



Higher Regulatory Standards

All communities that participate in the National Flood Insurance Program (NFIP) have adopted a flood damage prevention ordinance as a minimum requirement for participation. Many communities adopt higher flood ordinance standards not just to safeguard the riparian corridor and lessen future flood damages, but also to gain credit under the NFIP's Community Rating System in order to reduce flood insurance premiums for policyholders in their community.

The following are some of the most common higher floodplain standards:

SETBACKS – With a setback, structures are required to be sited back away from the top of the bank of a stream or river, or setback from the floodway line a minimum distance (e.g., 50 or 100 feet). Setbacks have several advantages: (1) they provide an added margin of safety by keeping structures away from higher velocity flood waters closer to the channel; (2) they reduce flood losses caused by stream-bank failure when stream channels naturally migrate and erode the land, undermining near-bank structures; and, (3) they can provide a riparian buffer along the stream channel to protect fish and wildlife habitat.

FREEBOARD — Many communities require the lowest floor of structures to be elevated one, two or more feet above the base flood elevation (BFE). Although building to the BFE is the minimum FEMA standard, there are several reasons why communities adopt a freeboard requirement: (1) larger floods than the base or 100-year flood do occur; (2) building only to the BFE may not protect floor joists, heating ducts, and insulation since they may be below BFE; (3) the BFE is based on current conditions, and flood heights often increase, especially in urban areas as development increases; (4) the higher the lowest floor above the BFE, the cheaper the flood insurance rates; and, (5) the added margin of safety provides peace of mind to the property owner.

COMPENSATORY STORAGE – Sometimes referred to as “cut-and-fill”, this provision requires developers to compensate for the loss of flood storage caused by filling in the floodplain fringe by removing an equal amount of material in the floodplain near the proposed development. This requirement helps to maintain flood storage and ensure that floodwaters will not be displaced onto someone else's property as the result of a floodplain fill.

FILL PROHIBITION – Some communities have restricted the placement of fill in floodplains altogether in order to maintain floodplain storage and lessen environmental impacts. This provision also creates a disincentive to build in the floodplain, since without the placement of fill, a builder would not qualify for a Letter of Map Revision (LOMR) from FEMA. A LOMR removes an area elevated on fill from the regulatory floodplain by letter or through a flood map revision. Most banks will waive the flood insurance requirement if a builder or homeowner presents a LOMR.

SUBDIVISION EGRESS AND INGRESS – All too often developments placed in the floodplain are “islands” during a flood. This creates a dangerous situation for property owners trying to cross floodwaters by foot or by vehicle. This island effect also places a burden on local emergency services that must evacuate stranded homeowners. To combat this, a provision in the local flood ordinance could require that all developments have at least one exit route that will remain dry during a flood event.

SAFEGUARD CRITICAL FACILITIES – Some facilities if impacted by floodwaters could have a significant negative impact on emergency response, water quality, or on special populations. Given this, it may be prudent to require certain critical facilities like schools, fire/police stations, nursing homes, and chemical storage tanks to be sited outside of the floodplain, or built with the lowest floor significantly above the base flood elevation.

HIGHER FLOODWAY SURCHARGE – Some communities use a .1 foot or .5 foot surcharge (instead of the normal FEMA standard of a 1 foot surcharge) as the basis for computing the regulatory floodway on their flood insurance rate maps (FIRMs). This higher floodway surcharge standard used in hydraulic computer modeling usually results in a wider floodway, which means a smaller developable area in the floodplain.

PROHIBIT FLOODWAY DEVELOPMENT – Even though the minimum NFIP regulations make development in the regulatory floodway portion of the floodplain difficult, it is still possible. By proving that a proposed development will cause “no-rise” to base flood heights, a structure, bridge abutment, road or berm could be built in the floodway. To keep the floodway open, some communities prohibit some or all development activities within the regulatory floodway. This not only assures unimpeded conveyance of floodwaters, but also keeps development away from the stream channel, helping to create a riparian buffer zone.

DEPTH / VELOCITY PROVISIONS – The regulatory floodway as shown on the FIRM may not be the only area where swift moving floodwaters pose a danger to human life and the built environment. Oftentimes, overflow channels carry high velocity flood flows. Because these overflow areas may not be designated as floodways, developments could be allowed in these high-risk areas. To avoid putting people and property at risk, special floodways based on a combination of flood depths and flood velocities could be established and regulated like a conventional floodway.

CUMULATIVE SUBSTANTIAL IMPROVEMENT/DAMAGE – The minimum requirement of the NFIP treats any structure that will incur improvements totaling more than 50% of the market value of the structure, as a new structure – meaning the structure will need to be elevated above BFE. Some communities have reduced this 50% threshold, and have begun to track these improvements over time (ie, structure must be elevated if they received flood damage two times over the past 10 years, of which the cost to repair after each flood equals 25% of the market value on average). Since 1997, NFIP policyholders can get up to \$20,000 to elevate their homes if they are determined to be substantially damaged under the Increased Cost of Compliance provision of their flood policy.

LIMITING BELOW-BFE ENCLOSURES – Structures built on foundation stem-walls in the floodplain with the lowest habitable floor several feet or more above grade are usually built appropriately, with adequate flood vent openings, and with areas below the BFE unfinished and used only for parking, building access, and limited storage. Unfortunately, many homeowners convert this below-BFE space into habitable uses (bedrooms, bathrooms, etc.). To keep these violations from occurring, some communities require stem-walls to be no more than 4-feet in height, and/or prohibit standard doorways or interior stairways to limit interior access options. Others require homeowners to pledge not to finish below-BFE areas by signing “non-conversion” agreements.

FLOOD ZONE DISTRICTS – Through a zoning ordinance, floodplains can be designated as one or more zoning districts in which development is prohibited or allowed only if it minimizes exposure to flood damage. Some types of flood districts are dedicated for recreation, public use, or conservation. Other zoning or subdivision requirements are cluster developments to avoid the flood hazard or density provisions that keep the number of structures allowed in the floodplain to a minimal number.

HAZARDOUS MATERIALS – Petroleum products, chemicals and other toxic substances located in the floodplain not only leak during a flood causing health/ecological problems, but can also become floating debris that may strike buildings or plug bridge/culvert openings causing increased flood heights and damages. Hazardous materials should be stored outside the floodplain, or, at a minimum, be elevated higher than the base flood elevation with explicit anchoring requirements.

ADDITIONS AND ALTERATIONS – Some communities require all additions to existing buildings to comply with floodplain management standards that apply to construction of new buildings and substantial improvements. Some communities also prohibit any alteration or addition to an existing building that does not conform to the floodplain management standards if it would have the effect of increasing or enlarging the existing building’s nonconformity. In the first case the addition, if not the existing building, will be protected from future flood damage. In the second case the existing building and any addition will not be made more susceptible to flood damage as a result of the alterations.