

III. APPLICABLE NATIONAL FLOOD INSURANCE PROGRAM FLOODPLAIN MANAGEMENT REQUIREMENTS IN APPROXIMATE ZONE A AREAS

The primary requirement for community participation in the NFIP is the adoption and enforcement of floodplain management regulations that meet the minimum standards of the NFIP regulations in Title 44 of the Code of Federal Regulations (CFR) Section 60.3. These minimum standards vary depending on the type of flood risk data provided to the community by FEMA. The intent of floodplain management regulations is to minimize the potential for flood damages to new construction and to avoid aggravating existing flood hazard conditions that could increase potential flood damages to existing structures. To protect structures in riverine and lacustrine areas, the NFIP regulations require that the lowest floor (including basement) of all new construction and substantial improvements of residential structures be elevated to or above the BFE. New or substantially improved non-residential structures in riverine areas must either be elevated or floodproofed (made watertight) to or above the BFE.

Requirements for Obtaining BFE Data

In areas designated as approximate Zone A, where BFEs have not been provided by FEMA, communities must apply the provisions of Paragraph 60.3(b) of the NFIP regulations. Subparagraph 60.3(b)(4) requires that communities:

Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source... [44 CFR 60.3 (b) (4)]

Section IV describes the sources from which BFE data may be obtained. These data are to be used as criteria for requiring that new construction, substantial improvements, and other development within all approximate Zone A areas meet the applicable requirements in Paragraphs 60.3(c) and (d) of the NFIP regulations, including the requirement that structures have their lowest floors elevated to or above the BFE (or floodproofed to or above the BFE for non-residential structures). These data should be used as long as they reasonably reflect flooding conditions expected during the base (100-year) flood, are not known to be scientifically or technically incorrect, and represent the best data available. Communities should consider formally adopting these data by reference as part of their floodplain management regulations.

Requirements for Developing BFE Data

Under Subparagraph 60.3(b)(3) of the NFIP regulations, communities must also:

Require that all new subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data; [44 CFR 60.3 (b)(3)]

This means that any subdivision which meets this threshold must be evaluated to determine if the subdivision proposal is affected by an approximate Zone A area and whether BFE data are required. BFE data are required for the affected lots in the subdivisions shown in Figure 3, "Proposed 76-Lot Subdivision," and Figure 4, "Proposed 6.7-Acre Subdivision." Figure 3 clearly shows a 76-lot subdivision with several lots affected by an approximate Zone A area. The subdivision depicted in Figure 4 is only 12 lots, but because the subdivision is greater than 5 acres and clearly shows buildable sites affected by an approximate Zone A area, BFE data are required.

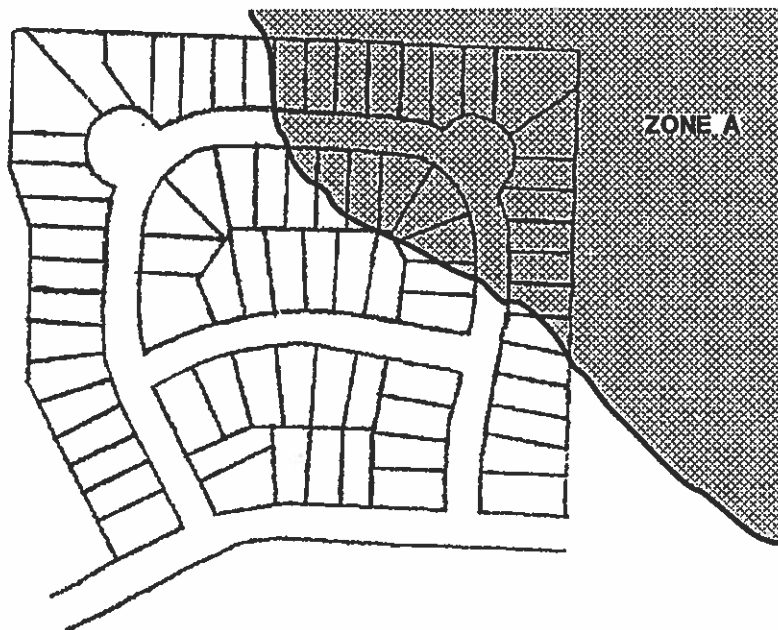


Figure 3 - Proposed 76-Lot Subdivision

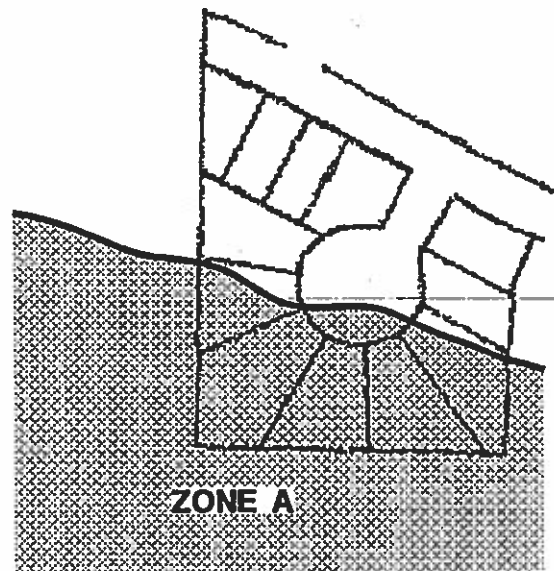


Figure 4 - Proposed 6.7-Acre Subdivision

Communities are encouraged to address the flood hazards at the earliest stages of subdivision planning rather than at the actual placement of individual structures. If a community can work with the developer and others when land is being subdivided, many long-term floodplain management benefits can be achieved, particularly if the floodplain is avoided altogether.

In Figure 5, "Proposed 76-Lot Subdivision," the entire approximate Zone A area is to be dedicated as open space. If the planned subdivision shows the floodplain is contained entirely within an open space lot, it may not be necessary to conduct a detailed engineering analysis to develop BFE data.

Also, it may not be necessary to develop detailed BFE data in large-lot subdivisions or single-lot subdivisions that are within the thresholds under Subparagraph 60.3(b)(3) of the NFIP regulations when the actual building sites are clearly outside of the Zone A area. In Figure 6, "Proposed 5.6-Acre Subdivision," it is evident from the topographic features of this 5.6-acre subdivision that the building sites would be clearly out of the floodplain since the proposal indicates a steep grade between the approximate Zone A area and the building sites which are located on natural high ground.

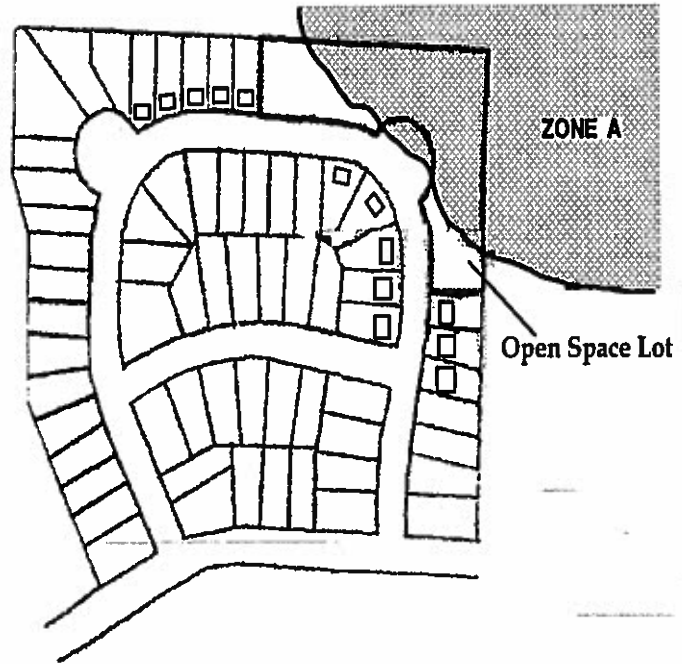


Figure 5 - Proposed 76-Lot Subdivision

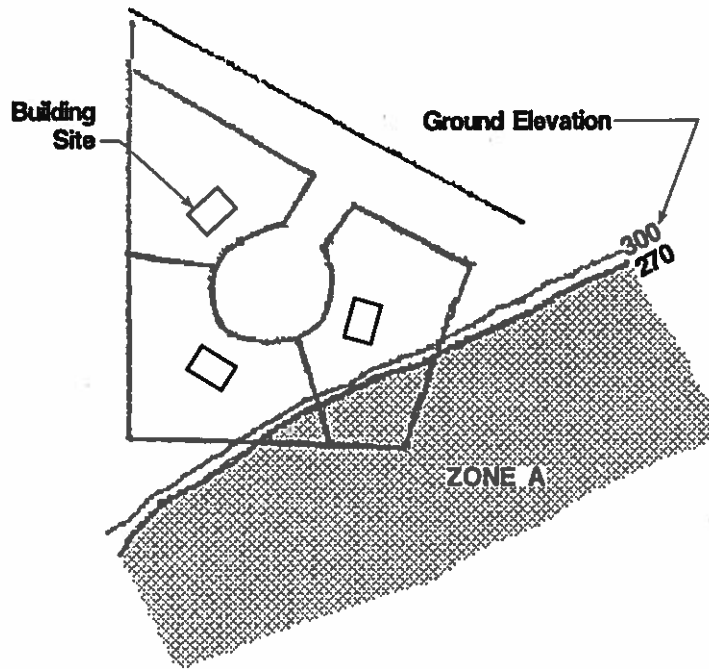


Figure 6 - Proposed 5.6-Acre Subdivision

If the grade between the actual building sites and the approximate Zone A area of the proposed subdivision is relatively gradual, as shown in Figure 7, "Proposed 6.7-Acre Subdivision," the floodplain could extend beyond what is shown on the Flood Insurance Rate Map. It is very likely that flooding could affect the building sites. In this case, an analysis should be conducted to determine the location of the 100-year floodplain and the BFE.

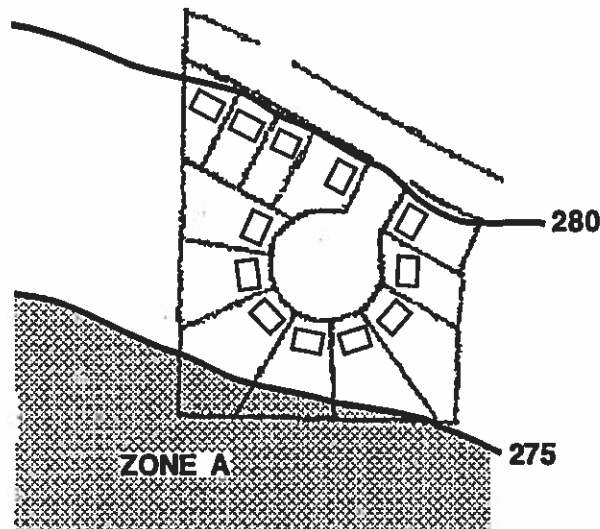


Figure 7 - Proposed 6.7 Acre Subdivision

For developments that exceed the thresholds identified in NFIP regulations Subparagraph 60.3(b)(3), BFEs must be either obtained from other sources or developed using detailed methodologies comparable to those contained in a Flood Insurance Study. Section V describes some of the detailed methodologies available that can be used to develop BFE data when none are available from the sources listed in Section IV.

If the size of the new subdivision or other proposed development falls below the thresholds specified in NFIP regulations Subparagraph 60.3(b)(3) and no BFE data are available from the sources listed in Section IV, the community must still apply, at a minimum, the requirements of Subparagraph 60.3(a)(3) to proposed structures or Subparagraph 60.3(a)(4) to subdivisions and other developments within approximate Zone A areas. These paragraphs require that permit officials:

Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement..., (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. [44 CFR 60.3(a)(3)]

Review subdivision proposals ... including manufactured home parks or subdivisions ... to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities ... are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards; [44 CFR 60.3(a)(4)]

One way that communities can ensure that building sites will be reasonably safe from flooding for proposed developments that fall below the thresholds in Subparagraph 60.3(b)(3) is to use the simplified methods outlined in Section V for estimating a BFE. Another approach to ensure that a building site is reasonably safe from flooding is to require the structure to be elevated above the highest adjacent grade by a specified number of feet based on the local official's knowledge of flood conditions in the area. In the absence of available BFE data from other sources, the community may require the permit applicant to elevate the structure two or more feet above the highest adjacent grade which qualifies the structure for reduced flood insurance rates. Elevation of the structure to four feet above the highest adjacent grade will enable the structure to qualify for substantially reduced flood insurance rates.

However, some states and communities require that BFE data be developed for all subdivisions and/or floodplain development within approximate Zone A areas, not just those subdivisions

which meet the 50-lot or 5-acre threshold. A community may, at its discretion, require the use of detailed methods for such development. While this requirement is more restrictive than NFIP minimum requirements, the NFIP regulations specifically recognize and encourage states and communities to adopt and enforce more restrictive floodplain management regulations in those instances where the state or community believes that it is in the best interest of its citizens.

No matter what the size of the subdivision or other development proposal, requests to revise or amend effective Flood Insurance Study information through the procedures outlined in Part 65 and Part 70 of the NFIP regulations must be based on detailed methodologies presented in Section V or other methodologies comparable to those found in a Flood Insurance Study. The analysis used to develop the BFEs must be certified by a registered professional engineer or licensed land surveyor, as appropriate, if the BFEs are to be used to revise or amend an NFIP map.

Use of Draft or Preliminary Flood Insurance Study Data

The data from a draft or preliminary flood insurance study constitutes "available data" under Subparagraph 60.3(b)(4). Communities must reasonably utilize the draft or preliminary flood insurance study data under the section of their ordinance that requires the use of other base flood data when detailed BFE data has not been published in a flood insurance study. Communities are given discretion in using draft or preliminary flood insurance study data only to the extent that the technical or scientific validity of the proposed flood elevation data is questioned. If a community decides not to use the draft or preliminary flood insurance data in a FIS because it is questioning the data through a valid appeal, the community must still assure that buildings are constructed using methods and practices that minimize flood damages in accordance with the requirements under Subparagraphs 60.3(a)(3) and (4).

When all appeals have been resolved and a notice of final flood elevations has been provided by FEMA, communities are required to use the data from the flood insurance study for regulating floodplain development in accordance with Subparagraph 60.3(b)(4) since the data represents the best data available. Communities must regulate floodplain development using the flood insurance study data under Subparagraph 60.3(b)(4) until such time as the community has adopted the effective FIRM and flood insurance study.

Advantages of Developing BFE Data

While the NFIP regulations do not require that communities develop BFE data in approximate Zone A areas when proposed development is below the thresholds in NFIP regulations Subparagraph 60.3(b)(3), there are significant advantages and financial benefits for communities and individual property owners that develop BFE data. These advantages and benefits include:

- protecting structures up to the BFE will minimize and reduce future flood losses, resulting in long-term savings to the individual, the community, and the National Flood Insurance Fund;
- flood insurance policies in approximate Zone A areas that are rated using a BFE will often qualify for significantly lower insurance rates than policies that are rated without a BFE. The difference in flood insurance premiums could be substantial;
- less burden will be placed on the permit official because he or she can require protection to a specified elevation. Without a BFE, the permit official must make judgements as to what constitutes "reasonably safe from flooding" and "constructed with materials and practices that minimize flood damages";
- the NFIP's Community Rating System establishes flood insurance premium discounts of up to 45 percent for policy holders within communities that have a floodplain management program that exceeds NFIP minimum requirements. Sizable Community Rating System credits are available for Community Rating System communities that develop BFEs for areas designated as approximate Zone A on their Flood Hazard Boundary Map or FIRM, or that require site-specific engineering analyses for development proposals; and
- by specifying a BFE in an approximate Zone A area, a building or property can, in some circumstances, be removed from the floodplain by issuance of a Letter of Map Amendment or Letter of Map Revision in accordance with Part 65 and Part 70 of the NFIP regulations. While these procedures eliminate the requirement that flood insurance be purchased as a condition of obtaining a loan from a Federally insured or regulated lender, a lending institution may, at its discretion, require the purchase of flood insurance.

IV. OBTAINING EXISTING BASE (100-YEAR) FLOOD ELEVATIONS

The NFIP Regulations at 44 CFR 60.3 require that structures be elevated or floodproofed (non-residential structures only) to provide protection from flood damage. A BFE must be established before such flood protection measures can be used. There are a variety of computational methods that can be employed to determine BFEs. However, these methods can be costly. Before computational methods are used, every attempt should be made to obtain information, in the form of floodplain studies or computations, from Federal, State, or local agencies. Data obtained from these agencies may be adequate to determine BFEs with little or no additional research, computation, or cost.

Local officials who obtain BFE data should maintain the information for future reference. Local officials should also consider making a search for BFE data for the entire community. By doing so, the local officials may not have to conduct a search each time a floodplain development permit is requested. If the data reasonably reflect flooding conditions, a community should consider adopting the information into its floodplain management ordinance.

Provided below are a list of agencies that can be contacted to determine if any BFE data have already been developed. When obtained, these data should be evaluated to ensure that they reasonably reflect flooding conditions expected at the site during the 100-year flood, are scientifically or technically correct, and represent the best data available.

Three major sources of existing data are highlighted in this section: FEMA, other Federal agencies, and State and local agencies.

FEMA

FEMA's technical evaluation contractors maintain libraries that contain technical and administrative data developed during the preparation of Flood Insurance Studies, as well as the resulting Flood Insurance Study reports and NFIP maps. FEMA can be contacted to determine whether or not sufficient information exists in the back-up data to calculate BFEs. For some flooding sources that are designated as approximate Zone A, FEMA may have detailed flooding information that has not yet been incorporated into the community's Flood Insurance Study. FEMA can be contacted to obtain this information where it exists.