

# GLOSSARY

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Below, you'll find definitions and helpful links for terms that appear in the Historic Resilience Project's publications. The Federal Emergency Management Agency (FEMA) has an extensive [glossary of related terms](#).

## **100-Year Floodplain (1 Percent Annual Chance Floodplain)**

An area with a 1 percent chance of flooding in any given year. This does not mean that an area will *only* flood once every 100 years. For more on the probability of flooding, recurrence intervals, and the possibility of a 100-year flood occurring in successive years, see the U.S. Geological Survey, "[The 100-Year Flood](#)."

## **500-Year Floodplain (0.2 Percent Annual Chance Floodplain)**

An area with a 0.2 percent chance of flooding in any given year. This does not mean that an area will *only* flood once every 500 years. For the probability of a 500-year flood occurring twice in a lifetime, see the U.S. Geological Survey, "[The 100-Year Flood](#)."

## **Base Flood Elevation (BFE)**

The height of flooding in a 100-year flood, as determined by FEMA. The BFE and other information appears on Flood Insurance Rate Maps (FIRMs) that can be accessed at the [FEMA Flood Map Service Center](#).

## **Certificate of Appropriateness (COA)**

An official approval issued by a local preservation commission that is required for altering the exterior of a property that is a designated local historic landmark or in a historic district. In limited circumstances, a COA may be required for altering the interior of a local landmark. Decisions for COAs are based on adopted design standards and evidence presented to the preservation commission through a quasi-judicial process. See [Chapter 160D, Section 947 of the North Carolina General Statutes](#).

## **Climate Change**

Long-term shifts in local, regional, and global weather patterns with a wide range of associated effects—including higher temperatures, rising sea levels, and more intense storms and droughts. See NASA, "[What Is Climate Change?](#)"

## **Coastal Area Management Act (CAMA)**

CAMA is a North Carolina law that protects the state's coastal areas by regulating activities and development that affect them. Administered by the Coastal Resources Commission with assistance from the North Carolina Department of Environmental Quality, CAMA applies to properties in twenty North Carolina counties along the coast. See [Chapter 113A, Article 7 of the North Carolina General Statutes](#). For more on CAMA rules and resources, see [Division of Coastal Management](#).

## **Coastal Flooding**

Coastal flooding occurs when normally dry land near the coast is inundated or covered by water as a result of high or rising tides that coincide with storm surges. See the [FEMA National Risk Index](#).

## **Community Rating System (CRS)**

This voluntary incentive program encourages communities to make efforts to enhance their floodplain management practices beyond the minimum requirements of the National Flood Insurance Program (NFIP). See FEMA, [Floodplain Management Community Rating System](#).

## **Design Flood Elevation (DFE)**

Used for retrofitting purposes, the DFE is the highest elevation of floodwater plus a community's additional freeboard or safety measurement. It is also known as the Flood Protection Elevation.

## Dry Floodproofing

A combination of measures, generally used to protect nonresidential buildings, that keeps water out of all or part of a structure during flooding. See FEMA, [Floodproofing Non-Residential Buildings](#).

## Engineered Structural Soil

A manufactured soil that nourishes and protects plants and trees, especially in urban environments, with a blend of porous materials, such as gravel, sand, clay, and compost. It provides structural support, increased drainage, and ample room for root growth. See CityGreen, [What Is Structural Soil?](#)

## Established Flood Risk

The National Park Service (NPS) defines this term as the “property-specific height of anticipated floodwater,” and it is based on information about a site and its flooding history. The NPS uses this term in lieu of other federal, state, and local regulatory language to avoid confusion about flood risks. For more, see [The Secretary of the Interior’s Standards for Rehabilitation & Guidelines on Flood Adaptation for Rehabilitating Historic Buildings](#).

## Floodplain

An area of land that is susceptible to inundation by floodwaters from rivers, streams, or other sources. Communities in a regulatory floodplain, or flood-hazard area, must regulate building development, construction, and repair to participate in the NFIP.

## Floodplain Management Ordinance

To participate in the NFIP, a community must adopt a Floodplain Management Ordinance, consisting of regulations to ensure that flood hazards are considered in all official actions relating to land management and use.

## Floodway

The portion of the regulatory floodplain that must be kept free of development so that flood elevations will not increase beyond a set limit—a maximum of one foot, according to NFIP guidelines. The floodway usually consists of the channel of a river or other watercourse and the land alongside it. Also known as a regulatory floodway.

## Freeboard

The height that is added to the Base Flood Elevation as a safety measure (it’s usually one to three feet above the BFE). It determines the lowest level of a structure that must be elevated or floodproofed to meet state or community floodplain management regulations.

## Green Infrastructure

Unlike gray infrastructure, such as sewer systems, green infrastructure filters and absorbs stormwater at its source. The Federal Water Pollution Control Act defines it as the “range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.” See the EPA’s [“What Is Green Infrastructure?”](#)

## Hazard Mitigation

The process of taking action to reduce or eliminate the potential loss of life and property in future disasters. FEMA has more information about hazard-mitigation measures and funding opportunities at [Hazard Mitigation Assistance Grants](#).

## High-Risk Flood Zone

Also known as Special Flood Hazard Areas (SFHAs), these zones are in the 100-year floodplain and experience frequent and severe flooding. Since they have a 26 percent chance of flooding over the course of a thirty-year mortgage, they face stricter development and flood-insurance regulations. On flood maps, high-risk zones are labeled “A” in inland or riverine areas and “V” in coastal areas.

## High-Tide Flooding

High-tide flooding occurs when a local sea level temporarily exceeds the threshold height for flooding. It is caused by extremely high tides, not storm surge or riverine flooding. See the [U.S. Climate Resilience Toolkit](#).

## Historic Character

The distinctive features and visual elements that add architectural and historic interest to structures, streets, and sites. See the National Park Service, [Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character](#).

## Historic Easements and Protective Covenants

These legal documents provide long-term protection to a historic property, preventing demolition and modifications that could alter its historic character. The restrictions run in perpetuity and are transferred with the property's deed. See [Preservation North Carolina](#).

## Hydrodynamic Forces

The forces created by flowing water as it presses against the front of a structure, drags along its sides, and pulls on the back. Very fast-moving water can sometimes push a building off its foundation or carry debris that can strike and damage it. For information about hydrodynamic and hydrostatic forces, see FEMA, [Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures](#).

## Hydrostatic Forces/Hydrostatic Load

The lateral and vertical forces of standing or slow-moving water that exert intense pressure on walls and floors. Hydrostatic forces can cause significant structural damage.

## Moderate-Risk Zone

These areas are commonly referred to as the 500-year flood zone, meaning that in any given year they have a 0.2 percent chance of flooding. Although there are usually fewer regulations associated with moderate-risk areas, flooding should be considered an inevitable eventuality. On flood maps, these areas are labeled either as "B" zones or "X (shaded)" zones.

## National Flood Insurance Program (NFIP)

Managed by FEMA, the NFIP provides federally backed flood insurance to residents, business owners, and communities. The rates are determined by FIRMs that delineate areas with high, moderate, or low risks of flooding. FEMA has more information at [Flood Insurance](#).

## Nuisance Flooding

Temporary but recurring shallow flooding that does not pose an immediate threat to public safety or cause major property damage but does disrupt daily activities, strain infrastructure, and lead to minor property damage. Nuisance flooding may occur along the coast, where it is also known as high-tide flooding, or in other low-lying areas. See more at the National Park Service, ["Coastal Geohazards—Nuisance Flooding."](#)

## Resilience

The National Academies of Sciences, Engineering, and Medicine define resilience in a 2012 report as "the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events." See the full report, [Disaster Resilience: A National Imperative](#).

## Riverine Flooding

A flood that occurs when a stream or river overflows its banks and spills into adjacent areas. See the [FEMA National Risk Index](#).

## Special Flood Hazard Area (SFHA)

A designation on FEMA flood maps for a high-risk area where 100-year floods can be expected. The SFHA zones on a Flood Hazard Boundary Map (FHBM) or a FIRM are A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE, or V. The NFIP's flood management regulations must be enforced in these areas, and flood insurance is mandatory.

## Storm Surge

An abnormal, usually sudden rise in sea level that results from atmospheric pressure changes associated with hurricanes, cyclones, and severe storms.

## Stream Restoration

A complex process that improves the function of a damaged or degraded stream channel and returns it to a more natural condition with a dynamic, self-sustaining ecosystem. For information on North Carolina's stream-restoration efforts, see the [North Carolina Department of Transportation Stream Mitigation Program](#).

## Wet Floodproofing

Protective measures that allow floodwaters to enter and flow through parts of a building so that the internal and external hydrostatic forces are minimized and equalized. Wet floodproofing is usually limited to parking, storage, or special-access areas rather than living spaces.

**Zone AE**

FEMA uses zones on its flood-insurance maps to convey the levels of risk in different geographic areas. Zone AE is considered a high-risk area in the 100-year floodplain. The “AE” label is now used on FIRMs instead of “A1-A30.”

**Zone AH**

Zone AH has a 1 percent annual chance of shallow flooding, ranging in depth from one to three feet. These areas have a 26 percent chance of flooding over the life of a thirty-year mortgage.

**Zone AO**

Zone AO is a river or stream flood-hazard area or an area with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow, ranging in depth from one to three feet. These areas have a 26 percent chance of flooding over the life of a thirty-year mortgage.

**Zone V**

Zone V is a coastal area with a 1 percent or greater chance of flooding each year. The NFIP requires that buildings in this zone are anchored to resist wind and water forces, elevated above the BFE, and protected from waves, hurricane-force winds, and erosion. FEMA requires a V-Zone Certificate for all structures built or substantially modified in this zone. The [North Carolina Floodplain Mapping Program](#) has documents, certificates, and other resources.