

Frequently Asked Questions about Local Floodplain Regulations in North Carolina

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Local floodplain regulations are essential elements of public safety and community resilience. They can also be a complex web of technical standards and multi-government coordination. This resource is intended as a brief guide to key questions about the authority and standards of local floodplain regulations, as well as considerations for rebuilding after a flood. This resource is intended to help public officials and community members understand the basics of local floodplain regulations. Many other resources are available to address the engineering details and regulatory requirements of floodplain administration. Many of those resources are linked in the answers below.

Contents

I.	Basic Authority for Local Floodplain Regulations	2
A.	Who adopts and enforces floodplain regulations?	2
B.	What is the federal role in local floodplain regulation?	2
C.	What is the state’s role in local floodplain regulation?	3
D.	What do these terms and acronyms stand for?	3
E.	Is my property in a flood zone?	3
II.	Regulating Floodplain Development	4
A.	In general, what are floodplain standards?	4
B.	Can a local government relax the floodplain regulations?	4
C.	Can a local government make the floodplain regulations more restrictive?	4
D.	Can a local government use other regulations to address floodplain development?	5
E.	Can rules distinguish residential uses from other uses?	5
F.	What are the rules for heavy impact uses like landfills and chemical storage?	5
G.	What are the rules for fill? Can a local government ban fill?	6
H.	Are there exceptions for particular uses?	6
I.	Are there special rules for historic buildings?	6
J.	Are there variances from the floodplain regulations?	6
III.	Temporary Actions After a Flood	7
A.	Can a local government adopt a temporary moratorium for floodplain permitting?	7

- B. Can a local government allow temporary occupancy of a building that was determined to be substantially damaged? 7
- C. Can a local government allow temporary housing such as RVs or FEMA Trailers?..... 7
- IV. Rebuilding After a Flood..... 8
 - A. What are the steps to rebuild after a flood?..... 8
 - B. Are existing buildings grandfathered? 8
 - C. What if the flood caused major changes to the landscape and the floodplain has moved?..... 8
- V. Buyouts and Floodplain Protections 9
 - A. What are the options for purchasing property in the floodplain?..... 9
- VI. Where can I find more information?..... 9

I. Basic Authority for Local Floodplain Regulations

A. Who adopts and enforces floodplain regulations?

Federal, state, and local laws authorize and encourage floodplain regulations, but the essential elements of regulation, permitting, and enforcement are handled by the local government.

North Carolina local governments are authorized to adopt floodplain regulations in [Part 6, Floodway Regulation](#) of the state law on Water and Air Resources (G.S. 143-215.51 through -215.61). Because floodplain regulations are development regulations (similar to zoning), the local government follows the procedural and enforcement provisions of Chapter 160D (the state law for planning and zoning) as long as those do not conflict with Chapter 143 (G.S. 160D-923).

As with other development regulations, a municipal government has jurisdiction within the municipal boundaries and within any extraterritorial jurisdiction (ETJ). Counties have jurisdiction outside of the municipal boundaries and extraterritorial jurisdiction. As allowed at G.S. 160D-202(f), a municipality may request for a county to exercise jurisdiction for floodplain regulation within the municipality or ETJ.

B. What is the federal role in local floodplain regulation?

The federal government oversees the National Flood Insurance Program (NFIP) which is a voluntary program. When a community elects to participate, a local government must adopt floodplain regulations that meet or exceed the federal minimum standards in order for local residents and businesses to have access to federal flood insurance and in order for the community to access some disaster assistance. The minimum floodplain development standards are outlined at [44 CFR 60.3](#). In general, these federal minimums prohibit development in the floodway, require elevation of habitable floors in the floodplain areas, and limit the location of manufactured homes in the floodplain.

In addition to setting requirements for local floodplain regulations, the federal government provides data and maps for flood risk areas upon which participating local governments must apply the local floodplain

regulations. That data is also used as the basis for Flood Insurance Rate Maps (FIRMs) and the mandatory flood insurance purchase requirements.

C. What is the state’s role in local floodplain regulation?

Following the devastation of Hurricane Floyd in 1999, North Carolina strengthened state laws and local authority for floodplain management. G.S. 143-215.51 through -215.61 define flood-hazard areas, delegate authority for local floodplain regulations, limit certain high-impact land uses in the floodplain such as landfills and chemical storage, and authorize local government purchase of flood-prone properties.

The Hazard Mitigation Section of North Carolina Emergency Management provides extensive technical support for local governments, including flood risk mapping, a model ordinance, training for local officials, elevation certificate and permitting guidance, and more. More information is available here: <https://flood.nc.gov/ncflood/ncfip.html>

D. What do these terms and acronyms stand for?

The terminology and acronyms of floodplain management can be dizzying. For an overview of the risks for properties in North Carolina and the terminology used in floodplain management, check out the [Historic Resilience Primer](#), including a glossary at the back of the Primer.

One topic of terminology is worth highlighting: The notion of a 100-Year Flood is inaccurate. Flood risks are based on probability. Flood regulations, for example, refer to 1% Annual Chance flood. At times this terminology has been converted to the common short-hand of 100-Year Flood. But, a 1% chance does not mean that the event can only occur once every hundred years. There is a 1% chance of that flood event EVERY year. Over a 30-year period (the life of a standard residential mortgage), there is a 26% chance that flood event will occur.

Sadly, recent storms have emphasized these risks. Communities in eastern North Carolina experienced multiple “Five Hundred Year Floods” within just a couple of years when Hurricanes Matthew and Florence hit. In the mountains, the City of Canton saw catastrophic flooding along the Pigeon River with Hurricane Ivan in 2004, Tropical Storm Fred in 2021, and Hurricane Helene in 2024.

E. Is my property in a flood zone?

North Carolina’s Flood Risk Information System provides an interactive map to search for properties and evaluate flood risks. <https://fris.nc.gov/fris/>

There are options for getting changes to the flood maps—such as Letters of Map Amendment and Letters of Map Revision—if detailed site conditions are not accurately reflected on the maps. As noted in the North Carolina Quick Guide, a Letter of Map Amendment “is an official amendment to an effective FIRM that may be issued when a property owner provides additional technical information from a professional land surveyor or civil engineer, such as ground elevation relative to the BFE.” A Letter of Map Revision “is an official revision to an effective FIRM that may be issued to change flood insurance risk zones, SFHAs and floodway boundary delineations, BFEs, and other map features”. Additional information about methods to change the flood zone designation can be found on FEMA’s website - <https://www.fema.gov/flood-maps/change-your-flood-zone>.

II. Regulating Floodplain Development

A. In general, what are floodplain standards?

In general, local floodplain regulations limit and guide development within identified flood hazard areas, require new and substantially improved buildings be elevated or flood-proofed, require permits for development, and provide for inspection and enforcement of the regulations.

A detailed discussion is available in the [North Carolina Floodplain Management: 2017 Quick Guide](#) from the Floodplain Management Branch of the North Carolina Department of Public Safety.

B. Can a local government relax the floodplain regulations?

State and federal laws strongly incentivize floodplain regulations, but they are not required unless a community elects to join the [National Flood Insurance Program \(NFIP\)](#). A local decision to reduce floodplain regulations would risk significant negative impacts for individuals and the broader community. Reducing floodplain regulations could set the stage for repeated devastation as residences and businesses are built in harm's way. Additionally, if a participating community does not have a compliant flood damage prevention ordinance or fails to enforce its ordinance, residents and businesses are not eligible for flood insurance through the [National Flood Insurance Program \(NFIP\)](#), federal disaster assistance is limited, and other federal financial assistance is limited for flood-prone properties.

A local government should work with their NC NFIP Branch Planner and the NC NFIP Coordinator to ensure regulations and/or revisions maintain the minimum compliance.

C. Can a local government make the floodplain regulations more restrictive?

State law and federal law set the *minimum* for floodplain regulations, but a local government may choose to adopt more restrictive regulations.

The minimum regulations set forth by state are: Comply with the National Flood Insurance Program (NFIP) requirements; prohibit certain new uses such as landfills and chemical storage; and ensure certain facilities mitigate potential flood damage (G.S. 143-215.54A). There is an allowance for variances in certain circumstances.

G.S. 143-215.61 further emphasizes that a local government may impose regulations more restrictive than the state or federal minimum: "The provisions of this Part shall not preclude the imposition by responsible local governments of land use controls and other regulations in the interest of floodplain management for the 100-year floodplain."

The North Carolina [Model Flood Damage Prevention Ordinance, Non-Coastal Regular Phase](#) (2021) includes language and suggestions for higher standards. Additionally, the Association of State Floodplain Managers has [A Guide for Higher Standards in Floodplain Management](#) (2013).

Local communities can benefit from adopting regulations more restrictive than the minimum. The Community Rating System (CRS) Program ([CRS Resources Home - CRSresources](#)) is a voluntary incentive program that recognizes, encourages, and rewards community floodplain management practices that

exceed the minimum requirements of the National Flood Insurance Program (NFIP). The rewards come as insurance discounts for their residents.

While local regulations can be updated and amended, such changes will raise questions of permit choice and vested rights. Permit choice is the option for a permit applicant to continue under rules applicable at the time of application. Vested rights are the rights of a property owner to continue a previously permitted land use or development despite changes to the ordinance.

D. Can a local government use other regulations to address floodplain development?

Even beyond the floodplain regulations, local governments have authority for regulating land uses under the general zoning authority. State law authorizes local governments to regulate the location and size of buildings, to prohibit particular land uses from specific districts, require site plan and permit review, and more. Zoning can work alongside floodplain regulations to address public safety concerns in the floodplain.

Building code regulations are also closely related to floodplain regulations. Strength of foundations, lateral force on piers, anchors for structures, and more may be topics of the building code or the floodplain regulations. In general, the State of North Carolina sets the State Building Code, so some topics of plumbing, electrical, and building safety may require changes at the state level. Notably, however, state law allows local modification to the State Building Code for flood protection. State law (at G.S. 143-138(e)) provides that for floodplain management, “[l]ocal floodplain regulations may regulate all types and uses of buildings or structures located in flood hazard areas identified by local, State, and federal agencies.” Such regulations may address improvements, floor elevation, mechanical and electrical systems, foundation construction, flood resistance, and other measures deemed necessary. Floodplain modifications do not require approval by the Building Code Council or Residential Code Council.

E. Can rules distinguish residential uses from other uses?

Yes. The risks and impacts of flooding are different for residential and non-residential development.

Federal regulations incorporate this difference. Residential development must be elevated to meet the local elevation requirement (either base flood elevation (BFE) or regulatory flood protection elevation (RFPE) which is base flood elevation plus locally adopted freeboard). Non-residential development must either be elevated to the BFE or RFPE or be dry floodproofed to the BFE/RFPE.

F. What are the rules for heavy impact uses like landfills and chemical storage?

State law requires that a local floodplain regulation must prohibit “[n]ew solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities” in the floodplain unless they obtain a variance. G.S. 143-215.54 and -215.54A.

In some cases, a chemical or fuel tank may be necessary and incidental to an otherwise allowable use in the floodplain. In such cases, the local ordinance must require that the tank is engineered to withstand

flooding (“the structure or tank is either elevated above base flood elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.”). G.S. 143-215.54A.

As noted above, typical land use zoning may also be used to regulate where particular land uses are permitted or prohibited.

G. What are the rules for fill? Can a local government ban fill?

Placement of fill in the Special Flood Hazard Area (SFHA) is included in the definition for “[development](#)” under the NFIP regulations, and can be permitted in accordance with the local Flood Damage Prevention Ordinance. Placement of fill within the floodway or non-encroachment area is considered an encroachment and must meet with the regulatory requirements for development within the floodway.

Communities can adopt higher standards, including prohibiting fill from being placed in the Special Flood Hazard Area. Note that fill may be needed for stream restoration, transportation (roads, bridges, culverts, greenways, etc.), and other types of development not related to structures or buildings. Some communities prohibit fill and others limit the use of fill.

H. Are there exceptions for particular uses?

State law sets forth certain uses that are allowed in the flood hazard area without a permit, as long as the use complies with local land use rules and other regulations. The listed uses include farming and agriculture; ground level loading, parking, and rotary aircraft ports; lawns, gardens, and play areas; golf courses, tennis courts, and similar recreation areas; land application of waste and septage consistent with applicable regulations and permits. G.S. 143-215.54. Many of these allowances still require permits under the NFIP regulations, especially those involving changes to grade or land cover. Planting and harvesting of crops, planting a garden, and maintaining a lawn do not require floodplain development permits. However, construction or alteration of golf courses, tennis courts, helipads, etc. would require a local permit.

Certain airport development activities are exempt from floodplain regulation. G.S. 143-215.56(i)

I. Are there special rules for historic buildings?

Many historic properties and historic districts are in or near flood hazard areas. There is inevitable tension between the strong public interests of preserving cultural heritage and ensuring public safety. The [Historic Resilience Project](#) has resources to assist communities navigating this tension. It includes a Primer, Community Planning Handbook, and model Design Standards.

Additionally, as noted below, federal regulation contemplates variances from local floodplain regulations for historic structures.

J. Are there variances from the floodplain regulations?

Variance provisions will depend upon the local ordinance, but the local floodplain regulations are informed by state and federal laws and regulations. Also, even if a variance from the regulation is granted, that does not address insurance premium rates.

From the federal perspective, [44 CFR 60.6](#) provides guidance for and limitations of variances. Among other things, it addresses variances for repair or rehabilitation of historic structures.

The state law authority for development regulations provides specific procedures and standards for variances, as outlined at G.S. 160D-705. More specifically, state law at G.S. 143-215.54A allows that the floodplain ordinance may include a procedure for granting a variance. In order to grant a floodplain variance, the local government must notify the state of its intention to grant a variance and find all of the following:

- (1) The use serves a critical need in the community.
- (2) No feasible location exists for the location of the use outside the 100-year floodplain.
- (3) The lowest floor of any structure is elevated above the base flood elevation or is designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
- (4) The use complies with all other applicable laws and regulations.

III. Temporary Actions After a Flood

A. Can a local government adopt a temporary moratorium for floodplain permitting?

Yes. In some cases a community may need to pause development in order to get infrastructure repaired, new regulations in place, or plans adopted. The community may adopt a development moratorium for a stated purpose and for a limited amount of time. This blog on [Temporary Development Moratoria](#) outlines the basic authority and procedures.

B. Can a local government allow temporary occupancy of a building that was determined to be substantially damaged?

Temporary occupancy of substantially damaged structures is not explicitly prohibited or allowed under the NFIP regulations. Substantially damaged/improved structures must be brought into compliance with the local Flood Damage Prevention Ordinance requirements for new construction. Under extenuating circumstances, communities have permitted minor repairs to make the home habitable while the property owner develops a plan to bring the structure into compliance. The community should set a time-limit to meet the requirements and is required to monitor the progress of the compliance plan. Failure to meet the ordinance requirements constitutes a violation and will require enforcement action.

C. Can a local government allow temporary housing such as RVs or FEMA Trailers?

After many natural disasters housing is a major concern. Temporary housing solutions are necessary, but may not fit within the standard development regulations. This blog on [Temporary Housing and Zoning](#)

[Amendments](#) outlines key considerations. In particular, note that floodplain regulations may require that manufactured homes must be elevated and anchored, and that residents have an evacuation plan. Standards may require that recreational vehicles must be ready for highway use (and only on site for a limited period of time) or elevated and anchored. The current State Building code prohibits the placement of recreational vehicles (RV) in the floodway or coastal high hazard area.

IV. Rebuilding After a Flood

A. What are the steps to rebuild after a flood?

From the FEMA [Substantial Damage Quick Guide](#):

When structures inside the Special Flood Hazard Area (SFHA) are damaged, National Flood Insurance Program (NFIP) participating communities have a responsibility to assess impacts before repairs can be made, no matter the cause of damage. If the cost to repair is 50% or more of the market value, the structure is considered Substantially Damaged and must be brought into compliance with current local floodplain management standards. Rebuilding to current standards decreases peril to life and property and prevents future disaster suffering.



For detailed guidance on Substantial Damage, see [Substantial Improvement/Substantial Damage Desk Reference, FEMA P-758 \(May 2010\)](#).

B. Are existing buildings grandfathered?

From the FEMA Desk Reference: “Local floodplain management regulations and codes contain minimum NFIP requirements that apply not only to new structures, but also to existing structures which are ‘substantially improved (SI)’ or ‘substantially damaged (SD).’”

C. What if the flood caused major changes to the landscape and the floodplain has moved?

Changes in the stream channel or alignment may cause challenges as communities start to rebuild. Floodplain regulations rely on the effective flood studies and maps, and those studies are based on terrain, stream alignment, etc. at the time those studies are conducted. The results of the current flood studies may not be completely invalid following this event. Cases where the stream channel is no longer contained within the SFHA may need to be examined/reconsidered.

The North Carolina Floodplain Mapping Program is securing funding to collect Lidar for western NC this leaf-off season. It will take time to process and QC the data.

V. Buyouts and Floodplain Protections

A. What are the options for purchasing property in the floodplain?

State law authorizes local governments to “acquire, by purchase, exchange, or condemnation an existing structure located in a flood hazard area in the area regulated by the local government if the local government determines that the acquisition is necessary to prevent damage from flooding.” G.S. 143-214.55.

Most grant funds require voluntary participation of property owners. Many grants are available. FEMA Hazard Mitigation Assistance Grants are available to communities that participate in the National Flood Insurance Program. Some of the grants, including Flood Mitigation Assistance (FMA) and Building Resilient Infrastructure and Communities (BRIC) are competitive. FMA focuses on NFIP insured structures, especially those that are identified as Repetitive Loss or Severe Repetitive Loss structures. The Hazard Mitigation Grant Program (HMGP) is available after a presidentially declared disaster and can be used to fund a number of mitigation activities. The North Carolina Emergency Management Hazard Mitigation Section has a strong grant development team that can assist communities with grant applications.

The US Department of Housing and Urban Development (HUD) also provides grant opportunities through the [CDBG-DR](#) and [CDBG-MIT](#) programs. These funds are administered through the NC Office of Recovery and Resiliency (NCORR).

Communities across North Carolina have used floodplain buyouts and relocations to reduce risks and increase resilience. [Charlotte-Mecklenburg Storm Water Services](#) runs a local buyout program. The [Wilson Housing Authority](#) replaced housing in the floodplain with new housing outside of harms way.

VI. Where can I find more information?

Many resources are linked in the prior sections of this document. Here are some highlights:

Helene Resources

- North Carolina Emergency Management, Hazard Mitigation Section, DR-4827-Helene Floodplain Management Resources, https://flood.nc.gov/ncflood/announcement_two.html
- UNC School of Government, Hurricane Helene Resources, <https://www.sog.unc.edu/resources/microsites/nc-emergency-management/hurricane-helene-resources>

Floodplain Resources

- North Carolina Floodplain Management: 2017 Quick Guide, https://flood.nc.gov/NCFLOOD_BUCKET/FAQS/QuickGuideTopic/NCQuickGuide2017.pdf
- FEMA Substantial Damage Quick Guide, <https://www.fema.gov/fact-sheet/substantial-damage-quick-guide>

- NC State Historic Preservation Office, Historic Resilience Project, <https://hrp.sog.unc.edu/resources/>

Floodplain Training

- FEMA Floodplain Management Training, <https://www.fema.gov/floodplain-management/training/courses>.
- Additional FEMA Training Resources, <https://www.fema.gov/about/organization/region-2/floodplain-management-training>.
- Association of State Floodplain Managers On-Demand Learning, <https://www.floods.org/training-center/online-training/asfpm-on-demand-learning/>