



Floodplain Construction Requirements in New York State

New York State Department of Environmental Conservation

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Second in a series of two brochures about the National Flood Insurance Program. The first is entitled Common Questions and Answers about Flood Insurance in New York State.

This brochure discusses basic standards governing construction in floodplains mapped under the National Flood Insurance Program in New York State.

Introduction

Floods occur when runoff from rain or snowmelt exceeds the capacity of rivers, stream channels or lakes and overflows onto adjacent land. Floods can also be caused by storm surges and waves that inundate areas along tidal or Great Lakes coastlines. Throughout history, floods have claimed uncounted human lives and devastated property, even destroying cities. Yet people continue to settle and build in floodplains, increasing the risk of property damage and loss of life.

What is a floodplain?

Floodplains are low-lying lands next to rivers and streams. When left in a natural state, floodplain systems store and dissipate floods without adverse impacts on humans, buildings, roads and other infrastructure. Natural floodplains add to our quality of life by providing open space, habitat for wildlife, fertile land for agriculture, and opportunities for fishing, hiking and biking.

Floodplains can be viewed as a type of natural infrastructure that can provide a safety zone between people and the damaging waters of a flood. But more and more buildings, roads, and parking lots are being built where forests and meadows used to be, which decreases the land's natural ability to store and absorb water. Coupled with changing weather patterns, this construction can make floods more severe and increase everyone's chance of being flooded.

What is the National Flood Insurance Program?

The National Flood Insurance Program is a federal program created in 1968 to provide flood insurance to people who live in areas with the greatest risk of flooding, called Special Flood Hazard Areas. The program provides an alternative to disaster assistance and reduces the escalating costs of repairing damage to buildings and their contents caused by floods. The program provides flood insurance, while at the same time encouraging the sensible management and use of floodplains to reduce flood damage.

The National Flood Insurance Program offers flood insurance to homeowners, renters and business owners, provided their communities use the program's strategies for reducing flood risk, including adopting and enforcing floodplain management ordinances to reduce future flood damage. Community participation in the National Flood Insurance Program is voluntary. However, flood insurance and many kinds of federal disaster assistance are not available in communities that do not participate in the program. Fortunately, in New York, 1,466 communities participate in the National Flood Insurance Program.

Each participating community has a local law for flood damage prevention that contains specific standards for any development in federally mapped Special Flood Hazard Areas. These areas have a one percent or greater chance of experiencing a flood in any year and are shown on Flood Insurance Rate Maps provided by the Federal Emergency Management Agency.

Construction Questions

All communities that participate in the National Flood Insurance Program have a local law or ordinance that regulates development within mapped floodplains. The basic standards are contained below. However, anybody who wishes to develop any area within a floodplain should consult with their local floodplain manager, often a building inspector or zoning officer, for specific requirements.

Q. What areas are subject to construction regulations?

A. All development within Special Flood Hazard Areas is subject to floodplain development regulations. The Special Flood Hazard Area is the area that would be inundated by the 100-year flood, better thought of as an area that has a one percent *or greater* chance of experiencing a flood in any single year. Special Flood Hazard Areas are shown on federal flood maps, known as Flood Insurance Rate Maps, as shaded areas labeled with the letter "A" or "V" sometimes followed by a number or letter.

- "V" zones are coastal flood hazard zones subject to wave runup in addition to storm surge.
- "A" zones include all other special flood hazard areas.
- "VE" zones, "AE" zones, "V" zones, or "A" zones followed by a number are areas with specific flood elevations, known as Base Flood Elevations.
- A zone with the letter "A" or "V" by itself is an approximately studied flood hazard area without a specific flood elevation.
- Within an "AE" zone or a numbered "A" zone, there may be an area known as the "regulatory floodway," which is the channel of a river and adjacent land areas which must be reserved to discharge the 100-year flood without causing a rise in flood elevations.

The floodway is shown either on the community's Flood Insurance Rate Map or on a separate "Flood Boundary and Floodway" map for maps published before about 1988. Within regulatory floodways, more stringent development controls exist than elsewhere in the Special Flood Hazard Area.

Q. What is the "base flood elevation?"

A. It is the elevation that the one hundred-year flood, better thought of as the flood that has a one

percent or greater chance of occurring in any given year, rises to. It is the basic standard for floodplain development, used to determine the required elevation of the lowest floor of any new or substantially improved structure.

Q. What type of development is subject to construction regulations?

A. All development, including buildings and other structures, mining, dredging, filling, paving, excavation, drilling, or storage of equipment or materials is subject to construction regulations if it occurs within a Special Flood Hazard Area.

Q. Who regulates development in a Special Flood Hazard Area?

A. In New York State, local communities that participate in the National Flood Insurance Program regulate development in Special Flood Hazard Areas. An exception is development funded and undertaken by the state or federal government, which is regulated by the responsible agency, subject to technical assistance by the New York State Department of Environmental Conservation and the Federal Emergency Management Agency. Nearly all New York communities participate in the National Flood Insurance Program. A community is defined as a town, city or village. Each participating community in the state has a designated floodplain administrator. This is usually the building inspector or code enforcement official.

Q. Who must get local floodplain development permits?

A. Private development is subject to local floodplain development permits. In addition, New York State Environmental Conservation Law states that local laws or ordinances passed to qualify for participation in the National Flood Insurance Program shall apply to any development undertaken within the community by any *county, city, town, village, school district or public improvement district*.

Q. When is a structure covered by floodplain development regulations?

A. Any new structure or structure that is substantially improved or substantially damaged by any cause is subject to floodplain development regulations. Substantial improvement or damage occurs when the improvement or the value of the damage exceeds 50% of the market value of the structure.

Q. What are the standard development requirements within a coastal "V" zone?

A. New construction and substantial improvement or substantially damaged structures must be elevated on pilings, columns or sheer walls such that the bottom of the lowest horizontal structural member supporting the lowest elevated floor is elevated to or above the base flood elevation, plus two feet for residential structures. Detailed standards exist regarding how to elevate the structure.

Q. What are the standard development requirements within an "A" zone?

A. When there is a base flood elevation available, the lowest floor *including any basement*, must be at or above the base flood elevation, plus two feet for residential structures. Elevation may be by means of properly compacted fill, a solid slab foundation, or a "crawl space" foundation which contains permanent openings to let flood waters in and out. Non-residential structures may be flood proofed in lieu of elevation.

Q. What if there is no base flood elevation?

A. In most New York communities, new structures must have the lowest floor three feet or more above the highest adjacent grade. Where a local floodplain administrator has information to estimate a base flood elevation, such as historic flood records or a hydraulic study, that elevation must be used. If the development consists of more than 5 acres or more than 50 lots, the permit applicant must develop a base flood elevation and build accordingly.

Q. What about a building's utilities?

A. Machinery and equipment servicing a building must be protected from flooding or elevated to or above the base flood elevation.

Q. What are the requirements within a regulatory floodway?

A. No development is allowed unless the developer has first proven that the development will not increase flood elevations at any location during the 100-year flood.

Q. May a local community pass more restrictive standards?

A. Yes. In fact, local communities are encouraged to provide an extra margin of safety by requiring structures to be elevated above the base flood elevation. Always check with your local community to find out what their standards are.

Q. How does building elevation affect flood insurance?

A. Flood insurance for a house built two or more feet above the base flood elevation will cost about half as much as for a house built to the base flood elevation. Flood insurance for a house built just one foot below the base flood elevation will cost about four times more than for a house built to the base flood elevation. This additional cost could mean tens of thousands of dollars over the life of a 30-year mortgage.

Q. Where can I get more information?

A. The New York State Department of Environmental Conservation (DEC) is the state's coordinating agency for the National Flood Insurance Program. Local officials, developers, and the public may contact DEC for technical assistance and guidance in all matters associated with the National Flood Insurance Program.

Contact DEC at the following numbers:

Central Office: 518-402-8151
Region 1: 631-444-0423
Region 2: 718-482-4946
Region 3: 845-256-3822
Region 4: 518-357-2379
Region 5 North: 518-897-1243
Region 5 South: 518-623-1211
Region 6 North: 315-338-0481
Region 6 South: 315-793-2358
Region 7 North: 315-426-7501
Region 7 South: 607-775-2545 x121
Region 8 North: 716-226-5445
Region 8 South: 607-739-0809
Region 9: 716-851-7070

