

UNIT 7: **ORDINANCE ADMINISTRATION**

In this unit

This unit covers things you need to know to effectively administer your floodplain management ordinance, including

- ◆ The legal basis for your ordinance,
- ◆ The duties and qualifications of the person who administers it,
- ◆ How to process permits,
- ◆ Conducting inspections,
- ◆ Enforcement tools,
- ◆ Appeals and variances, and
- ◆ Record keeping.

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INTRODUCTION

Generally, the NFIP does not have specific requirements on how local ordinances should be administered.

The NFIP does require that the local ordinance be legally enforceable and enforced uniformly throughout the community (44 CFR 60.1(b)). There are also some record keeping requirements that assist in verifying community and building compliance with the regulations.

If FEMA finds that a community's program is not in full compliance with its NFIP obligation, then it may require certain administrative adjustments to the program. How the program is administered, though, is dependent on the enabling legislation and the community.

This unit, therefore, is primarily a series of recommended administrative procedures. Those items that are NFIP requirements are highlighted in the "44 CFR" regulation boxes.

A. THE ORDINANCE

This course assumes that your community has a floodplain regulation ordinance in effect. While the course does not provide a model ordinance or ordinance language, it does describe the significance of your ordinance, and how to enforce some of its provisions.

If you need to enact or revise your floodplain regulations, contact your state NFIP coordinator to see if there is a model appropriate to your state laws and flooding conditions that you could use as a foundation for your local ordinance.

Statutory authority

As used in this course, ordinance is the generic term for a law passed by a local government. In some states it is called a “by-law” or some other name.

In all states, the authority to enact an ordinance comes from state law.

Communities are created by their state. Their powers are granted by and limited by state law or statutory authority, which is also known as enabling legislation. Your state has a specific law or set of laws authorizing your community to enact and enforce floodplain regulations. That law probably sets these parameters:

- ◆ The purpose and limits of the regulatory authority—for example, your community may not be able to regulate development projects undertaken by state agencies or public utilities.
- ◆ Minimum regulatory standards—many states mandate a certain building code or floodway encroachment standard.
- ◆ Prerequisites for enacting or amending the ordinance—a zoning ordinance may have to be based on a comprehensive plan or be adopted only after a public hearing.
- ◆ Requirements for issuing variances or allowing special uses.
- ◆ Prerequisites for the administering official—the community may have to have a certified building official enforce its building code.

Some state laws provide for state oversight of local regulations. In some cases, developers must apply to the state for a permit. In other cases, they may appeal to the state if they feel the community has not interpreted the regulations correctly.

In most states, local laws are subject to “Dillon’s rule,” named after a judge named Dillon who ruled in the 19th Century that because local governments are created by state government, they can do only what state laws specifically authorize.

If an action is not authorized by statute, a community cannot do it.

At one time, some communities did not have the statutory authority to implement the minimum NFIP regulatory requirements. FEMA worked with those states, so now all communities (cities and counties) should have all the authority they need to fulfill their NFIP obligations.

In some states, larger communities may be granted home rule. A home rule community is authorized to do anything that is not prohibited by statute. However, zoning and building laws are usually specific enough that even home rule communities must follow their provisions.

TYPES OF ORDINANCES

Floodplain regulations are usually found in one of four types of rules: zoning ordinances, building codes, subdivision regulations, sanitary regulations, and “stand alone” ordinances. Each is explained below.

Zoning ordinance

A zoning ordinance regulates development by dividing the community into zones or districts and setting development criteria for each district. Two approaches address development in floodprone areas: separate districts and overlay zoning.

In a separate district, the floodplain can be designated as one or more separate zoning districts that only allow development that is not susceptible to damage by flooding. Appropriate districts include public use, conservation, agriculture, and cluster or planned unit developments that keep buildings out of the floodplain, wetlands and other areas that are not appropriate for intensive development.

Overlay zoning adds special requirements in areas subject to flooding. The areas can be developed in accordance with the underlying zone, provided the flood protection requirements are met. As illustrated in Figure 7-1, there may also be setbacks or buffers to protect stream banks and shorelines or to preserve the natural functions of the channels and adjacent areas.

Building codes

A building code establishes construction standards for new buildings. The code may or may not set site or location requirements as a zoning ordinance does.

Many communities have adopted one of these national model building codes:

- ◆ The National Building Code of the Building Officials and Code Administrators (BOCA) has its flood resistant design and construction standards in Chapter 31.
- ◆ The Standard Building Code of the Southern Building Code Congress International (SBCCI) has a separate standard for flood resistant design and construction which is referenced in Chapter 31 and automatically adopted with the code.
- ◆ The Uniform Building Code of the International Conference of Building Officials (ICBO) has a separate appendix that must be specifically adopted by reference.

- ◆ The One and Two Family Dwelling Code of the Code Administrators and Building Officials (CABO) has no flood resistant design and construction standards but does have drainage provisions.

Many, but not all, NFIP regulatory requirements appear in parts of these codes. The Standard Building Code has a separate section devoted to floodplain management standards.

You should not assume that since your community uses one of these codes that all your regulatory requirements are covered.

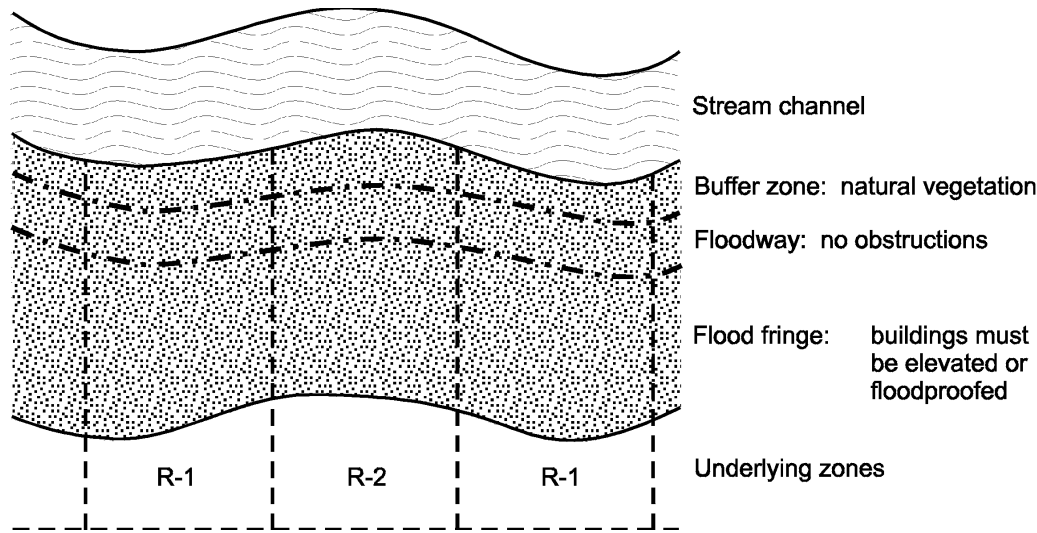


Figure 7-1. Example of overlay zoning

Subdivision regulations

Subdivision regulations govern how land will be divided into single lots. They set construction and location standards for the infrastructure the developer will provide, including roads, sidewalks, utility lines, storm sewers and drainageways.

As noted in Unit 6, Section C, subdivision regulations offer an opportunity to keep buildings out of the floodplain entirely with cluster developments.

They can also require that every lot have a buildable area above the BFE, include dry land access and meet other standards that provide more flood protection than a building code can.

Sanitary regulations

The NFIP's requirements for water and sewer system protection are sometimes best located with the regulations that set the construction standards for these systems.

“Stand alone” ordinance

Many, if not most, communities in the NFIP have enacted a separate ordinance that includes all the NFIP regulatory requirements, usually based on a FEMA or state model.

The advantage of doing this is that one ordinance contains all floodplain development standards. Developers can easily see what is required of them, and FEMA and the state can easily see if your community has adopted the latest requirements.

The disadvantage to a separate ordinance is that it may not be coordinated with other building, zoning or subdivision regulations. Some communities have found that by adopting a stand alone model, they adopt standards that are inconsistent or even contrary to the standards in the other regulations. For example, your building code may require crawlspace vents to be high, near the floor joists, while the floodplain ordinance requires them to be no more than one foot above grade.

If you have a stand alone ordinance, you should review its provisions with all other offices and ordinances that regulate land development and building construction. Make sure that others know the floodplain regulations and that there are no internal inconsistencies. For example, a floodplain ordinance administered by the city engineer may not be coordinated with the permit process conducted by the building department.

CONTENTS

Whether your floodplain regulations are in one ordinance or several, they should have these provisions:

- ◆ Purpose: Why was the ordinance adopted? What are its objectives? This provision helps set the tone for regulatory standards. For example, if the only purpose of the ordinance is to meet the NFIP minimum building requirements, a court may rule that it should not have higher regulatory standards that protect life safety.
- ◆ Definitions: What technical terms are needed? Most ordinances have to define terms like “development,” “building,” “base flood elevation” and “lowest floor” in order for the regulations to be clearly understood.
- ◆ Adoption of flood data: Your community needs to adopt the flood maps, profiles and other regulatory flood data. This provision may need to be amended when new studies are published or new areas are annexed.
- ◆ Requirement for a development permit: Your ordinance must have a development permit process. Relying on your community’s building code or zoning ordinance permit process may not be sufficient because those programs may not require permits for all development, including fill, mining, etc.
- ◆ Construction standards: This is the meat of the ordinance. It should cover all of the NFIP standards discussed in Unit 5 and additional regulatory standards required by the state or that the community deems appropriate. The standards should include provisions for:
 - ◆ Building protection standards (elevation, floodproofing, anchoring)
 - ◆ Standards for manufactured (mobile) homes and manufactured home parks
 - ◆ Construction standards peculiar to the flood zones in your community, such as V, AO, AH and A99
 - ◆ Construction in the floodway and standards for encroachments where floodways are not mapped
 - ◆ Standards for subdivisions
 - ◆ Standards for water and sewer service
 - ◆ Rules on water course alterations
- ◆ Designation of administrator: The community must officially designate one person responsible for administering the ordinance. This provision may list that person’s duties, as detailed in the next section.
- ◆ Appeals process: The regulations need to provide a way for people to appeal or request a variance when they feel that the construction standards are overly harsh or inappropriate. This process should be handled by a separate body, such as a board of appeals or plan-

ning commission; it should not be left up to the decision of a single person, such as the administrator.

- ◆ Enforcement: The ordinance must have enforcement procedures clarifying penalties for violations. These are usually fines and orders to correct the violation.
- ◆ Abrogation and greater restriction: This is a legal provision that specifies that the ordinance take precedence over less restrictive requirements.
- ◆ Severability: This is a statement that the individual provisions are separable and if any one is ruled invalid, it does not affect the rest of the ordinance.

B. THE ADMINISTRATOR

The state grants communities the police powers to adopt, administer and enforce local codes and regulations, including floodplain regulations. Generally, elected officials delegate authority for ordinance administration and enforcement to a subordinate officer.

A local floodplain administrator might be an existing local staff person, such as the building inspector, community zoning official, engineer or planner. The community also might contract to have the job done by the county, regional planning agency, another jurisdiction or authority, or a private firm.

Throughout this course, the person designated as responsible for administering the floodplain management ordinance is called “the administrator.” This course also assumes that you are the administrator, so the terms “you” and “the administrator” are used interchangeably.

DUTIES

In general, the administrator is responsible for ensuring that development activities comply with the floodplain management regulations and other applicable codes and ordinances.

Duties of the administrator vary depending on the kind, size and characteristics of the community. However, certain responsibilities are common to all ordinance administrators. Here is a list of such duties:

Understand the regulations: This is the most important of all of your duties and is the main subject of this course. A sound working knowledge of the general and technical provisions of various federal, state and local regulations is essential. You must be able to explain them to others, to review permit applications for compliance, and to provide adequate interpretations.

Ensure that permits are applied for: Often people do not realize that they need to apply for a permit for a project in the floodplain. You need to ensure that the public is informed as to when permits are needed and how they are obtained. Anyone engaged in a development project without a permit must be told to stop and apply for one.

Correct violations: You must evaluate complaints, conduct investigations and use legal recourse when necessary to correct violations.

Process permit applications: Your primary role is to review permit applications for compliance with applicable local regulations. This involves:

- ◆ Collecting permit fees, where applicable.
- ◆ Assessing the accuracy and completeness of the application.
- ◆ Evaluating site plans, topographic data, building design plans and other technical data.
- ◆ Identifying deficiencies and devising ways to correct them.

- ◆ Issuing or denying the permit.
- ◆ Helping applicants pursue appeals or requests for variances.

Coordinate with other programs: Responsibility for permit review may reside in or be shared with other offices, such as public works, planning and zoning, code enforcement or housing departments. Depending on your duties, you may be involved in coordinating permit reviews.

You must advise the applicant of any need for additional local, state or federal permits for the proposed development. Your office could have copies of the permit application forms or advise applicants whom to contact.

One of your NFIP responsibilities is to notify adjacent communities and the state NFIP coordinating agency prior to any alteration or relocation of a watercourse. You must submit evidence of such notification to the FEMA Regional Office.

You should also notify adjacent communities of plans for a substantial commercial development or large subdivision that could affect their flood hazard areas.

Ensure projects are built according to approved permits: You or your staff must perform periodic and timely on-site inspections to confirm visually that development is following the approved plans. The best way to do this is with a series of inspections at appropriate stages in the construction process, as discussed later in this unit. A certificate of use or occupancy is a final permit that allows the owner to use the building. It should not be given until a final inspection confirms that everything was done according to the approved plans.

Take enforcement actions: When noncompliant activities are uncovered, you must act to resolve the situation. This may involve issuing stop-work orders or other violation notices, coordinating enforcement procedures with the community's attorney, or appearing in court.

Keep records: You should have on hand a sufficient supply of current permit applications, variance requests and other administrative forms. A project file should be kept for each development permit application.

Maintain and update flood data and maps: As noted in Unit 4, Section D, your community should maintain an adequate supply of maps showing the regulatory floodplain for your office and the public to use. All map corrections and notices of map revisions should be recorded and denoted on administrative maps, with the details kept in an indexed file.

You should also cooperate with federal, state and local agencies, and private firms, undertaking flood studies. You must submit any new floodplain data to the FEMA Regional Office within six months of their development. Community staff should review revisions to maps (including Conditional Letters of Map Revision and Letters of Map Revision) to ensure they meet your regulations.

You must notify the FEMA Regional Office and the state within one year of an annexation or when your community has assumed or relinquished authority to adopt or enforce floodplain management regulations for a particular area.

44 CFR 59.22(a)(9)(v) Upon occurrence, [the community must] notify the Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed or no longer has authority to adopt and enforce flood plain management regulations for a particular area. In order that all FHBMs and FIRMs accurately represent the community's boundaries, include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished flood plain management regulatory authority.

You must notify the FEMA Regional Office and the state within six months of physical changes that can affect flooding conditions, such as channel modifications or upstream detention.

44 CFR 65.3. A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Administrator of the changes by submitting technical or scientific data in accordance with this part. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.

Update the ordinance: If your community is notified of changes in federal or state laws and/or regulations that would require changing your floodplain management ordinance, you must revise your ordinance within six months.

44 CFR 60.7. From time to time Part 60 may be revised as experience is acquired under the Program and new information becomes available. Communities will be given six months from the effective date of any new regulation to revise their flood plain management regulations to comply with any such changes.

Similarly, if you are given new flood data by FEMA, you have six months to update your ordinance to adopt the data and the regulatory requirements appropriate for that level of data (Unit 5, Section A, Community Types relates the level of data to the regulatory requirements).

44 CFR 60.2(a) A flood-prone community ... will be given a period of six months from the date the Administrator provides the data set forth in § 60.3(b), (c), (d), (e) or (f), in which to meet the requirements of the applicable paragraph.

A certified copy of any ordinance revision should be submitted to the FEMA Regional Office and to the state NFIP coordinating agency promptly after adoption.

QUALIFICATIONS

Your state may set minimum requirements for the person who administers the floodplain management ordinance, such as stipulating that the post be held by a certified building official. A

few states are encouraging or requiring that the ordinance be administered by a “certified floodplain manager,” a new certification that may be conferred by your state or the floodplain management association in your state.

In most instances, there are no specific qualifications or prerequisites. This does not mean just anyone can do any part of the job of administering the ordinance. One of your jobs is to make sure that the person with the right qualifications helps you. You will probably need help from three other professions:

- ◆ Some tasks should be conducted by an engineer experienced in hydrologic and hydraulic studies, such as reviewing a developer’s flood study before you accept new flood elevations.
- ◆ While the NFIP allows any properly appointed local administrator to complete an elevation certificate, some states require that such work only be done by registered land surveyors.
- ◆ You should always consult your community’s attorney before you initiate an enforcement action.

TRAINING

In many cases, only you will have the expertise needed to administer your ordinance. As the administrator, you will probably be your community’s primary source of information on:

- ◆ The basic NFIP requirements.
- ◆ Additional requirements of your ordinance.
- ◆ How to use the NFIP maps and regulatory flood data.
- ◆ How maps are reviewed and revised.
- ◆ When permits are needed.
- ◆ Whether a proposed project meets the ordinance’s standards.
- ◆ Whether a completed project complies with the approved plans.
- ◆ What records are needed.
- ◆ How to deal with citizens and builders.
- ◆ How to deal with violations.
- ◆ How floodplain development regulations and flood insurance rating are related.
- ◆ Where citizens and builders can get more information or help.

These topics are not taught at any high school or college. To learn these things you will need additional training. Here are some ways to get it:

- ◆ Complete this home study course.
- ◆ Spend time with the floodplain administrator in a neighboring community.

- ◆ Check with the FEMA Regional Office and/or the state NFIP coordinator before you issue your first few permits or certificates of occupancy.
- ◆ Request a Community Assistance Visit whereby a FEMA or state person will visit you and review your procedures.
- ◆ Attend a workshop put on by your state NFIP coordinator.
- ◆ Attend a meeting or conference of your state or national floodplain management association (contact the state coordinator for information about these associations).
- ◆ If available before you take a certification test, attend a recommended training or refresher course.
- ◆ Attend the Emergency Management Institute.
- ◆ Visit FEMA's web site periodically (<http://www.fema.gov>).
- ◆ Order and review the publications listed in Appendix C.

The Emergency Management Institute (EMI) in Emmitsburg, Maryland, provides several courses related to the administrator's job. While you would not need to take the resident course that has the same name as this one, EMI offers three others that would be helpful:

- ◆ National Flood Insurance Program/Community Rating System
- ◆ Digital Hazard Data (how to use digital FIRMs and other data)
- ◆ Retrofitting Floodprone Residential Buildings

These courses are designed to give you step-by-step practical knowledge and experience. In addition, by attending an EMI course you meet other local administrators from around the country from whom you also can learn the ins and outs of floodplain management administration.

EMI courses run Monday through Friday, two to four times a year. They are free for state and local officials. Generally FEMA will pay transportation to Emmitsburg and will house you in dormitories on campus. For more information, See Appendix G, ask your local emergency manager, or call EMI at 800/238-3358.

LIABILITY

Ordinance administrators naturally fear they could be sued if a person gets flooded or a building is damaged by a flood. Debated nationally for some time, this issue has been studied extensively by Dr. Jon Kusler, a nationally known attorney in floodplain management law.

Dr. Kusler summarized his most recent findings in *Floodplain Management in the United States: An Assessment Report*, Volume 2, prepared for the Federal Interagency Floodplain Management Task Force, 1992.

Excerpts from that report are quoted here. However, your community's legal department should provide more specific guidance.

- ◆ Government agencies are generally not liable for flood damage unless the flood was caused by a government action. “Except in a few instances, governments are not liable for naturally occurring flood damages. Government has, in general, no duty to construct dams, adopt regulations, or carry out other hazard reduction activities unless required to do so by a statute. It is only where a government unit causes flood damages or increases natural flood damages that liability may arise.” (*Floodplain Management in the United States: An Assessment Report, Volume 2, Page 1012*)
- ◆ Liability is based on negligence; a community is well defended by a properly administered program. “In general, government units are not 'strictly or absolutely' responsible for increased flood damages. Liability usually results only where there is a lack of reasonable care. ... Where the standard of reasonable care is judicially applied to an activity, the seriousness of foreseeable threat to life or economic damage is an important factor in determining reasonableness of conduct. In general, the more serious the anticipated threat, the greater the care the government entity must exercise. (*Floodplain Management in the United States: An Assessment Report, Volume 2, Page 1013*)
- ◆ Policy or discretionary actions are more defensible than nondiscretionary, ministerial actions. It is better to have clear standards spelled out in the ordinance adopted by your governing board than to leave a lot of interpretation up to the administrator. “As a general rule, courts do not hold legislative bodies or administrative agencies liable for policy decisions or errors in judgment where the legislature or agency exercises policymaking or discretionary powers. But they often hold agencies responsible for failure to carry out nondiscretionary duties or for negligence in carrying out ministerial actions.” (*Floodplain Management in the United States: An Assessment Report, Volume 2, Page 1013*)
- ◆ “... from a legal perspective it may be desirable to submit proposed standards ... to a community's legislative body (e.g., community council) for debate and approval. Due to the special way legislative decisions are treated by the courts, legislative judgments, particularly those of a discretionary nature, are less likely to result in a successful liability suit than are agency decisions. Courts generally defer to legislative judgment.” (*Floodplain Management in the United States: An Assessment Report, Volume 2, Page 1017*)
- ◆ Government employees are usually protected from liability suits. “Although governments may be liable for increased flood or drainage losses in a broad range of contexts, government employees are usually not personally liable for planning, permit issuance, operation of dams, adoption of regulations or other activities. ... No personal liability results where a government employee acts in good faith, within the scope of his or her job, and without malice. Successful lawsuits for hazard-related damages against government employees under common law theories or pursuant to Section 1983 of the Civil Rights Act are apparently nonexistent.” (*Floodplain Management in the United States: An Assessment Report, Volume 2, Pages 1013 - 1014*)

Based on these findings, you can protect yourself from lawsuits by:

- ◆ Adopting sound and appropriate flood protection standards: Remember, NFIP standards are minimums. Buildings should not be allowed in a mountainous floodplain with no warning time and very high velocities, even though the NFIP minimums would allow it. If you know flooding could be or has been higher than the BFE shown on the FIRM, you

are not doing your residents any favors by allowing them to build buildings exposed to a known hazard.

- ◆ Becoming technically competent in the field: You won't be sued if you have ensured that the project was properly constructed. There is no grounds for a suit if no one is damaged by flooding: "... 'liability can be avoided if flood damages are avoided.' From a legal perspective, this is a sound philosophy." (*Floodplain Management in the United States: An Assessment Report*, Volume 2, Page 1017)
- ◆ Insuring the community: Your community may want to purchase liability insurance or establish a self-insurance pool or plan to protect itself.
- ◆ Encouraging property owners to buy flood insurance coverage. If people are compensated for any flood losses, they are less likely to file a lawsuit.
- ◆ Adopting an ordinance provision that exempts the community from liability. Several states' model ordinances have language like the following:

Disclaimer of Liability:

(i) The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on available information derived from engineering and scientific methods of study.

(ii) Larger floods may occur or flood heights may be increased by man-made or natural causes.

(iii) This ordinance does not imply that development either inside or outside the SFHA will be free from flooding or damage.

(iv) This ordinance does not create liability on the part of the City or any officer or employee therefore for any flood damage that results from reliance on this ordinance or any administrative decision made lawfully thereunder. (*Floodplain Management in Northeastern Illinois*, Illinois Department of Natural Resources, 1996, p. 56)



LEARNING CHECK #1

1. Review your floodplain regulations and identify where the following provisions are found.

- ◆ Purpose statement
- ◆ Definitions of
 - base flood elevation
 - building or structure
 - development
 - floodway
 - lowest floor
 - substantial improvement
 - substantial damage
- ◆ Adoption of the FIRM or other floodplain map
- ◆ Adoption of the Flood Insurance Study
- ◆ Requirement for a permit for all development in the floodplain
- ◆ Construction standards:
 - floodway construction (if applicable)
 - encroachment analysis where floodways are not mapped
 - building elevation criteria
 - floodproofing criteria
 - anchoring requirements
 - standards for manufactured (mobile) homes
 - standards for manufactured home parks
 - construction standards in V Zones
 - construction standards peculiar to the zones in your community
 - standards for subdivisions
 - standards for water and sewer service
 - rules on water course alterations
- ◆ Designation of administrator
- ◆ Duties of the administrator
- ◆ Appeals process

- ◆ Enforcement procedures and penalties
 - ◆ Abrogation and greater restriction
 - ◆ Severability
2. Check your community's other regulatory ordinances to determine if there are any inconsistencies between them and your floodplain construction standards.

C. DEVELOPMENT PERMITS

Once the ordinance is in force, any development or change in land use requires authorization, generally in the form of a permit from the local administrator or agency. This section of Unit 7 discusses the permit review process that leads to approval or denial of an application.

This discussion reviews a standard process. It is not a mandatory process, but it does ensure that all of your NFIP requirements will be met. If your community has a permit process that has proven successful, you should review this section to see if there are things you would want to add to your process.

Figure 7-2 shows the permit process that forms the organization for this section. To facilitate your work, you may want to develop your own checklist. An example developed by the State of South Carolina is at the end of this section in Figure 7-3.

WHEN A PERMIT IS REQUIRED

A permit is required for almost any development-related change to the floodplain, including but not limited to:

- ◆ Construction of new structures
- ◆ Modifications or improvements to existing structures
- ◆ Excavation
- ◆ Filling
- ◆ Paving
- ◆ Drilling
- ◆ Driving of piles
- ◆ Mining
- ◆ Dredging
- ◆ Land clearing
- ◆ Grading
- ◆ Permanent storage of materials and/or equipment

While most communities have issued building permits for some time, most usually don't have a permit system for such a wide range of activities as "development" Regulation of all development in floodplains is essential because fill or other material can obstruct flood flows just as structures can.

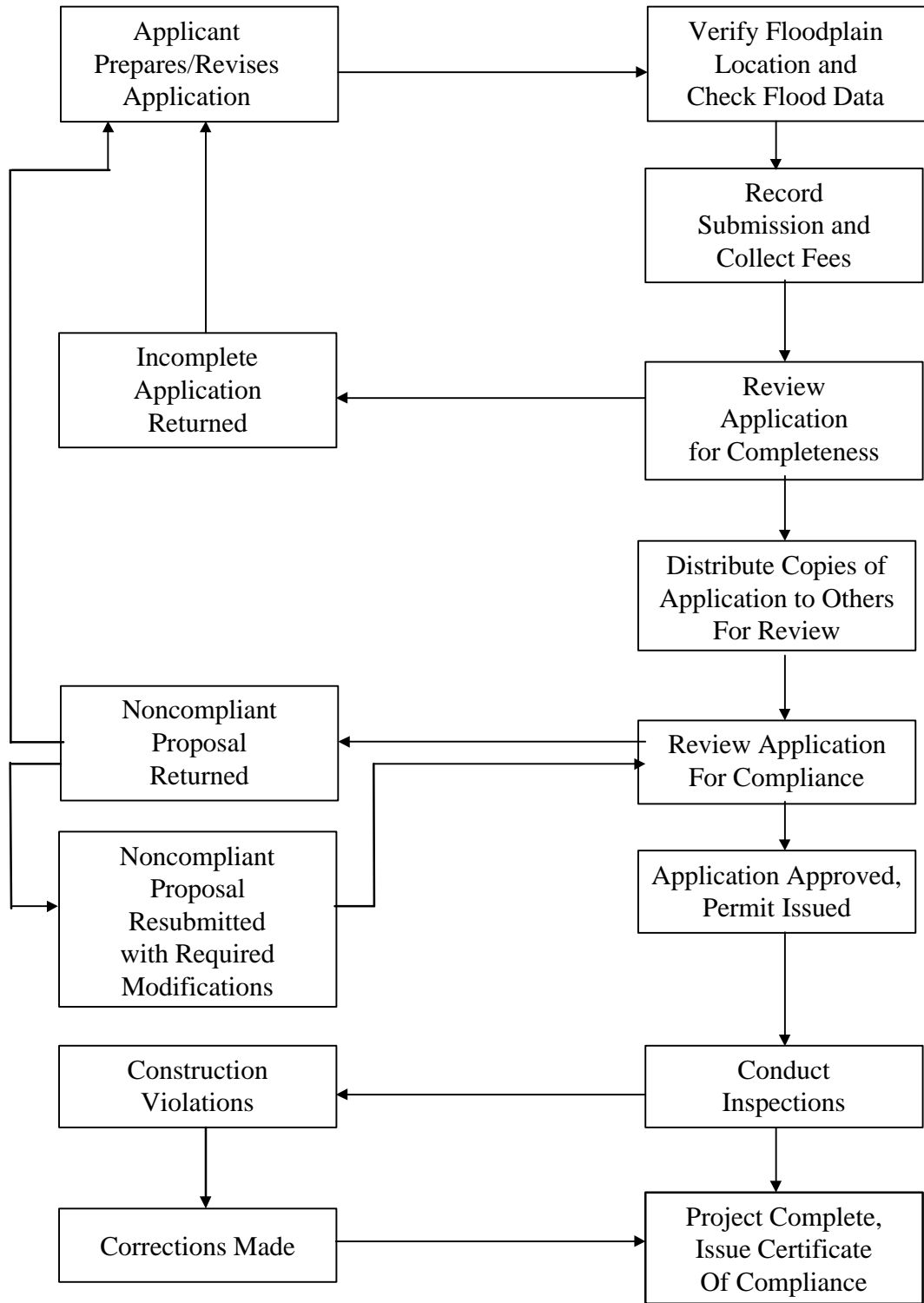


Figure 7-2. Permit process flow chart

EXEMPTIONS

Your statutory authority may limit your community's ability to regulate some development. The most common limitation is over activities by federal agencies, tribal lands, state agencies, other local governments, and public utilities. Check with your state NFIP coordinator to determine what is exempt from a local ordinance.

44 CFR 60.1(b) *These regulations must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone ... areas, and the community must provide that the regulations take precedence over any less restrictive conflicting local laws, ordinances or codes.*

You cannot exempt activities by your own community government. Just because the public works department doesn't get a permit from the building department does not mean that it doesn't have to follow the NFIP rules that govern all development within your statutory authority.

If State actions are exempt from your permit authority, your state should have adopted floodplain management requirements that are comparable to your ordinance. This is usually in the form of a governor's executive order. Similarly, Federal agency activities are subject to the provisions of Executive Order 11988 Floodplain Management.

You do have some discretion to exempt obviously insignificant activities from the permit requirement—such as planting a garden, farming, putting up a mailbox or erecting a flagpole. Other projects, such as reroofing and replacing siding, will not affect flood flows or be labeled substantial improvements. See also the discussion on the NFIP's development permit requirements in Unit 5, Section C.

Some communities specify exempt projects in their ordinances. Check with your state coordinating agency and/or FEMA Regional Office before you do this, because you don't want to exempt projects that could be considered floodway violations or substantial improvements.

PERMIT APPLICATION FORM

A good administrative form can serve as a checklist for identifying the kinds of information that should accompany a permit application.

Your community should have its own permit application form. Figure 7-4, at the end of this section, is the model form developed by the state of North Carolina. It contains all the required information for a floodplain development permit application. Your form may be different, but the review process is the same.

Note: If you use the form in Figure 7-4 to develop your own permit application program, be sure to include all other state and local requirements. You may want to include checklists of items you will need to look at.

Where a particular activity that is required by the NFIP regulations is mentioned in this unit's text, the reference to 44 CFR Part 60 is included in brackets (e.g. [44 CFR 60.3(c)(5)]). These

activities must be included in the permit process in order for the community to remain in full compliance with the NFIP.

Forms are a valuable and necessary tool in reviewing development proposals for regulatory compliance. When designed properly, they can be the most efficient way to get information that is essential to conducting an effective and thorough review. The forms should be revised periodically to remain current with changes in the floodplain management ordinance and to include pertinent information.

APPLICATION REVIEW

Submission of a development permit application starts the permit process.

Before submitting an application, the prospective applicant often will contact you to obtain a copy of the regulations, locate the proposed site in relation to the NFIP maps, determine flood elevations, or gather procedural and technical information needed to complete the application.

This informal part of the permit process can be important in guiding the applicant to locate and design the development in compliance with local regulations. It also can help the applicant to prepare a complete application, avoiding unnecessary delays at the outset.

Some communities ensure that the permit process will go smoothly by having a formal pre-application meeting with a developer to review a preliminary plan.

REVIEW FOR COMPLETENESS

The application package should contain all the administrative forms, plans, blueprints and technical documentation required for you to review the proposed project for regulatory compliance. If the application package is incomplete, the review can't go forward. The applicant should be advised of missing documents and told that the review will not start until the missing documents are submitted.

Some states and communities require that a permit be issued within so many days of receipt of the application. You should not officially "receive" the application or log it in until it has been reviewed and determined to be complete.

You should review the package in a timely manner. The review should include the following procedures:

1. Make sure all administrative forms are completed satisfactorily and properly signed. Scan the administrative forms to ensure that all questions have been answered. If important items are left blank or not addressed completely, bring them to the attention of the applicant for completion.

Inaccurate information also should be brought to the attention of the applicant. Your review should be halted until deficiencies are corrected.

2. Briefly review site plans, grading and excavation plans, and building design plans for completeness. Depending on the specificity or detail of the administrative forms, the various plans that accompany the application will provide the technical data needed for a thorough review.

The site plan is a critical component of floodplain development proposals. Such a plan should show:

- ◆ Location of property lines.
- ◆ Required set backs lines and easements.
- ◆ Topographic information, such as contour lines or spot elevations.
- ◆ Streets.
- ◆ Watercourses.
- ◆ Existing and proposed structures.
- ◆ Proposed building elevations of all new construction and the existing lowest floor for substantially improved or substantially damaged structures.
- ◆ All clearing, filling and other proposed changes to the ground.
- ◆ Floodway and floodplain boundaries.
- ◆ Base flood elevations.
- ◆ In V zones, the line of the mean high tide and Zone V/Zone A boundary; if there is more than one Zone on the lot, the BFE and boundary locations should be depicted on the plans.

When a plan is prepared by a registered professional architect, engineer or land surveyor, it should be stamped with the license seal to certify technical accuracy.

3. Ensure that all necessary certifications are included and properly signed. The applicant must provide all completed certifications needed for the permit review.

Based on the minimum NFIP requirements, four situations would require the filing of certified documents with the permit application:

- ◆ Floodway encroachment: If any part of the proposed project is to be located in a designated floodway, the applicant must submit an engineering certification and documentation demonstrating that the proposed encroachment would not result in any increase in base flood heights. If the project is in a riverine floodplain where no floodway has been adopted, the certification would show that there the project will not exceed the allowable increase a flood heights. This certification could be the same as the No-Rise Certification shown in Figure 5-5. [44 CFR 60.3(c)(10) and (d)(3)]
- ◆ Floodproofed building: In the event a nonresidential structure is to be floodproofed, the applicant must submit a statement from a registered professional engineer or architect

certifying that the design and methods of construction meet these standards [44 CFR 60.3(c)(4)]. A second, as-built, certificate is also required to be submitted later.

- ◆ Enclosures below the lowest floor. Unit 5, Section E covered the requirements for openings in enclosures. If an applicant designs an enclosure below the lowest floor using an alternative to the NFIP standard, a registered professional architect or engineer must certify the design [44 CFR 60.3(c)(5)]. If a full-story enclosure is planned below the elevated lowest floor, you should require the applicant to sign a non-conversion agreement such as the one in Figure 5-13.
- ◆ V Zone construction. An applicant proposing to construct a building in a V zone must supply a statement from a registered professional architect or engineer certifying the design and method of construction of the elevated building and the design of breakaway walls [44 CFR 60.3(e)(4)]. See Figure 5-18 for an example. An as-built certificate is also recommended to be submitted later

4. Ensure that all necessary federal and state permits are being obtained. You must review the application package to determine whether federal and state permits are necessary [44 CFR 60.3(a)(2)]. To help you and the applicant, you might include the agency or program names as a checklist on your permit application form.

When obtaining federal and state approval takes a long time, you may condition issuance of your permit on the applicant's obtaining such permits later. The applicant should provide documentation to the administrator stating that the required federal and state permits have been applied for, and that portion of the project affected by needed permits will not proceed until those permits are issued.

For example, getting a Section 404 wetlands permit from the Corps of Engineers may take several months. Under such circumstances, you may issue a local permit with the stipulation that the applicant must have submitted all required permits before beginning construction. You can verify this at your first inspection.

5. Submit copies of appropriate parts of the application package to other departments for review. Depending on the type and size of the proposed development and on the regulatory responsibilities of other departments or offices in your community, the applicant should submit a sufficient number of copies to allow for others' review.

Here are some departments and agencies who might need to review a portion of the application:

- ◆ Building department.
- ◆ Zoning department.
- ◆ Engineer's office.
- ◆ Health department (septic system approval).
- ◆ FEMA Regional Office (for assistance in evaluating a no-rise floodway application, change to a floodway delineation or other activity that will result in a map revision).

- ◆ State NFIP coordinating agency (state permit requirements, alteration or relocation of a watercourse).
- ◆ U.S. Army Corps of Engineers (404 permit, technical assistance).
- ◆ Environmental Protection Agency.
- ◆ State public health agency (permits for hospitals, nursing homes, etc.).
- ◆ Natural Resources Conservation Service (impact of subdivisions and other large development on the natural resources of the area).
- ◆ Adjacent communities (alteration or relocation of a watercourse).

If your office hasn't done this already, you should contact these agencies, determine what, if anything, they need to review, and prepare a checklist for permit applicants that advises them of the other approvals that will be needed.

REVIEW FOR COMPLIANCE

Now that you have a complete application package, follow these recommended procedures to verify that the project will meet all of your ordinance requirements.

1. Examine site information. Check the site plan to ensure the that plotted floodplain, floodway, and V Zone boundaries appear accurately plotted. Look for possible obstructions in the floodway and other potential violations.

Inspect the plan carefully and compare it with the FIRM, floodway map and profile. In coastal areas, you should determine if the site is in a COBRA zone and so advise the applicant/property owner (COBRA zones are explained in Unit 3, Section F and Unit 9, Section D).

Some project sites may be located close to the boundaries of the SFHA. Because the map scale is small, or it is difficult to pinpoint the project site, you may have trouble determining whether the project will be in or out of the SFHA. See Unit 4, Section B, on making floodplain and floodway boundary determinations.

Remember, a floodplain development permit is required only if the planned structure is located within the SFHA. For example, while the applicant's property may be located partially in the SFHA, the proposed structure would be built on land outside the SFHA. In this case, floodplain regulations would not apply and no special floodplain development permit is needed. However, if clearing, grading, filling, or road or bridge construction associated with erecting the structure is within the SFHA, a permit is necessary.

Note that while you can use better ground elevation data to determine that a building location is above the BFE (and therefore outside the SFHA), the property will remain in the SFHA on the FIRM. That means that it is still subject to the flood insurance purchase requirement and the rates will be set at SFHA rates. It is the owner's responsibility to submit a request for a Letter of

Map Amendment (LOMA) in order to have the FIRM reflect the better data (see Unit 4, Section D for more information on LOMAs).

2. Review building plans. If a building site is in the SFHA, all buildings must be protected to the BFE or higher.

In this course, the term “building” is the same as the term “structure” in the NFIP regulations. Your ordinance may use either term. The terms are reviewed in more detail in Unit 5, Section E.

The application package must include building design plans that show:

- ◆ The kind and potential use of the structure.
- ◆ The elevation of the lowest floor.
- ◆ The type of foundation system.
- ◆ The existence of any enclosure below the lowest floor, along with electrical and plumbing plans for the area, location of openings and materials proposed for use in an enclosure below the BFE.
- ◆ The height to which a nonresidential structure is to be floodproofed and the complete list of floodproofing techniques to be used, with detailed drawings

Any conflict or inconsistency with applicable regulations will require adjustments to the building plans.

3. Have the community’s engineer review engineering documents. As listed previously, depending on the type and location of the structure being proposed, as many as four engineering documents or certifications are needed to show compliance with NFIP requirements concerning floodway encroachment, floodproofing, enclosures below the lowest floor and V Zone construction.

All engineering documents should be examined by your community’s staff engineer, or a consulting engineer available to perform reviews, to ensure that acceptable technical standards were used and that calculations are correct. If your community does not have a staff engineer, the state NFIP coordinating agency or FEMA Regional Office may be able to help review the data.

APPLICATION APPROVAL OR DENIAL

Once you complete your review of the permit application papers for completeness and technical compliance with the ordinance, a decision on the application is due.

If the proposed development is in compliance with regulations, issue a permit. The permit becomes the official authorization from the community allowing the applicant to proceed, based on the information submitted in the application package. A sample permit developed by the North Carolina state NFIP coordinator is shown in Figure 7-5.

Somewhere in the permit record, such as the approved plans, the application form or the permit form itself, a record should be kept of the base flood elevation and the required floor

elevation. There should also be a general statement that all construction will be in accordance with all codes and ordinances (see Section 1, item 6 in Figure 7-4).

The day a permit is issued is the date of the “start of construction,” provided construction begins within 180 days. Used for insurance rating purposes, this date determines what FIRM was in effect when the building was built, regardless when ground was broken or construction was finished.

For regulatory purposes, a permit may be effective or valid for a certain period of time, according to the standard used in your other regulations. If at the end of this period the project is not complete, the permit technically expires. However, ordinances routinely provide for the permit officer to issue written extensions to allow completion of the development under the conditions of the original permit.

If the application is not in compliance with local regulations, the permit should be denied. The applicant then can choose to:

- ◆ Withdraw the permit application.
- ◆ Redesign the project to bring it into compliance with regulations.
- ◆ Appeal to the Board of Appeals.
- ◆ Ask for a variance to the regulations.

While you may not be formally required to disclose the reasons for denying an application, it is good policy to do so in writing. This tells the applicant what areas are noncompliant so that if he or she wishes to resubmit the application, appropriate corrections can be made.

Appeals and variances are covered in Section F of this unit. Clarifying the deficiencies for the applicant also can help reduce the number of appeals of administrative and regulatory decisions you make

Building Permit Number: _____

Applicant's Name:	Owner's Name:
Site Address, Tax #, Parcel #:	Address:
Telephone:	Telephone:

I. All development - Base Flood Elevation Data provided.

- A. The as-built elevation certification from a registered land surveyor or professional engineer has been submitted? Yes No
- B. The lowest floor elevation is at or above the required lowest floor elevation? Yes No
- C. Electrical, heating, ventilation, plumbing, air conditioning equipment (including duct work) and other service facilities are located above BFE or floodproofed? Yes No

II. Development in Zones A, AE, A1-A30 and AH.

- A. *Solid foundation perimeter walls located below BFE.:*
 - 1. There are at least two (2) openings? Yes No
 - 2. Square footage of enclosed area subject to flooding _____
 - 3. Square inches of venting required _____
 - 4. Square inches per opening (multiply l by w) _____
 - 5. Number of required vents (3 above divided by 4 above) _____
 - 6. Foundation contains the minimum number of vents? Yes No
 - 7. The bottom of each opening is no higher than one (1) foot above grade? Yes No
 - 8. Any cover on openings will permit the automatic flow of floodwaters in both directions? Yes No

- B. *Base flood elevation and/or floodway data not available or AO Zones:*
 - 1. The lowest floor is at least three (3) feet above the highest adjacent grade? Yes No
 - 2. The development meets the setback requirements of the ordinance? Yes No
 - 3. If 2 above was "no", has a No-Rise Certification been submitted? Yes No

Reviewer's Name: _____ Date reviewed: _____

- C. *Floodway data is provided.*
 - 1. Did this development encroach in the floodway? Yes No
 - 2. Do the actual field conditions meet the proposed actions and technical data requirements? Yes No
 - 3. If C1 was "yes", has a No-Rise Certification been submitted? Yes No

Reviewer's Name: _____ Date reviewed: _____

III. Development in Zones V, VE, and VI-V30, VO (Coastal High Hazard Areas).

- A. Development location complies with all coastal setback requirements? Yes No
- B. Structure is securely anchored to pilings or columns and certification by a registered, professional architect or engineer has been submitted? Yes No

Reviewer's Name: _____ Date reviewed: _____

- C. Walls permitted below the base flood elevation consist of decorative lattice work or, where permitted, are breakaway and have been certified by a registered, professional architect or engineer? Yes No

Reviewer's Name: _____ Date reviewed: _____

Local Administrator's Signature: _____ Date : _____

Figure 7-3. Sample permit review checklist
(Developed by the South Carolina Department of Natural Resources)

**SAMPLE
FLOODPLAIN DEVELOPMENT PERMIT APPLICATION**

This form is to be filled out in duplicate.

SECTION I: General Provisions (APPLICANT to read and sign):

1. No work of any kind may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal regulatory requirements.
7. Applicant hereby gives consent to the Local Administrator or his/her representative to make reasonable inspections required to verify compliance.
8. THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE) _____ DATE _____

SECTION 2: Proposed Development (To be completed by APPLICANT)

NAME	ADDRESS	TELEPHONE
APPLICANT		
BUILDER		
ENGINEER		

PROJECT LOCATION:

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or well-known landmark. A sketch attached to this application showing the project location would be helpful.

Figure 7-4a. Sample floodplain development permit application form
(Developed by the North Carolina Division of Emergency Management)

DESCRIPTION OF WORK (Check all applicable boxes):

Application # _____
Page 2 of 4

A. STRUCTURAL DEVELOPMENT

ACTIVITY

STRUCTURE TYPE

- | | |
|--|---|
| <input type="checkbox"/> New Structure | <input type="checkbox"/> Residential (1-4 Family) |
| <input type="checkbox"/> Addition | <input type="checkbox"/> Residential (More than 4 Family) |
| <input type="checkbox"/> Alteration | <input type="checkbox"/> Non-residential (Floodproofing? <input type="checkbox"/> Yes) |
| <input type="checkbox"/> Relocation | <input type="checkbox"/> Combined Use (Residential & Commercial) |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Manufactured (Mobile) Home (In Manufactured Home Park? <input type="checkbox"/> Yes) |
| <input type="checkbox"/> Replacement | |

ESTIMATED COST OF PROJECT \$ _____

B. OTHER DEVELOPMENT ACTIVITIES

- Clearing Fill Mining Drilling Grading
- Excavation (Except for Structural Development Checked Above)
- Watercourse Alteration (Including Dredging and Channel Modifications)
- Drainage Improvements (Including Culvert Work)
- Road, Street or Bridge Construction
- Subdivision (New or Expansion)
- Individual Water or Sewer System
- Other (Please specify) _____

After completing SECTION 2, APPLICANT should submit form to the Local Administrator for review.

SECTION 3: Floodplain Determination (To be completed by the Administrator)

The proposed development is located on FIRM Panel No. _____, Dated _____.

The Proposed Development:

- Is **NOT** located in a Special Flood Hazard Area (Notify the applicant that the application review is complete and NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED).
- Is partially located in the SFHA, but building/development is not.
- Is located in a Special Flood Hazard Area
FIRM zone designation is _____.
"100-Year" flood elevation at the site is: _____ ft. NGVD (MSL)
 Unavailable
- Is located in the floodway.
FBFM Panel No. _____ Dated _____
(if different from the FIRM panel and date)
- See Section 4 for additional instructions.

SIGNED _____ DATE _____

Figure 7-4b. Sample floodplain development permit application form
(Developed by the North Carolina Division of Emergency Management)

APPEALS: Appealed to Board of Appeals? Yes No
 Hearing date: _____
 Appeals Board Decision - Approved? Yes No
 Reasons/Conditions: _____

SECTION 6: AS-BUILT ELEVATIONS (To be submitted by **APPLICANT** before Certification of Compliance is issued)

The following information must be provided for structures that are part of this application. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application). Complete 1 and 2 below.

1. Actual (As-Built) Elevation of the top of the lowest floor, including basement (in Coastal High Hazard Areas, bottom of lowest horizontal structural member of the lowest floor, excluding piling(s) and columns) is: _____ ft. NGVD (MSL).
2. Actual (As-Built) Elevation of floodproofing protection is _____ ft. NGVD (MSL).

SECTION 7: COMPLIANCE ACTION (To be completed by **LOCAL ADMINISTRATOR**)

The **LOCAL ADMINISTRATOR** will complete this section as applicable based on inspection of the project to ensure compliance with the community's local law for flood damage prevention.

INSPECTIONS DATE: _____ BY _____ DEFICIENCIES? Yes No
 DATE _____ BY _____ DEFICIENCIES? Yes No
 DATE _____ BY _____ DEFICIENCIES? Yes No

SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by **LOCAL ADMINISTRATOR**)

Certificate of Compliance issued: DATE _____ BY _____

Figure 7-4d. Sample floodplain development permit application form
 (Developed by the North Carolina Division of Emergency Management)

No. _____

FLOODPLAIN DEVELOPMENT PERMIT

Specify for what purpose the permit is issued—
New construction, alterations, fill, excavation, other

ISSUED TO: _____

ADDRESS: _____

PROJECT ADDRESS: _____
(if different from permittee's address)

ISSUED BY: _____
Floodplain Management Administrator

DATE: _____
(This permit expires 180 days from this date)

THIS PERMIT MUST BE POSTED ON THE PREMISES IN A CONSPICUOUS PLACE SO AS TO BE
CLEARLY VISIBLE FROM THE STREET.

Figure 7-5. Sample permit form



LEARNING CHECK #2

1. What activities are exempt from regulation under your floodplain ordinance?
2. Does your community have a permit application form that makes sure things like a floodway encroachment analysis or V Zone certification are not missed?
3. What five items need to be checked to ensure an application for a permit is complete?
4. What departments or offices in your community should review a permit application before it is approved?
5. During your permit review, you find that the applicant's site plan shows that the ground is currently higher than the BFE. Should you continue to treat this as a floodplain development permit?
6. What's the best way to make sure the applicant's engineering certifications are sufficient?
7. What are the key items you need to check when reviewing the plans for a new house to be built on pilings in the V Zone?
8. Match the list of proposed projects with the documents that will be needed in order to determine if the project should be built in the floodplain.
 - New shopping center parking lot in the floodway
 - New house in the fringe
 - New business in the V Zone
 - Reconstruction of a state highway bridge
 - New house built over a floodable, but enclosed garage
 - a. Floodplain development permit application
 - b. Site and/or building plans
 - c. Floodway encroachment analysis
 - d. Floodproofing certification
 - e. Non-conversion agreement
 - f. V Zone certification

D. INSPECTIONS

You can't assume that construction and development will proceed as spelled out in the permit you've approved. Follow-up conversations and inspections are vital to ensure that the applicant adheres to the permit's requirements.

Taking a hands-off attitude toward construction can create many problems for both the project's owners and your community.

The most effective way to ensure compliance is to inspect the site frequently during construction. This is particularly important in the early phases of work on a building because that's when errors in relocation or elevation of the lowest floor can be found and corrected. An inspection program also puts builders, developers and property owners on notice that the community will insist that projects are completed in compliance with regulations.

We recommend a series of three inspections for every project, especially any project that involves construction of a building.

FIRST INSPECTION

Do this inspection before ground is broken. Ideally, this site visit should be after the site is staked out to allow you to check the plans in relation to the ground and lot boundaries. With plans in hand, you should determine that the site as identified on the proposed plans is consistent with actual ground conditions.

Check the following:

- ◆ The location of the floodplain and floodway boundaries.
- ◆ Setbacks from lot lines, channel banks, etc.
- ◆ Floodway encroachments, if applicable.

If the building, filling, etc., as staked out are in violation of the approved plans or of the ordinance requirements, you must tell the developer to make revisions.

The project must not be allowed to proceed until you have gone back and verified that it is in compliance.

SECOND INSPECTION

Schedule your second inspection of a project involving a new building or addition to a building just before installation of the lowest floor. You need to ensure that the lowest floor will be built at the height stipulated in the permit application, and that the foundation is the type specified in the plans.

The type of foundation dictates your schedule:

- ◆ If the building is on a slab foundation, the inspection is best done when the forms are placed. You can check the proposed floor elevation by checking the elevation of the top of the forms. If the forms are high enough, you can approve the pouring the slab.
- ◆ If the building is on an elevated foundation (crawl space, piles, etc.), the inspection is best done when the foundation is completed. If the top of the foundation is high enough, you can approve placement of the floor.
- ◆ If the building is to be floodproofed and the floodproofing technique is easy to identify—such as a reinforced concrete stem wall up to the BFE plus freeboard—this inspection should be conducted when that portion of the project is completed.

Making sure a structure is properly elevated is the key to the entire regulatory process. If this doesn't happen, the permit process is pretty much for naught. Therefore, an inspection at the point of initial construction, where changes to the height of the foundation can be made without major difficulty, is best. Once the foundation is poured or laid, it can be very expensive for the property owner to change the building location or the elevation of the lowest floor.

Checking elevations

You can confirm the floor elevation at this stage in one of two ways. First, you can have the builder certify the floor elevation. This must be done by a surveyor or engineer.

The alternative approach is to check for yourself:

- ◆ Before construction or sometimes as part of the first inspection, the developer's surveyor or your engineer can shoot an elevation reference mark to a nearby stationary object such as a tree or telephone pole. The mark should be at the same elevation as the height to which the lowest floor should be elevated.
- ◆ During the second inspection, you can use a hand level to determine whether the lowest floor will be as high as the reference mark.
- ◆ This will give you a rough estimate that the building will be close to the correct elevation. A hand level will not give accurate elevations.

Note: Neither approach relieves the builder of having to provide an as-built elevation or floodproofing certificate when the project is done. It simply verifies that the building will be elevated or floodproofed to the proper elevation before it is too late to make changes.

During your second inspection, also check:

- ◆ Whether any fill meets the necessary compaction, slope and protection standards contained in your regulations.
- ◆ The building's location matches the permit application plans.

- ◆ The number and size of crawlspace or enclosure openings.
- ◆ Whether any part of the project encroaches into the floodway.
- ◆ In V Zones, get an as-built foundation certification at this time, such as the V Zone certification in Figure 5-18.

THIRD INSPECTION

The third and last inspection is conducted as the project nears completion. The purpose of this “final” inspection is to:

- ◆ Ensure that the foundation and floor elevation has not been altered since the second inspection.
- ◆ Obtain an as-built elevation or floodproofing certificate.
- ◆ Verify that enclosures below the lowest floors have adequate openings.
- ◆ Ensure that nothing subject to flood damage, such as a furnace or air conditioning unit, has been located below the lowest floor.
- ◆ Check breakaway walls in V Zones.
- ◆ Check for floodway encroachments.
- ◆ Check the anchoring system used in securing manufactured homes.

Certificate of occupancy

After the project passes final inspection, many communities issue a document called a certificate of occupancy, certificate of compliance or use permit.

This certificate allows the owner to move in to the newly constructed building or addition. Usually a new building cannot be sold until the seller has this certificate; some utility companies will not start service until the certificate is presented.

Before a certificate is completed, you must make sure that all needed documents are received and checked. You must have an elevation certificate and the other forms noted in the later section on record keeping.

LATER INSPECTIONS

Certifying a structure for occupancy is the final step in the permit process. However, the property must remain in compliance with your ordinance and the conditions under which the permit was issued.

Your office should periodically check to ensure that the property continues to remain in compliance over time. Later inspections are particularly important when a structure contains an enclosure below the lowest floor. Such areas can be easily modified and made into habitable spaces in violation of regulations.

In some states, communities do not have the statutory authority to go onto private property to look for violations. This can make it hard, if not impossible, to verify whether an enclosed area has been modified. If this is true in your community, your ordinance should prohibit enclosures or limit their allowable size to less than 300 square feet. Allow larger enclosures only if they have wood lattice or screening so you can tell from the street if changes have been made.



LEARNING CHECK #3

1. When is the best time to make the first site inspection?
2. When should you make the second inspection of a building on a slab foundation?
3. What are your two options for making sure a new building is high enough before you allow construction to proceed after the second inspection?
4. What should you check for during the third inspection?
5. If a project meets all of the ordinance requirements and is built according to the approved plans, what does the owner get after the final inspection?

E. ENFORCEMENT

Adequate, uniform and fair enforcement means two things:

- ◆ All development in a floodplain must have a permit.
- ◆ All development with a permit must be built according to the approved plans.

In order to ensure that development is meeting these requirements, you must monitor the floodplain, and where necessary, conduct an inspection of a property. Some permit officials have statutory limits on where they can go to inspect a potential violation. Be sure to review your authority to access onto private property with your attorney.

If you discover development activities without permits or contrary to the approved plans, you must enforce your ordinance. You have several methods for enforcing your ordinance. This section explores these methods.

VOLUNTARY COMPLIANCE

The best approach is to convince the developer that complying with the ordinance is in his or her own best interest. This may take some explanation of the flood hazard and how the rules protect the property (or neighboring properties) from that hazard.

If the issue is protection of a building, the flood insurance rate table in Figure 9-3 can show how expensive insurance could be. Even if the developer is not interested in flood insurance, future owners may want it and probably will be required to purchase it as a condition of a mortgage or loan.

Should voluntary efforts not work, here are the other compliance tools you have.

ADMINISTRATIVE STEPS

Your first steps in enforcement involve what you can do as an ordinance administrator. Be sure to review these with your community's attorney before you start:

- ◆ Contact the property owner or building contractor in person or by telephone to explain your concerns.
- ◆ Notify the property owner (in writing) of the nature of the violations and what to do to correct them.
- ◆ Post a violation notice on the property.

If a problem is found during construction of a permitted project, you have additional tools:

- ◆ If the violation is a serious one, or if the problem still exists after a follow-up inspection, you can issue a stop-work order or revoke the permit.

- ◆ You can withhold the certificate of occupancy until the problem is corrected. Usually utilities will not be turned on or a bank loan will not be closed until the certificate of occupancy is issued.

LEGAL RECOURSES

If your administrative measures do not bring results, go back to your community's attorney and discuss the next steps. Your attorney can take the case to court and request two additional enforcement measures be brought to bear.

You can help the attorney by having complete records of all correspondence and meetings with the person accused of the violation. You should also identify what section of the ordinance was violated, when and how, and what was specifically allowed in the approved permit.

You should advise the attorney about what actions can be taken that will bring the project into compliance. Depending on the violation, these actions could include removing the building (or other project), retrofitting the building to protect it, applying for a variance, or revising the maps to remove the problem from the floodplain, floodway, V Zone, etc.

Fine. Your ordinance should establish a maximum fine per offense. Usually each day a violation continues is considered a separate offense. This approach encourages a quick remedy to the problem.

A per-day fine for a summary offense from a local district justice or magistrate can be difficult to get because many courts would believe that such a severe financial penalty does not fit the infraction. However, the threat of seeking the fine may be sufficient to persuade a property owner to remedy the violation.

Recordation. Depending on your statutory authority, you may be able to record the violation in the property's deed records. This will inform potential purchasers as well as "cloud the deed," making it hard for the owner to sell the property or the buyer to obtain title insurance. This approach is more appropriate for new developments that are likely to be sold in the near future.

Injunction. An injunction is a court order to stop further noncompliant conduct. A temporary restraining order will be issued if the activity can be shown to be a danger to the public and that immediate irreparable harm can occur.

Housing court. Dealing with your state or county's judicial system can be expensive and difficult. Your case has to wait its turn and compete with many cases for attention.

To speed up the enforcement process, some communities enact special enforcement ordinances to create a municipal housing court or a building court. This is a local judicial body that has several advantages:

- ◆ The judge or administrative judge will be familiar with housing or building code law.
- ◆ The community has more control over when cases will be heard.

- ◆ Such courts usually are less formal. For example, the defendant may not have to have an attorney present.

The establishment of these courts varies by state law. Your attorney or state department of local government affairs or housing can provide more information on how it can work in your community.

SECTION 1316

Section 1316 of the National Flood Insurance Act authorizes FEMA to deny flood insurance to a property declared in violation of the community's ordinance.

Section 1316 is used when all other legal means to remedy the violation have been exhausted and the structure is still noncompliant. Check with your state NFIP coordinator or FEMA Regional Office on how 1316 works in your state.

If invoked under Section 1316, denying flood insurance means:

- ◆ The property may be difficult or impossible to sell.
- ◆ The market value of the property may fall.
- ◆ The cost of suffering flood damage without insurance may be too great a risk for the property owner.
- ◆ Lending institutions holding the property's mortgage may threaten to foreclose.
- ◆ Any permanent reconstruction will be denied disaster assistance.

In some cases a Section 1316 insurance denial will be sufficient to convince the property owner to correct the violation. Section 1316 also has the advantage of limiting any taxpayer liability if the building is damaged by a flood, as the owner will be ineligible for an insurance claim and disaster assistance.

F. APPEALS, SPECIAL USES AND VARIANCES

Generally, procedures for Appeals, special uses and variances are specified by state law. They require judgment calls involving several people, as ordinances typically do not allow only one person to decide these issues. Here is when they can occur and how they are usually handled.

Appeals

Ambiguous language or differing interpretations can lead the applicant and permit office to disagree. Your ordinance should have a process for referring these disagreements to a board of appeals or adjustment which will interpret the ordinance and settle the dispute.

Special uses

Some regulations require that certain situations be given a special review to determine if they should be allowed and, if so, whether conditions should be attached to the permit. While the NFIP sets construction standards for all buildings, your community may have decided that residences should not be allowed in a floodway and that nonresidential buildings should be allowed only if certain conditions are met. Some official body needs to determine if a special use permit or if a conditional permit should be issued.

Variances

Zoning ordinances, building codes and floodplain management regulations cannot be written to anticipate every imaginable situation. A process for issuing variances gives a builder a way to seek permission to vary from the letter of the rules because of a special situation.

A variance can mean that the minimum standards of the NFIP may not be met by a project due to a special local circumstance. Because of this, most of this section is devoted to variances.

Boards

In all three cases, the applicant submits a request to a knowledgeable board of arbiters. Typically, variances and special or conditional use permits are handled by the planning commission or other body that is responsible for writing and amending the ordinance. Appeals are usually handled by a separate board of appeals or board of adjustments. Sometimes all three processes are handled by the same body and sometimes, especially in smaller communities, that body is the city council or governing board.

These boards do not have authority to change the ordinance, just to apply or interpret the ordinance's provisions. They may or may not have authority to make a final decision. If not, they make recommendations to the governing board which makes the final decision.

VARIANCES

A variance is a grant of relief by a community from the terms of a land use, zoning or building code regulation. Because a variance can create an increased risk to life and property, variances from flood elevation or other requirements in the flood ordinance should be rare.

Granting variances is a local decision that must be based on not only NFIP criteria, but also on state law and other provisions the community may wish to require. Your community's review board must consider the fact that every newly constructed building adds to the local government's responsibilities and remains a part of the community for the indefinite future.

Variances are based on the general principal of zoning law that they pertain to a piece of property and are not personal in nature. Though standards vary from state to state, in general a variance is granted for a parcel with physical characteristics so unusual that complying with the ordinance would create an exceptional hardship to the applicant or surrounding property owners. Those characteristics must:

- ◆ Be unique to that property and not shared by adjacent parcels.
- ◆ Pertain to the land, not to any structure, its inhabitants or the property owners.

Characteristics that might justify a variance include an irregularly shaped lot, a parcel with unsuitable soils, or a parcel with an unusual geologic condition below ground level. It is difficult, however, to imagine any physical characteristic that would give rise to a hardship sufficient to justify issuing a variance to a flood elevation requirement.

Your community should grant variances based only on a structure-by-structure review. Never grant variances for multiple lots, phases of subdivisions or entire subdivisions.

NFIP requirements

NFIP regulations do not address appeals, special uses or conditional permits. Follow the procedures used in your zoning ordinance or building code as these are usually prescribed by state law.

Because variances may expose insurable property to a higher flood risk, NFIP regulations set guidelines for granting them. The guidelines, which are designed to screen out situations in which alternatives other than a variance are most appropriate, appear in 44 CFR 60.6(a). They are summarized in Figure 7-6.

A review board hearing a variance request must not only follow procedures given in the NFIP criteria, it must consider the NFIP criteria in making its decision. When the NFIP guidelines are followed, few situations qualify for a variance.

Good and sufficient cause. The applicant must show good and sufficient cause for a variance. Remember, the variance must pertain to the land, not its owners or residents. Here are some common complaints about floodplain rules that are NOT good and sufficient cause for a variance:

- ◆ The value of the property will drop somewhat.
- ◆ It will be inconvenient for the property owner.
- ◆ The owner doesn't have enough money to comply.
- ◆ The property will look different from others in the neighborhood.
- ◆ The owner started building without a permit and now it will cost a lot to bring the building into compliance

Hardship. The concept of unnecessary hardship is the cornerstone of all variance standards. Strict adherence to this concept across the country has limited the granting of variances.

The applicant has the burden of proving unnecessary hardship. Reasons for granting the variance must be substantial; the proof must be compelling. The claimed hardship must be exceptional, unusual and peculiar to the property involved. Financial hardship, inconvenience, aesthetic considerations, physical handicaps, personal preferences or the disapproval of one's neighbors do not qualify as exceptional hardships.

The local board must weigh the applicant's plea of hardship against the purpose of the ordinance. Given a request for a variance from floodplain elevation requirements, the board must decide whether the hardship the applicant claims outweighs the long-term risk to the owners and occupants of the building would face, as well as the community's need for strictly enforced regulations that protect its citizens from flood danger and damage.

When considering variances to flood protection ordinances, local boards continually face the difficult task of frequently having to deny requests from applicants whose personal circumstances evoke compassion, but whose hardships are simply not sufficient to justify deviation from community-wide flood damage prevention requirements.

1. Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result;

2. Variances may be issued by a community for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the procedures of paragraphs (a) (3), (4), (5) and (6) of this section;

3. Variances shall only be issued by a community upon...

(i) a showing of good and sufficient cause,

(ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and

(iii) a determination that the granting of a variance will not result in increased flood height, additional threat to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

5. A community shall notify the applicant in writing over the signature of a community official that...

(i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and;

(ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a) (6) of this section.

6. A community shall...

(i) maintain a record of all variance actions, including justification for their issuance, and

(ii) report such variances issued in its annual or biennial report submitted to the [Federal Insurance] Administrator.

7. Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that...

(i) the criteria of paragraphs (a) (1) through (a) (4) of this section are met, and

(ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

Figure 7-6: NFIP variance criteria (44 CFR 60.6(a))

These problems can be resolved through other means, even if the alternatives to a variance are more expensive or complicated than building with a variance, or if they require the property owner to put the parcel to a different use than originally intended, or to build elsewhere.

Here are two examples:

Example 1. A small undeveloped lot is surrounded by lots on which buildings have been constructed at grade. The ordinance requires new buildings to be constructed at a level several feet above grade.

If the owner were to build a new house, it would look different, Potential buyers would ask questions and find out about the flood problem in the area. If it were built on fill, the lot might drain onto the neighbors' property.

This situation probably would not warrant a variance because the owner does not face an exceptional hardship. Appearance is not a hardship and no action should be taken to hide the hazard from others. There are ways to elevate a building without creating a drainage problem, such as elevating the building on pilings or a crawlspace, or grading the fill to drain away from adjoining properties.

Example 2. A property owner seeks a variance because he or she would have to spend several thousand dollars to elevate a house to comply with the ordinance, and several thousand more to build a wheelchair ramp or an elevator to provide access for a handicapped member of the family.

While financial considerations are important to property owners and the needs of a handicapped person must be accommodated, these difficulties do not put this situation in the category of "exceptional hardships" because:

- ◆ The characteristics that result in the claimed hardship do not pertain to the property but are personal.
- ◆ A variance is not needed to provide day-to-day access to the building, which can be provided by building a ramp or elevator.
- ◆ Having a handicapped person occupy a floodprone dwelling raises a critical public safety concern.

If a variance is granted and the building is constructed at grade, the handicapped or infirm person must leave when floodwaters begin to rise, yet he or she may need help to do so. This poses an unnecessary danger to the handicapped person and places an extra demand on the community's emergency services personnel, who may be called upon to rescue the resident in the event of a flood.

On the other hand, if the building is properly elevated, the handicapped person either can be evacuated or can survive the flood simply by remaining at home safely above the floodwaters.

In effect, the variance would not relieve the property owner of his or her difficulty, but likely only postpone and perhaps ultimately increase it. It would not help the community, either, as the building will be susceptible to damage long after the current owners are gone.

It would be more prudent for both the owner and the community if the variance were denied and the home built at the proper elevation with handicapped access. This would ensure the safety

of all family members when floodwaters rise, as well as protect the property owner's and the community's investment in the property.

Public safety and expense. Flood damage prevention ordinances are intended to help protect the health, safety, well-being and property of the local citizens. Variances must not create threats to public safety or nuisances.

Because it would increase damage to other property owners, no variance may be issued within a regulatory floodway that will result in any increase in 100-year flood levels (44 CFR 60.6(a)(1)).

Fraud and victimization. Variances must not defraud or victimize the public. Any buildings permitted below the BFE face increased risk of damage from floods, and future owners of the property—and the community—are subject to all the costs, inconvenience, danger and suffering that those increased flood damages may bring.

Future owners may purchase the property, unaware that because of a variance, it is subject to potential flood damages and can be insured only at high rates.

Minimum variation necessary. A variance is a request to vary from the rules, not to ignore them. Any variance should allow only minimum deviation from the local requirements.

For example, even if an applicant can justify not elevating a building above the BFE, the review board should not automatically allow the building to be built at grade. The board should still require as much elevation as possible, to provide some flood protection without causing exceptional hardship.

In some instances it may be possible to vary individual provisions of the ordinance without reducing the overall level of protection. For example, a well-engineered building might be constructed in a V Zone on a foundation other than piles or columns.

In considering variances, the review board should use local technical staff expertise and recommendations from the building, planning, zoning or engineering departments. The local technical staff should consider varying other requirements in order to provide the needed flood protection. For example, it may be more appropriate to issue a variance to the front yard setback requirement in order to get the building out of the floodway.

Flood insurance rates. While a variance may allow deviation from building standards specified in a local ordinance, flood insurance rates and the flood insurance purchase requirement—which must be enforced by lending institutions—cannot be waived.

This can create severe financial consequences for a property owner, as insurance rates for a building built below BFE can be substantially higher than those for elevated buildings. A variance from elevation requirements—the most common kind of variance requested—increases the risk to a building, and that increased risk is reflected in higher annual insurance premiums (Figure 9-3).

If a variance is requested to construct a building below the BFE, you must notify the applicant (in writing) that granting the variance will result in increased flood insurance premium rates, up to \$25 per \$100 of coverage. In many instances, the variance-induced rates will be so high as to make the building essentially uninsurable because the owners cannot afford the premium. (In one case, a marine supply store on the Gulf Coast was built 14 feet below BFE in a V zone. The annual flood insurance premium was \$25,000—on a \$100,000 building.)

The original owner who applied for a variance may not care, but if approved, the variance's impact may matter a great deal to subsequent potential owners who cannot afford the property's high insurance rates. The result may be owner abandonment; your community could be left with a vacant, flood-damaged and essentially uninsurable building.

Figures 7-7 through 7-12 illustrate the premiums for a single-family home protected to different levels. They provide a clear picture of the cost of actuarial post-FIRM flood insurance rates and, therefore, the true risk to which the building is being exposed.

You should give these two pages of illustrations to anyone considering seeking a variance to save construction costs. A variance may save money in the short term, but over the long run, the owner will pay much more in insurance premiums or, if uninsured, in flood losses.

Note: These premiums are for the purposes of this example. Insurance rates vary, based on location, date of construction and lowest floor elevation, and must be computed case-by-case. The premiums shown for the next series of illustrations were computed based on \$100,000 in building coverage.



Figure 7-7. Pre-FIRM building—1995 insurance rate: \$595

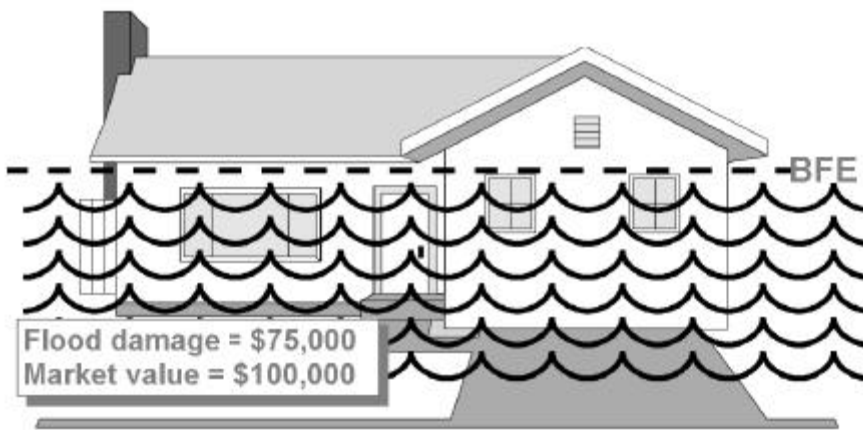
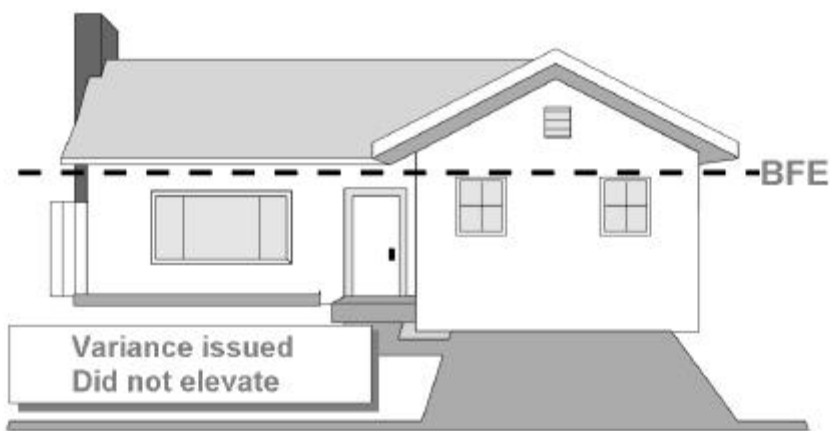


Figure 7-8. Pre-FIRM building—substantially damaged by 1997 flood



**Figure 7-9. Repaired—variance allowed
With no elevation (7 feet below BFE); actuarial rate: \$3,090**

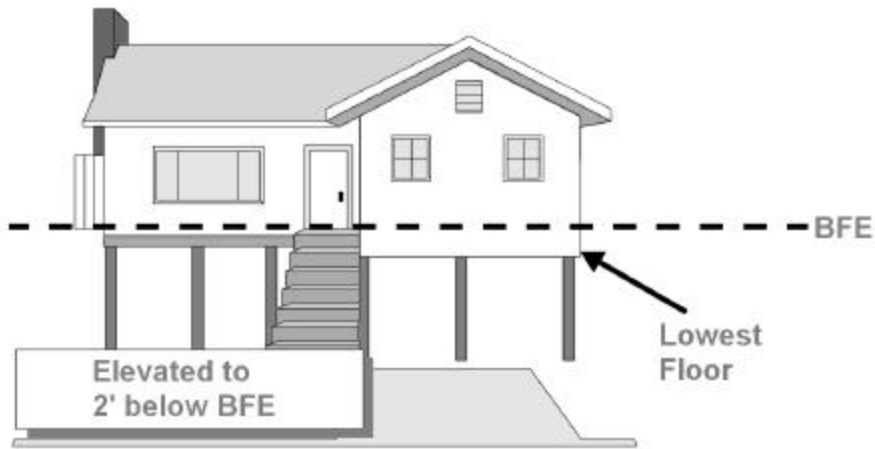


Figure 7-10. Repaired—variance allowed
 Elevated to 2' below BFE; actuarial rate: \$1,140

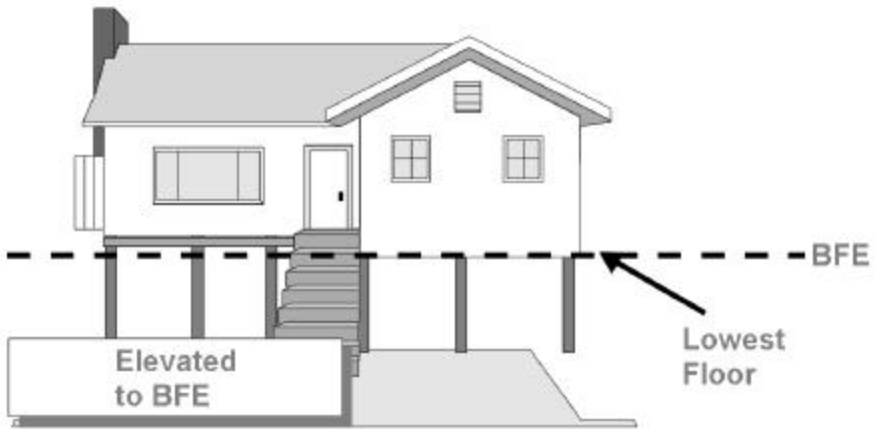


Figure 7-11. Repaired—elevated to BFE; actuarial rate: \$351

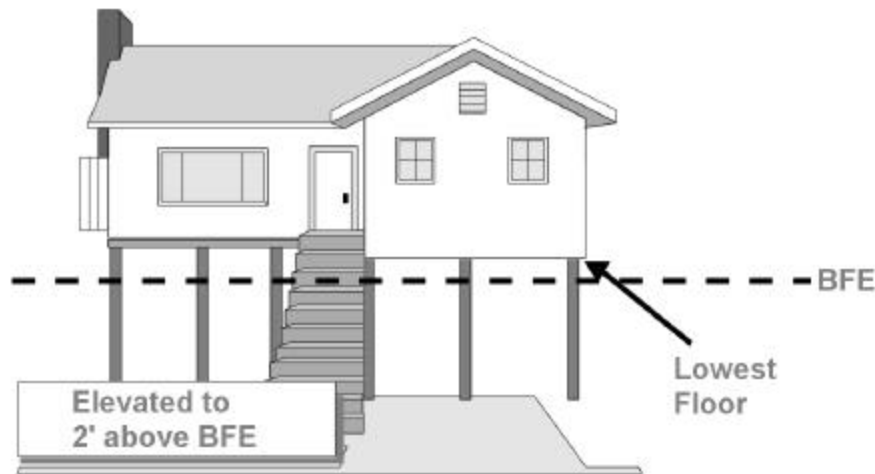


Figure 7-12. Repaired—elevated 2 feet above BFE; actuarial rate: \$216

Historic buildings

A variance may be issued for the reconstruction, rehabilitation or restoration of historic structures if the variance is the minimum necessary to preserve the historic character and design of the structure. “Historic structures” are those listed in the National Register of Historic Places or the State Inventory of Historic Places, or that contribute to a historic district.

Changes to the structure must not destroy or alter the characteristics that made it an historic building. A certified local historic board or the state historic preservation officer must review and approve remodeling, renovations and additions before granting a variance. Whatever mitigative measures can be taken to reduce future flood damage must be required—such as elevating an air conditioner or using flood-resistant materials.

Many older buildings are not considered historic, so the first thing to check is whether the structure proposed for an exemption is historic. Look for it on a list maintained by:

- The National Register of Historic Places.
- Federally-certified state programs operated through a state historic preservation officer.
- A federally-certified local historic preservation board.

Structures are listed in the National Register or on a federally-recognized state or local inventory in one of two ways: as an individual building, or as a primary, secondary, or other contributing building in a designated historic district.

Structures are either listed or may be eligible to be listed. Only a federally-certified state or local historic preservation program can make such determinations. Either the state historic preservation office or federally-certified local historic preservation board should be consulted to determine if a structure proposed for the historic exemption is indeed historic.

Figure 7 – 13. Definition of “historic building”

Functionally dependent use

A variance may be issued for new construction, substantial improvements and other development necessary for the conduct of a functionally dependent use. A functionally dependent use is one that must be located or carried out close to water—such as a docking or port facility necessary for the unloading of cargo or passengers, shipbuilding and ship repair.

A functionally dependent use variance could be issued provided that:

- ◆ There is good and sufficient cause for providing relief from the regulations.
- ◆ The variance will be the minimum necessary to provide relief.

- ◆ The variance does not cause a rise in the 100-year flood level within a regulatory floodway.

The structure or other development must be protected by methods that minimize flood damage, such as elevating mechanical equipment, locating offices above the BFE or using ground fault interrupt electrical circuits.

Records

The community must keep a record of all variances and the rationale for granting them. These are subject to review by FEMA or the state NFIP coordinator during a Community Assistance Visit.

The records must include a copy of the written notification to the applicant that the issuance of a variance to construct a building below the BFE will result in increased flood insurance premium rates as high as \$25 per \$100 of coverage, and such construction below the BFE increases risk to life and property.

It is recommended that the variance findings, conditions and authorization be recorded in the county deed records. This provides a means of permanently notifying future or prospective owners about the terms and conditions of the variance.



LEARNING CHECK #4

1. If a FEMA staff person finds a project in violation of the FEMA NFIP requirements in your community, who is responsible for correcting the violation?

2. You discover that Mrs. Murphy has ordered five truckloads of fill to raise her back yard in the floodway. She never asked for a permit. What is the recommended first step to dealing with this situation?

3. If a project is found underway in the floodplain, what is the first step you should take?

4. What legal recourses do you and your attorney have to bring a violation into compliance?

5. What are the NFIP procedures for submitting an appeal to your Board of Appeals?

6. Mr. Wilson wants to build a new house at grade instead of to the BFE, six feet above grade. You tell him he will need a variance. Which of the following are good and sufficient causes for granting him a variance?
 - An elevated house will look bad
 - Mrs. Wilson is old and has trouble with stairs
 - It will cost more money than the builder can afford
 - The builder has a contract with the bank to have it completed and sold in four months and changing plans will prevent meeting that deadline.
 - No one has ever seen a flood on that site.
7. Mr. Wilson is applying for a variance to build his house below the BFE. What two things must you tell him (in writing)?

G. RECORDS

Records show what you approved and what you told the developer, forming a “paper trail” needed for administrative or legal proceedings related to development projects. Such records are vital if the project violates your ordinance. They also give future owners information about the property.

Records are also checked by FEMA or the state to determine if your community is in full compliance with the NFIP.

This section reviews what records you must—or should—keep to meet your community’s obligation to the NFIP.

PERMIT FILE

Your community should have a permit record system that is keyed to a geographical identifier (not just a building permit number) such as: street address, lot and block number, township, section and range, or county appraiser’s property ID number.

You should have a file for each permit application. The files should have some indicator on the folder to show that it is a floodplain permit, such as a different color file folder or file label.

Permit files should contain copies of these items, as appropriate:

- ◆ The permit application form and all attachments, including the site plan.
- ◆ All correspondence pertinent to the project.
- ◆ Flood and floodway data prepared by the developer.
- ◆ Engineering analyses of floodway encroachments and watercourse alterations.
- ◆ Special engineering designs for enclosures below the BFE.
- ◆ In coastal high hazard areas, engineering certifications of designs and construction methods of new and substantially improved buildings.
- ◆ In coastal high hazard areas, certification of specially designed breakaway walls.
- ◆ Any variances or appeals proceedings.
- ◆ Records of inspections of the project while under construction.
- ◆ Documentation of the “as-built” lowest floor elevation of all new and substantially improved buildings.
- ◆ Certification of the elevation to which any nonresidential building has been floodproofed.
- ◆ Certificates of compliance or occupancy.

Keeping these records is a requirement to participate in the NFIP; there is no statute of limitations as to how long they should be kept. You may want to keep a separate log or record of

floodplain permits so you can readily retrieve those floodplain projects to show FEMA or the state NFIP coordinator.

It is not necessary to keep the entire building plans and other documents longer than is required for local code purposes. However, if you allow below-BFE enclosures, your files should include the ground floor plan of those buildings in case of a future violation issue.

ELEVATION CERTIFICATE

Your permit file needs an official record that shows how high new buildings and substantial improvements were elevated. This is needed both to show compliance with the ordinance and for the owner to obtain a flood insurance policy.

There is no mandated form for keeping building elevation records, but we strongly recommend that you use FEMA's Elevation Certificate Form (FEMA Form 81-31). A blank copy is in Appendix F. *Note: this form is being revised. A new version is expected by October 1998.*

If your community is participating in the Community Rating System, the FEMA form must be used for new construction and substantial improvements to existing buildings. Insurance agents writing flood insurance policies also must use the form to properly rate many types of buildings. Accordingly, FEMA encourages communities to use the form to help their residents obtain flood insurance.

The FEMA form is an eight-page packet. It includes the two-page FEMA Form 81-31, Elevation Certificate, and instructions on how to complete it. Additional copies of the packet are available in bulk at no cost by calling 800/638-6620, ext. 2 (customer service).

The current version of Form 81-31 is dated August 1996 and has an Office of Management and Budget (OMB) expiration date of July 31, 1999. Except for the date, it is the same as the 1990 and 1993 versions, which can still be used.

There is a software version of the FEMA Elevation Certificate. It can be ordered at no charge by calling the CRS order number, 317/848-2898. If you use the software version, or keep elevation records on a computer database, you also need to keep the original signed "hard copy" of the surveyor's certification.

The responsibility for obtaining and filing an elevation certificate rests on the local permit official. Part or all of the form may be completed by a land surveyor, engineer, architect, or local official authorized by ordinance to provide floodplain management information. (Depending on state law, if you are comfortable with using a transit or level you, as the floodplain ordinance administrator, can check the finished elevations and certify them for the record.)

You may give property owners or surveyors blank forms and expect them to complete the entire form. This practice does not relieve local officials in CRS communities from the requirement to ensure that the forms are complete and accurate. In non-CRS communities, the permit

official should at least double-check the form to ensure that it is complete and that Sections A, B and D (on property, map and community information) are correct.

Annexations. The FEMA Elevation Certificate form is self-explanatory. One problem arises when a community annexes or extends its planning or regulatory jurisdiction over Special Flood Hazard Areas for the unincorporated areas of a county or an adjacent community. Some communities enroll in the NFIP before a Flood Hazard Boundary Map or FIRM has been issued for them.

Both situations lead to considerable confusion as to flood zone determination, as well as knowing which community number and panel numbers should be used on Elevation Certificates and other NFIP documents.

Flood zone determination: If the subject property is located within areas annexed from the county or within an area of extraterritorial planning jurisdiction, use the county flood maps to determine the appropriate flood zone.

Community Identification Number: In item 1 of Section B of the FEMA form (“Community Number”), use the municipality’s NFIP ID number once a property is annexed or included in an extraterritorial planning jurisdiction.

Flood Map Panel Number: For property located in annexed areas or in the extraterritorial jurisdiction, for item 2 of Section B (“Panel Number”), use the entire county ID and panel number— “370087 0005,” not just “0005.” For sites within the “area not included,” state “No NFIP Map.”

FLOODPROOFING CERTIFICATE

Floodproofing means making a building watertight, or substantially impermeable to floodwaters. It is an option only allowed for nonresidential buildings.

Designs for a floodproofed building must account for flood warning time, uses of the building, mode of entry to and exit from the building and the site, floodwater velocities, flood depths, debris impact potential and flood frequency.

FEMA’s Technical Bulletin 3-93, *Non-Residential Floodproofing Requirements and Certification for Buildings Located in Special Flood Hazard Areas*, has a detailed discussion on each of these considerations.

For insurance rating purposes, the building’s floodproofed design elevation must be at least one foot above the BFE to receive rating credit. If floodproofed only to the BFE, the floodproofing credit cannot be used, resulting in higher flood insurance rates.

44 CFR Sections 60.3(B)(5) and (c)(4) require the community to obtain and maintain a registered professional engineer’s certification that a nonresidential building was properly floodproofed. You are encouraged to use the one-page FEMA certification form included in Appendix F because it fulfills NFIP insurance rating needs as well as floodplain management requirements.

V ZONE CERTIFICATION

Buildings in coastal high hazard areas or V Zones are subject to a greater hazard than buildings built in other types of floodplains. Not only do they have to be elevated above the base flood level, they must be protected from the impact of waves, hurricane-force winds and erosion.

The NFIP regulations require coastal communities to ensure that buildings built in the V Zone are anchored to resist these wind and water loads acting simultaneously.

44 CFR 60.3(e)(4) *[The community must] Provide that all new construction and substantial improvements in Zones V1-30 and VE ... are elevated on pilings and columns so that (i) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level; and (ii) the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of (e)(4)(i) and (ii) of this section.*

While FEMA does not provide a V Zone certification form, Figure 5-18 shows the form developed by the state of North Carolina. Be sure to check with your FEMA Regional Office before you use your own version of it.

NO-RISE CERTIFICATION

As discussed in Unit 5, Section D, your ordinance requires that riverine floodplains be free of encroachments that will cause an increase in flood levels.. Where a floodway has been mapped, construction in the flood fringe is assumed to not be a problem.

You need to document that a project in the floodway—or in a riverine floodplain where the floodway hasn't been mapped—will not cause an increase in flood heights. An engineering analysis must be conducted before you can issue a permit. Your permit file needs a record of the results of this analysis, usually in the form of a no-rise certification or an equivalent document.

The engineering or no-rise certification must be supported by technical data and signed by a registered professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on your FIRM or Flood Boundary and Floodway Map and the results tabulated in your Flood Insurance Study.

Although communities are required to review and approve the no-rise submittal, they may request technical assistance and review from the FEMA Regional Office. However, if this alter-

native is chosen, you must review the technical package and verify that all supporting data, listed in succeeding paragraphs, are included in the package before forwarding it to FEMA.

Figure 5-5 is a sample no-rise certification form developed by the North Carolina NFIP coordinating agency . Before using it, check with your state NFIP coordinating agency or FEMA Regional Office for additional guidance or requirements.

BIENNIAL REPORT

Every two years, participating communities must complete a form describing the community's progress in the previous two years in implementing floodplain management measures [44 CFR 59.22]. A copy of a biennial report appears in Figure 7-14.

FEMA sends the one-page form to your chief elected official. It must be completed and returned to FEMA within 30 days.

The only way you can complete the biennial report is to have complete and accessible permit records. You need to keep track of:

- ◆ Changes in community boundaries.
- ◆ Physical or topographical changes that affect flood hazard areas.
- ◆ Amendments to your floodplain ordinance.
- ◆ The number of building permits issued in the floodplain.
- ◆ The number of variances issued.

You also need to be able to tell FEMA:

- ◆ The number of people and number of buildings in the floodplain.
- ◆ Whether you would like any floodplain management assistance.

FEDERAL EMERGENCY MANAGEMENT AGENCY
 NATIONAL FLOOD INSURANCE PROGRAM
 Biennial Report for
 Calendar Year _____

O.M.B. No. 3067-0018
 Expires
 See reverse side for
 Paperwork Burden Notice

EMERGENCY AND REGULAR PROGRAM
 (With Base Flood Elevations)

RETURN TO:
 Federal Emergency Management Agency
 P.O. Box 2012
 Jessup, Md. 20794-2012

(Please make necessary corrections to the address above.)

Instructions	
1. This report should be completed by the locally designated Floodplain Management Administrator (e.g. your City Manager, City Planner, Building Inspector, etc.)	
2. Please answer every question.	
3. PLEASE RETURN THIS REPORT WITHIN 30 DAYS OF ITS RECEIPT, TO THE ADDRESS ABOVE.	

SECTION I - Changes and activities in your designated flood hazard area during the last TWO years.
 (If you answer "yes" to any question in this section, please provide explanatory information and/or technical data including, when appropriate, your own community map or a copy of the Flood Hazard Map showing the areas affected.)

	YES	NO
A. Does your community have any changes to the base data on your floodplain maps, such as (1) adding/correcting streets, (2) adding elevation reference marks, (3) aligning map panels, (4) adding LOMs, or (5) annexation/corporate limit changes?	<input type="checkbox"/>	<input type="checkbox"/>
B. Have the characteristics of flooding in your community changed to the extent that your floodplain needs to be restudied?	<input type="checkbox"/>	<input type="checkbox"/>
C. Does your community have information that may be incorporated in a Flood Insurance Boundary Map or Flood Insurance Rate Map? (example: water shed studies or base flood elevations established by developers)	<input type="checkbox"/>	<input type="checkbox"/>
D. Was there a significant man-made change affecting your designated flood hazard areas? (examples: levees, bridges, extensive filling, excavation or stream channelization)	<input type="checkbox"/>	<input type="checkbox"/>
E. Is your community in need of assistance in improving local floodplain management, such as regulation interpretation, planning, enforcement procedures, floodproofing, or a community visit?	<input type="checkbox"/>	<input type="checkbox"/>

SECTION II - Community Floodplain Management Data

A. If there has been a change to your floodplain management ordinance, please send a certified copy of the new law.

B. How many building PERMITS were granted within the last two calendar years for new structures (including substantial improvements to existing structures) in the designated flood hazard areas shown on your community's Flood Hazard Map?

C. How many VARIANCES to your local floodplain management ordinance were granted within the last two calendar years for new structures or substantial improvements to existing structures? Please provide only the number of variances granted for structures with the lowest flood below the Base Flood Elevation.

D. Please update the demographic information on your community that was provided FEMA when your community last reported to the National Flood Insurance Program. **If any numbers are NOT correct or a "0" appears, please provide the revised number.** If precise data is not available, please give us your best estimate.

	Permanent Year-Round Population	1-4 Family Structures	All Other Structures
1. In your <u>entire</u> community (including flood hazard areas) →			
2. In your flood hazard areas <u>only</u> , →			
NAME, TITLE, AND SIGNATURE	PHONE NO. (include area code)	DATE	
		MONTH	YEAR

Keep the last copy. Return the other 4 copies to the address listed above.
 FEMA Form 81-29, OCT 97 REPLACES ALL PREVIOUS EDITIONS

Figure 7-14. Example Biennial Report



LEARNING CHECK #5

1. Why should you keep permit records?
2. What records should be kept in your permit file?
3. Who is responsible for ensuring that the elevation certificate is completed correctly?
4. What are the four situations when a record of an engineer's or surveyor's certification is needed?
5. A property has been annexed from the county into your city, but the FIRM has not been revised to reflect the annexation. What is the NFIP community number that is recorded in Item 1, Section B of the FEMA Elevation Certificate?
6. Is a V Zone Certification needed for a residential building?
7. Where do you get a Biennial Report to send in to FEMA?



UNIT LEARNING EXERCISE

1. Does your community have formal written permit review procedures to ensure that a development proposal is properly reviewed and inspected?
2. What are the four situations where a certification will be needed before a floodplain development permit can be issued?
3. A development plan proposes to fill and regrade an area of the fringe to give most of the lots building sites that are above the BFE. The developer says “then we won’t have the banks telling people my subdivision is in the floodplain.” What do you tell the developer?
4. What are the key items you need to check when reviewing the plans for a new house to be built on a slab foundation on fill in the fringe?
5. You deny an application to build a house in the floodplain because the plans show a proposed basement 6’ below the BFE. What recourses does the applicant have now?
6. What should you check for during the first site inspection?
7. When should you make the second inspection for a building to be elevated on a crawlspace or columns?
8. If you use a level to verify the elevation of a building during the second inspection, will the builder still need to provide an as-built elevation certificate?
9. When is the best time to see if a crawlspace has adequate openings?

10. During the second inspection, you find that the builder wants to build the lowest floor three feet below the BFE in order to save on construction costs. What repercussions would the owner face if the community issued a certificate of occupancy for the building and did not pursue any enforcement action?

11. If the third inspection reveals that the builder of an apartment house has made a change to the structure that results in a major violation of your floodplain regulations, what can you do?

12. How can Section 1316 help a local permit official faced with a subdivider who refuses to build houses in compliance with the floodplain regulations?

13. Can a community grant a variance to allow a project in the floodway that will cause a ½ foot increase in flood heights.

14. Name two situations where special exceptions may be granted for a variance.

15. Permit records should be kept systematically. Your system should be keyed so you can retrieve permit files by:

16. What are the advantages of using the FEMA Elevation Certificate as a record of a building's lowest floor elevation?

17. Can a surveyor sign a Floodproofing Certificate?

18. What is needed to support a No-rise certification?

ANSWERS TO THE LEARNING CHECKS

Learning check #1

This learning check is a review of where the various NFIP requirements appear in your own ordinance. There are no correct answers, only the need to make sure that all the items listed in the learning check are covered.

Learning check #2

1. What activities are exempt from regulation under your floodplain ordinance?

Depends on the community. Small projects and activities by other governmental agencies may be exempt. Check with your State NFIP Coordinator to verify that any exempt activities are either covered by other regulations or are too small to be of concern.

2. Does your community have a permit application form that makes sure things like a floodway encroachment analysis or V Zone certification are not missed?

Depends on the community. If not, you'll find Figure 7-4 very helpful.

3. What five items need to be checked to ensure an application for a permit is complete?

— *All forms are completed and signed*

— *Site, grading, building, etc. plans are complete*

— *All necessary certifications are provided*

— *All necessary state and federal permits are being obtained*

— *Copies of the application are forwarded to other departments for review*

4. What departments or offices in your community should review a permit application before it is approved?

Depends on the community. This is a very important procedure to check to be sure that a project will meet all of your community's development requirements.

5. During your permit review, you find that the applicant's site plan shows that the ground is currently higher than the BFE. Should you continue to treat this as a floodplain development permit?

You do not have to. It's still a good idea to encourage the applicant to incorporate flood protection measures in case a future flood is higher than the predicted BFE (e.g., don't build any homes with basements).

6. What's the best way to make sure the applicant's engineering certifications are sufficient?

Have your community's engineer review them.

7. What are the key items you need to check when reviewing the plans for a new house to be built on pilings in the V Zone?

— *The proposed elevation of the lowest floor*

— *Whether there will be any enclosures below the elevated floor*

— *The V Zone certification signed by a registered professional architect or engineer.*

— *The materials used in the area below the BFE.*

8. Match the list of proposed projects with the documents that will be needed in order to determine if the project should be built in the floodplain.

— New shopping center parking lot in the floodway *a, b, c*

— New house in the fringe *a, b*

— New business in the V Zone *a, b, f*

— Reconstruction of a state highway bridge *see below*

— New house built over a floodable, but enclosed garage *a, b, e*

g. Floodplain development permit application

h. Site and/or building plans

i. Floodway encroachment analysis

j. Floodproofing certification

k. Non-conversion agreement

l. V Zone certification

The state highway department may be exempt from local regulations. However, it is a good idea to talk to the State NFIP Coordinator to ensure that the project meets all state floodplain management requirements.

Learning check #3

1. When is the best time to make the first site inspection?
After the site is staked out and before permanent foundation work has begun.
2. When should you make the second inspection of a building on a slab foundation?
When the forms are in place, but before the concrete is poured.
3. What are your two options for making sure a new building is high enough before you allow construction to proceed after the second inspection?
 - *Have the builder provide an elevation certificate*
 - *Check the elevation yourself during the second inspection*
4. What should you check for during the third inspection?
 - *Ensure that the foundation and floor elevation have not been altered since the second inspection.*
 - *Obtain an as-built elevation or floodproofing certificate.*
 - *Verify that enclosures below the lowest floors have adequate openings.*
 - *Ensure that nothing subject to flood damage, such as a furnace or air conditioning unit, has been located below the lowest floor.*
 - *Check breakaway walls in V Zones.*
 - *Check for floodway encroachments.*
 - *Check the anchoring system used in securing manufactured homes.*
5. If a project meets all of the ordinance requirements and is built according to the approved plans, what does the owner get after the final inspection?
A certificate of occupancy, certificate of compliance, use permit or other official document that allows the building to be occupied or used.

Learning check #4

1. If a FEMA staff person finds a project in violation of the FEMA NFIP requirements in your community, who is responsible for correcting the violation?

Your local permit official.

2. You discover that Mrs. Murphy has ordered five truckloads of fill to raise her back yard in the floodway. She never asked for a permit. What is the recommended first step to dealing with this situation?

Talk to Mrs. Murphy and explain why a permit is needed and why it is important not to fill in the floodway. You should get voluntary compliance.

3. If a project is found underway in the floodplain, what is the first step you should take?

Advise the owner to stop work and tell him or her (in writing) what the violation is and what should be done to correct it.

4. What legal recourses do you and your attorney have to bring a violation into compliance?

— *A fine (that can increase for each day the violation continues)*

— *Recording the violation in the property's deed records*

— *A court injunction to stop work*

5. What are the NFIP procedures for submitting an appeal to your Board of Appeals?

There are none, or, more correctly, they are whatever your ordinance specifies.

6. Mr. Wilson wants to build a new house at grade instead of to the BFE, six feet above grade. You tell him he will need a variance. Which of the following are good and sufficient causes for granting him a variance?

— *An elevated house will look bad*

— *Mrs. Wilson is old and has trouble with stairs*

— *It will cost more money than the builder can afford*

— *The builder has a contract with the bank to have it completed and sold in four months and changing plans will prevent meeting that deadline.*

— *No one has ever seen a flood on that site.*

None of these. They do not show an exceptional hardship, they are not unique to the property, nor do they pertain to the land, not the owners.

7. Mr. Wilson is applying for a variance to build his house below the BFE. What two things must you tell him (in writing)?

(i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and;

(ii) such construction below the base flood level increases risks to life and property.

Learning check #5

1. Why should you keep permit records?

Records do the following:

- *Show what you approved and what you told the developer.*
- *Form a paper trail needed for administrative or legal proceedings.*
- *Give future owners information about the property.*
- *Are checked by FEMA or the state to determine if your community is in full compliance with the NFIP.*

2. What records should be kept in your permit file?

- *The permit application form and all attachments, including the site plan.*
- *All correspondence pertinent to the project.*
- *Flood and floodway data prepared by the developer.*
- *Engineering analyses of floodway encroachments and watercourse alterations.*
- *Special engineering designs for enclosures below the BFE.*
- *In coastal high hazard areas, engineering certifications of designs and construction methods of new and substantially improved buildings.*
- *In coastal high hazard areas, certification of specially designed breakaway walls.*
- *Any variances or appeals proceedings.*
- *Records of inspections of the project while under construction.*
- *Documentation of the as-built lowest floor elevation of all new and substantially improved buildings.*
- *Certification of the elevation to which any nonresidential building has been floodproofed.*
- *Certificates of compliance or occupancy.*

3. Who is responsible for ensuring that the elevation certificate is completed correctly?

The permit official

4. What are the four situations when a record of an engineer's or surveyor's certification is needed?
 - *Elevation certificate: needed for new or substantially improved buildings that are elevated in the SFHA*
 - *Floodproofing certificate: needed for new or substantially improved non-residential buildings that are floodproofed.*
 - *V Zone certification: needed for new or substantially improved buildings in V Zones*
 - *No-rise certification: needed for development projects in floodways (or its equivalent in riverine floodplains where the floodway has not been mapped)*
5. A property has been annexed from the county into your city, but the FIRM has not been revised to reflect the annexation. What is the NFIP community number that is recorded in Item 1, Section B of the FEMA Elevation Certificate?

Your city's NFIP number. The county NFIP number is entered in Item 2 of Section B.
6. Is a V Zone Certification needed for a residential building?

Yes. It is needed for all buildings and substantial improvements in the V Zone.
7. Where do you get a Biennial Report to send in to FEMA?

Don't worry. FEMA sends it to the community every two years.

Unit Learning Exercise

1. Does your community have formal written permit review procedures to ensure that a development proposal is properly reviewed and inspected?

The answer should be “yes,” although there is no NFIP requirement for written procedures.

2. What are the four situations where a certification will be needed before a floodplain development permit can be issued?

— *Floodway encroachment analysis*

— *Engineer’s certification of floodproofing design*

— *Non-conversion agreement for enclosed lower areas*

— *V Zone design certification*

3. A development plan proposes to fill and regrade an area of the fringe to give most of the lots building sites that are above the BFE. The developer says “then we won’t have the banks telling people my subdivision is in the floodplain.” What do you tell the developer?

While the permit office can use better ground elevation data to determine that a building location is above the BFE (and therefore outside the SFHA), the property will remain in the SFHA on the FIRM. That means that it is still subject to the flood insurance purchase requirement and the rates will be set at SFHA rates. It is the owner’s responsibility to submit a request for a Letter of Map Amendment (LOMA) in order to have the FIRM reflect the better data.

4. What are the key items you need to check when reviewing the plans for a new house to be built on a slab foundation on fill in the fringe?

— *The proposed elevation of the lowest floor*

— *Your building code should also require you to make sure the fill will be properly compacted and protected from erosion and will not cause local drainage problems on neighboring properties.*

5. You deny an application to build a house in the floodplain because the plans show a proposed basement 6’ below the BFE. What recourse does the applicant have now?

— *He can drop the idea and withdraw the application*

— *He can redesign the house so the lowest floor (including basement) is above the required flood protection level.*

— *He can appeal to the Board of Appeals if he thinks you misread or misinterpreted the requirements*

— *He can apply for a variance to allow the basement.*

6. What should you check for during the first site inspection?
 - *The location of the floodplain and floodway boundaries.*
 - *Setbacks from lot lines, channel banks, etc.*
 - *Floodway encroachments, if applicable.*
7. When should you make the second inspection for a building to be elevated on a crawlspace or columns?

After the foundation is completed, so you can check if it is high enough before the lowest floor is built.
8. If you use a level to verify the elevation of a building during the second inspection, will the builder still need to provide an as-built elevation certificate?

Yes
9. When is the best time to see if a crawlspace has adequate openings?

During the second inspection, before the floor is built. This will allow the builder to install the needed openings with a minimum of disruption to the structure.
10. During the second inspection, you find that the builder wants to build the lowest floor three feet below the BFE in order to save on construction costs. What repercussions would the owner face if the community issued a certificate of occupancy for the building and did not pursue any enforcement action?

Even though the certificate of occupancy says the owner had a “legal” building, the flood insurance rates would be based on the elevation of the lowest floor. The annual insurance premium would be very high. A few years of such premiums would likely be more expensive than the extra cost of meeting the ordinance’s elevation requirement.
11. If the third inspection reveals that the builder of an apartment house has made a change to the structure that results in a major violation of your floodplain regulations, what can you do?

Withhold the certificate of occupancy. (This assumes that you have an ordinance that states that utilities cannot be turned on and/or apartments cannot be rented until the certificate is issued.)
12. How can Section 1316 help a local permit official faced with a subdivider who refuses to build houses in compliance with the floodplain regulations?

It authorizes FEMA to deny flood insurance to a property declared in violation of the community’s ordinance. Among other things, this will prevent any federal assistance or federally-regulated or insured lending institutions from issuing a loan or mortgage secured by the new homes.

13. Can a community grant a variance to allow a project in the floodway that will cause a ½ foot increase in flood heights.

No. "Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result..." (44 CFR 60.6(a)1.)

14. Name two situations where special exceptions may be granted for a variance.

Historic buildings and functionally dependent uses.

15. Permit records should be kept systematically. Your system should be keyed so you can retrieve permit files by:

Geographical identifier, such as street address

16. What are the advantages of using the FEMA Elevation Certificate as a record of a building's lowest floor elevation?

— *It includes all the data needed for NFIP compliance*

— *It meets the requirements of the Community Rating System*

— *It is needed by insurance agents to write a policy.*

17. Can a surveyor sign a Floodproofing Certificate?

No, it must be signed by a registered professional engineer.

18. What is needed to support a No-rise certification?

The engineering or no-rise certification must be supported by technical data and signed by a registered professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on your FIRM or Flood Boundary and Floodway Map and the results tabulated in your Flood Insurance Study.