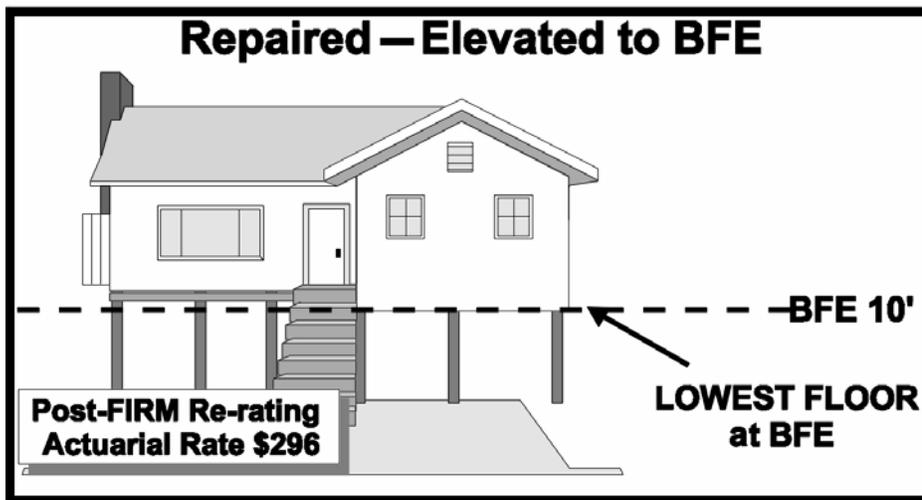


Figure 11-5

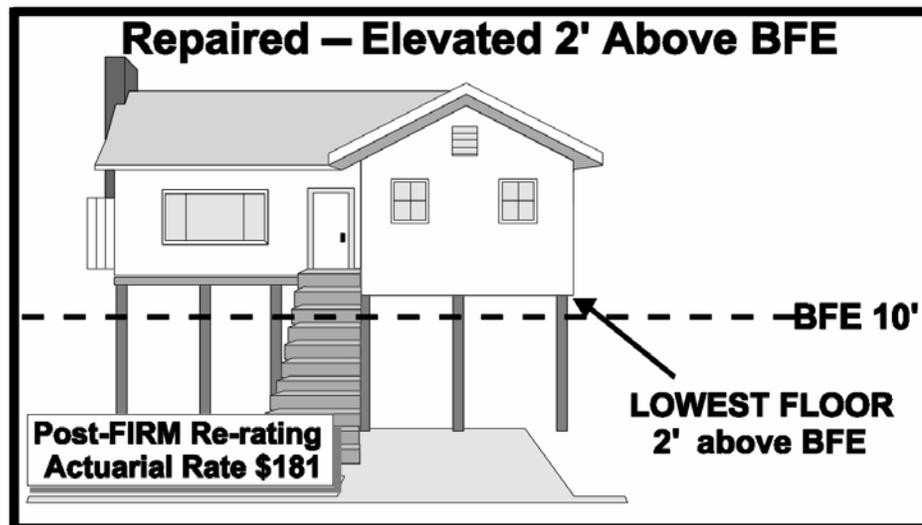


Figure 11-6

will vary based on location, date of construction, and lowest floor elevation and must be figured on a case-by-case basis. A structure (Figure 11-1) with a replacement cost of \$100,000 and structural insurance coverage of \$80,000 had an initial subsidized insurance premium rate of \$460. The structure was re-rated following flooding that necessitated repairs costing more than 50% of the pre-flood value of the structure. In Figure 11-3, the substantial improvements were made without elevating the structure, in violation of the local ordinance, resulting in exorbitant flood insurance premiums after re-rating (\$2,580). In Figure 11-4, the structure was elevated, but not high enough to meet local floodplain management requirements. Re-rating resulted in an insurance premium that was still quite high (\$940). Figure 11-5 shows the same structure elevated to the BFE, resulting in a premium (\$296) much lower than the original subsidized rate for a pre-FIRM structure. If the structure were elevated even higher to two feet above the BFE (Figure 11-6), the premium would be only \$181 based on actuarial rates.

### *Elevation and Floodproofing Certificates*

Elevation certificates and floodproofing certificates are tools to assist the insurance agent in the proper rating of structures. The required data on the forms includes zone designation, map panel number, BFE, lowest adjacent grade, and most importantly, the certified *as-built elevation* of the referenced floor level, or in the case of nonresidential structures, the elevation to which the structure is dry floodproofed. These data assist the agent and the insurance underwriters for the “Write-Your-Own” companies or NFIP in determining the correct flood insurance rate.

*When a nonresidential structure is dry floodproofed, one foot is subtracted from the flood level elevation. Thus, a structure must be floodproofed to one foot above the BFE in order to be rated as being floodproofed to the BFE. If it is only floodproofed to the BFE, the rating will be minus one foot, resulting in substantially higher long-term flood insurance rates.*

In unnumbered A Zones, a policy can be written for a new structure or a substantially improved structure without an elevation certificate or floodproofing certificate, but the quoted rate may be high. This serves as an incentive for the uninsured to submit the required forms. In cases where the structure is two or more feet below the BFE, the insurance agent cannot complete the rate calculation but sends the application to FEMA for a special, individualized rating. This procedure is known as **submit to rate**.

|          |
|----------|
| New Term |
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|                       |
|-----------------------|
| <b>Submit to rate</b> |
|-----------------------|

NFIP communities are required to obtain and maintain a record of as-built certifications. Although it is not required that the FEMA elevation and floodproofing forms be used for record keeping (other forms are acceptable), many communities suggest or even require the use of the FEMA forms. This dual use of the FEMA form (for both insurance and local permit purposes) can reduce the cost to the property owner and promote consistency.

Since a submit-to-rate policy often is an indicator of either the property owner's noncompliance with a community's regulations, the community's failure to enforce its regulations, or the result of a variance action, these cases are forwarded to the appropriate FEMA regional office for investigation.

## *Variations*

Although a community may grant a variance to permit a new structure or a substantially improved structure to be built at less than full compliance, FEMA cannot alter or vary the insurance rating mechanism. As noted earlier, new construction or substantial improvements are rated on an actuarial basis. A variance from the elevation requirements increases the risk to a structure, and that increased risk is reflected in higher annual insurance premiums. There can be variances other than to the flood elevation requirements, although elevation variance requests are the most common.

Insurance rates for structures built below BFE are substantially higher than those for elevated structures. In many instances the rates could be so high that the structure essentially becomes uninsurable because the owners may not be able to afford the premium. This may not matter to the original owner at the time the variance is requested, but it may matter to subsequent owners, and may make the structure unmarketable when a buyer cannot be found because of the high flood insurance rates. The result may be owner abandonment; and the local community may be left with the problem of vacant, flood-damaged, and essentially uninsurable buildings. The economic and sociopolitical costs to the community may therefore be significant.

As an example of how floodplain management decisions can affect flood insurance rates, a marine supply store on the Gulf Coast was built 14 feet below BFE while the community was suspended from the NFIP. The flood insurance premium was \$25,000 per year for a \$100,000 structure.

## ***Section 1316***

As evidenced above, flood insurance supports floodplain management in numerous ways. Another mechanism whereby flood insurance supports floodplain management is authorized by Section 1316 of the National Flood Insurance Act of 1968, which states,

“No new flood insurance coverage shall be provided under this title for any property which the Administrator finds has been declared by a duly constituted body, to be in violation of state or local laws, regulations, or ordinances which are intended to discourage or otherwise restrict land development or occupancy in floodprone areas.”

As an enforcement tool, the inability to obtain flood insurance coverage may induce the property owner to resolve the violation for several reasons.

- Non-availability of flood insurance may make the property difficult or impossible to sell.
- Denial of flood insurance coverage may reduce the market value of the property.
- Potential for substantial flood damage without the benefit of insurance coverage may be too great a risk for the property owner.
- Lending institution holding the property mortgage may threaten to foreclose without the necessary insurance coverage.
- There is no disaster assistance available for permanent reconstruction.

It should be pointed out that §1316 is used when all other legal means to remedy the violation have been exhausted and the structure is still noncompliant.



### ***Unit Learning Exercise***

***Purpose:*** To assess understanding of the relationship between floodplain management and flood insurance.

**Directions:** Complete the following.

1. Refer to Figures 11-1 through 11-6 in this unit. After the 1996 flood, how much would the property owner save in *annual* insurance premiums by elevating the substantially damaged residence to the base flood elevation instead of just making necessary repairs and moving back in?
2. How do elevation and floodproofing certificates assist insurance agents and underwriters?

Enter a “T” for true or “F” for false for each of the following statements.

- \_\_\_\_\_ 3. Once a variance is issued a request can be made to FEMA to alter or vary the insurance rating mechanism.
- \_\_\_\_\_ 4. New construction or substantial improvements are rated, for insurance purposes, on local floodplain management regulations.
- \_\_\_\_\_ 5. A nonresidential structure floodproofed to the BFE is rated, for insurance purposes, as being floodproofed to this flood elevation.
- \_\_\_\_\_ 6. Variances often result in higher insurance premiums for a property.
- \_\_\_\_\_ 7. Owners requesting variances may be most interested in saving on construction costs now and fail to consider the increased cost for flood insurance in the future.
- \_\_\_\_\_ 8. Very few situations should qualify for a variance when floodplain management and flood insurance reasoning and local regulations are followed.

### ***Answers to Unit Learning Exercise***

1. Refer to Figures 11-1 through 11-6 in this unit. After the 1996 flood, how much would the property owner save in *annual* insurance premiums by elevating the substantially damaged residence to the base flood elevation instead of just making necessary repairs and moving back in?

***\$2580 [Figure 11-3] - \$296 [Figure 11-5] = \$2284/year in insurance savings***

## 2. How do elevation and floodproofing certificates assist insurance agents and underwriters?

***They contain certified “as-built” elevations, necessary to determine the correct insurance rate.***

- F**     3. Once a variance is issued a request can be made to FEMA to alter or vary the insurance rating mechanism.
- \***     4. New construction or substantial improvements are rated, for insurance purposes, on local floodplain management regulations.
- F**     5. A nonresidential structure floodproofed to the BFE is rated, for insurance purposes, as being floodproofed to this flood elevation.
- T**     6. Variances often result in higher insurance premiums for a property.
- T**     7. Owners requesting variances may be most interested in saving on construction costs now and fail to consider the increased cost for flood insurance in the future.
- T**     8. Very few situations should qualify for a variance when floodplain management and flood insurance reasoning and local regulations are followed.

***\* You can't go wrong here. Technically, properties are rated on an actuarial (risk) basis. If local regulations are followed, that risk should be minimal and the rates will reflect the reduced risks.***