



**Federal Emergency Management Agency**  
**REGION VII**  
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**NATIONAL FLOOD INSURANCE PROGRAM**  
**APPLICABLE FLOODPLAIN MANAGEMENT REQUIREMENTS FOR**  
**CERTAIN ACCESSORY STRUCTURES**

**REGIONAL GUIDANCE**

**Background**

The National Flood Insurance Program (NFIP) floodplain management regulations require new, substantially improved, and substantially damaged residential buildings to be elevated to the Base Flood Elevation (BFE or 100-year flood). Detached garages and other accessory structures are included under the general definition of structure and are subject to all floodplain management regulations pertaining to structures.

However, the Federal Emergency Management Agency (FEMA) recognizes that alternate methods of flood protection may be appropriate for certain types of accessory structures located in the floodplain. These alternate methods of protection, commonly referred to as "wet floodproofing," allow for the inundation of the building by floodwaters, but minimize damage through use of flood-resistant materials and other construction techniques. Only in circumstances when it can be demonstrated that accessory structures can be designed in such a manner that results in minimal damage to the building and its contents and will create no additional threats to public safety, may a variance be issued.

In determining whether a variance from the local floodplain management regulations may be issued for accessory structures, the community must apply the following NFIP variance criteria set forth in the NFIP floodplain management regulations [44 CFR 60.6(a)]. The responsibility for determining whether an applicant qualifies for a variance rests solely with the community. To properly administer the granting of a variance for these types of accessory structures at the local level, communities must have variance review procedures in place. These variance review procedures must be within the bounds of the state enabling law.

Each variance must be decided individually by the community after a case by case analysis of the building's unique circumstances in accordance with the community's floodplain management ordinance. Issuing categories of variances to the NFIP requirements or granting a variance to a group of buildings is contrary to the purposes of the NFIP. FEMA uses these criteria to evaluate variances granted by a community and to determine if they are consistent with sound floodplain management.

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### NFIP VARIANCE CRITERIA

The applicant has good and sufficient cause for requesting a variance.

The applicant will suffer exceptional hardship should the variance be denied.

The variance will not cause increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

The variance is the minimum necessary, considering the flood hazard, to afford relief.

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### CONDITIONS TO VARIANCES ISSUED

In order to minimize flood damages during the base flood and the threat to public health and safety, the community shall attach, at a minimum, the following underlined conditions to a variance issued for any accessory structures that are wet floodproofed.

These conditions can also be used as guidance to determine whether a building is a candidate for wet floodproofing:

1. Use of the structure must be limited to parking or limited storage and not used for human habitation.
2. The accessory structure must be built or rebuilt, in the case of an existing building that is substantially damaged, with flood-resistant materials for the exterior and interior building components and elements (i.e., foundation, wall framing, exterior and interior finishes, flooring, etc.) below the BFE in accordance with 44 CFR 60.3(a) (3) of the NFIP regulations. The NFIP "Technical Bulletin 2 Flood-Resistant Material Requirements" provides guidance on materials resistant to flood damage and how and when these materials must be used to improve the building's ability to withstand flooding.
3. The accessory structure must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure in accordance with 44 CFR 60.3(a) (3) of the NFIP regulations. All of the building's structural components must be capable of resisting specific flood-related forces including hydrostatic, buoyancy, hydrodynamic and debris impact forces. Where flood velocities exceed five feet per second, fast-flowing flood waters can exert considerable pressure on the building's enclosure walls or foundation walls. "Technical Bulletin 1 Openings in Foundation Walls" and "Technical Bulletin 3 Non-Residential Floodproofing" provide guidance on design considerations to address these forces.

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4. The accessory structure must meet the NFIP openings requirement. NFIP requires that enclosure walls or foundation walls, subject to the 100-year flood, contain openings that will permit the automatic entry and exit of floodwaters in accordance with 44 CFR 60.3(c) (5) of the NFIP regulations. "Technical Bulletin 1 Openings in Foundation Walls" provides guidance for design openings in cases where a rate-of-rise is greater than five feet per hour.
5. Any mechanical, electrical, or other utility equipment must be located above the BFE or floodproofed so that they are contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with 44 CFR 60.3(a) (3).
6. The accessory structure must comply with the floodplain management floodway encroachment provisions of 44 CFR 60.3(d) (10) or (d) (3). No variances may be issued for accessory structures **within any designated floodway if any increase in flood levels would result during the base flood.**
7. Major equipment, machinery, or other contents must be protected. The rate-of-rise of flood waters or the flood-warning time available through an existing, reliable (community-based or regionally-based) flood warning system must be adequate to provide sufficient lead time to remove and relocate contents to land above the BFE. A community must make a finding that rate-of-rise of flood waters and/or flood warning is adequate. Protection techniques must be specified.

Protection techniques for contents that cannot be relocated in the event of a flood include constructing protective watertight floodproofed areas within the building, the use of equipment hoists for readily elevating contents, or permanently elevating certain contents on pedestals or shelves above the BFE.

For contents that can be relocated, a determination must be made that property owners can safely remove contents at any time, 365 days a year, without risk to lives and that the contents will be relocated to a site out of the floodplain. The site for storing relocated contents should be specified.

In order to permit detached garages, sheds, and similar structures which are not elevated or dry-floodproofed, the community would have to include the above recommendations, or equivalent provisions in its ordinances or require the issuance of variances.

### Ordinance Amendment

To address the construction of accessory structures, it is suggested that the above underlined language (Items 1-5 and 7) be included in a community's floodplain management ordinance as a subsection to the Floodway Fringe District. Item 6 should be included in the ordinance section dealing with Floodways, if applicable. These specific standards could also be included as a subsection of the variance procedures for construction outside of a designed floodway.

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### Important Issues Communities Need to Consider:

A community that varies individual standards for accessory structures, but still provides a level of protection that minimizes flood damages and the threat to public health, safety and welfare, will not jeopardize its NFIP eligibility. The community's Floodplain Manager needs to thoroughly document the conditions of each variance. Because granting variances to wet floodproofed accessory structures is a serious matter, the following are additional considerations a community should address as part of its variance review.

The community should consider stipulating a size limit for the structure to be wet floodproofed. Also, the community should take into consideration any existing or future wet floodproofed structures on the site by establishing a minimum number of structures which may be potentially wet floodproofed at any one site in order to minimize future flood damages.

The community should consider stipulating minimum distances to uncertified levees in order to protect structures that could be subject to high velocity waters as a result of a levee break or breach.

In order to grant the minimum type of variance from the NFIP standards necessary in order to afford relief, the community should consider a combination of elevation on fill and wet floodproofing.

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## INSURANCE IMPLICATIONS

**It must be emphasized that variances are granted with respect to floodplain management requirements and do not affect insurance rates.** The Federal Insurance Administration, by statute, must charge insurance rates commensurate with the risk to which a building is exposed. Insurance rates for buildings constructed under variances are generally higher than rates for a comparable structure that is fully compliant. In some instances the additional costs of insuring these buildings, if they are not elevated or floodproofed in accordance with the NFIP requirements, can approach or even exceed the costs of meeting NFIP requirements and the structure is still exposed to flood damages. **In accordance with the NFIP regulations, communities shall notify the applicant, in writing, that the issuance of a variance will result in increased premium rates for flood insurance and that such construction below the BFE increases risks to life and property [44 CFR 60.6(a) (5)].**

The insurance ramifications of exempting detached garages from the elevation or floodproofing requirements are as follows: If no more than ten percent of the policy coverage on a residential principal structures desired for a residential property owner's detached garage, this can be included under the standard policy covering the principal structure, regardless of the flood protection level of the detached garage. [See "Property Covered," paragraph A of the Standard Flood Insurance Policy Dwelling Form for a more detailed explanation of this coverage and exceptions to it.]

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However, if more than ten percent of the total policy coverage is desired for a residential property owner's detached garage, or if the principal structure is nonresidential, a separate policy must be written for the detached garage, with potentially prohibitive rates for "new construction" after the Flood Insurance Rate Map (FIRM) effective date, if the detached garage is neither elevated no dry-floodproofed. Other accessory structure require separate coverage as general property.

The contents coverage for the principal structure may not be used to cover contents in a detached garage. Consequently, there may be a need for a property owner to separately insure the contents in a detached garage. If this occurs, high premium rates could be charged if the detached garage is neither elevated no dry-floodproofed and constitutes "new construction" after the date of the FIRM.

This guidance is based on memoranda from Washington, D.C. dated 6, 1986 and November 10, 1993.

### **PUBLICATION ORDERING INFORMATION**

Single copies of the publications referenced in this document can be obtained from the appropriate FEMA Regional Office. Multiple copies of the Technical Bulletins should be ordered from the FEMA publications warehouse at the following address:

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