

## Chapter 9 - FLOODPLAIN REGULATIONS<sup>[1]</sup>

### Footnotes:

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**Editor's note**— Ord. No. 4912, adopted June 25, 2012, amended chapter 9 in its or entirety to read as herein set out. Formerly, chapter 9 pertained to similar subject matter and derived from Ord. No. 3578, adopted April 23, 2007, and Ord. No. 4115, §§ 1—13, adopted February 9, 2009.

**Cross reference**— Buildings and building regulations, Ch. 5; health and sanitation, Ch. 10; soil erosion and sedimentation control, Ch. 17; stormwater, Ch. 18; streets, sidewalks and other public places, Ch. 19; subdivisions, Ch. 20; waters, sewers and industrial waste discharge restrictions, Ch. 23; zoning, app. A.

**State Law reference**— Assessments for flood protection, G.S. 160A-238; municipal floodway regulations, G.S. 160A-458.1, G.S. 143-215.51 et seq.

### ARTICLE I. - STATUTORY AUTHORIZATION, FINDINGS, PURPOSE AND OBJECTIVES

#### Sec. 9-1. - Short title.

The regulations set out in this ordinance (sometimes herein referred to as "this regulation" or "this chapter") shall be known and may be cited as the "Floodplain Regulations of Charlotte, North Carolina."

(Ord. No. 4912, 6-25-2012)

#### Sec. 9-2. - Statutory authorization.

The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Articles 7, 9, and 11 of Chapter 160D; Article 6 of Chapter 153A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare.

(Ord. No. 4912, 6-25-2012)

#### Sec. 9-3. - Findings of fact.

- (a) The flood hazard areas of Charlotte and Charlotte's land use jurisdiction are subject to periodic inundation which results in loss of life, increased health and safety hazards, destruction of property, and disruption of commerce and governmental services. Inundation from flood waters results in public expenditures for flood protection, flood disaster relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- (b) These flood losses are created by the cumulative effect of obstructions in floodplains, causing increases in flood heights and velocities and by the occupancy in flood hazard areas by uses vulnerable to floods or hazards to other lands which are inadequately elevated, floodproofed or otherwise unprotected from flood damages.

(Ord. No. 4912, 6-25-2012)

#### Sec. 9-4. - Statement of purpose.

It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (a) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;
- (b) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (c) Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters;
- (d) Control filling, grading, dredging and other development which may increase erosion or flood damage; and
- (e) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

(Ord. No. 4912, 6-25-2012)

Sec. 9-5. - Objectives.

- (a) The regulations of the special flood hazard areas herein set forth are intended to protect areas of designated floodplains subject to and necessary for regulating flood waters and to permit and encourage the retention of open-land uses which will be so located and designed as to constitute a harmonious and appropriate part of the physical development of the city as provided in the comprehensive plans as such are adopted and amended from time to time.
- (b) The specific intent in establishing special flood hazard areas composed of floodways and flood fringe areas includes the following:
  1. To control uses such as fill dumping, storage of materials, structures, buildings and any other works which, acting alone or in combination with other existing or future uses, would cause damaging flood heights and velocities by obstructing flows and reducing floodplain storage;
  2. To protect human life and health;
  3. To minimize the expenditure of public money for costly flood-control projects;
  4. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  5. To permit certain uses which can be appropriately located in flood hazard areas and to assure such permitted uses will not impede the flow of flood waters or otherwise cause danger to life and property at or above or below their locations along the floodways;
  6. To minimize prolonged business interruptions;
  7. To protect existing drainage courses that carry abnormal flows of storm water in periods of heavy precipitations;
  8. To minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines and streets and bridges located in floodplains;
  9. To meet the needs of the streams to carry flood waters and protect the creek channels and floodplains from encroachment so that flood heights and flood damage will not be increased;
  10. To inform existing and potential property owners that property is in a special flood hazard area as well as the associated flood risks and development restrictions;
  11. To minimize future flood losses by depicting community flood fringe areas on the flood insurance rate maps; and
  12. To help maintain a stable tax base by providing for the sound use and development of flood prone areas.

- (c) This chapter is intended to permit only that development within the floodplain which is appropriate in light of the probability of flood damage and presents a reasonable social and economic use of land in relation to the hazards involved. The regulations hereinafter set forth shall apply to all property located within the special flood hazard area as shown on the flood insurance rate maps (FIRM) including FEMA and/or locally approved revisions to data shown on the FIRMs. It is the intent that these regulations combine with and coordinate with the zoning ordinance regulations for the zoning district in which such property is located. Any use not permitted by the zoning regulations shall not be permitted in the special flood hazard area, and any use permitted by the zoning regulations shall be permitted in these districts only upon meeting conditions and requirements as prescribed in this chapter.

(Ord. No. 4912, 6-25-2012)

Secs. 9-6—9-20. - Reserved.

## ARTICLE II. - DEFINITIONS

Sec. 9-21. - Definitions.

Unless specifically defined in this section, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to allow the most reasonable application of this chapter. The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning.

*Accessory structure* means a structure which is located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

*Addition (to an existing building)* means an extension or increase in the floor area or height of a building or structure.

*Alteration of a watercourse* means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification associated with development which may increase the FEMA or Community Base Flood Elevations.

*Appeal* means a request for a review of the floodplain administrator's interpretation of any provision of this chapter.

*Basement* means any area of the building having its floor subgrade (below ground level) on all sides.

*Building* means any structure built for support, shelter or enclosure for any occupancy or storage.

*Chemical storage facility* means a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

*Community base flood* means the flood, determined using future land use conditions, having a one-percent chance of being equaled or exceeded in any given year.

*Community base flood elevation* means the water surface elevation shown on the flood insurance rate map and in the flood insurance study, having a one-percent chance of being equaled or exceeded in any given year, determined using future land use conditions.

*Community conditional letter of map revisions (CoCLOMR)* means a letter from the floodplain administrator that provides conditional approval of a study that proposes to change the location of the community encroachment lines, and/or the location of the community flood fringe line, and/or community base flood elevations.

*Community encroachment area* means the channel of a stream or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA base flood without cumulatively increasing the water surface elevation more than 0.1 foot (see attachments).

*Community encroachment lines* are lateral limits of the community encroachment area, within which, in the direction of the stream or other body of water, no structure or fill may be added, unless specifically permitted by this chapter (see attachments).

*Community flood fringe area* is the land area located between the community encroachment line and the community flood fringe line as defined herein (see attachments).

*Community flood fringe line* is the line that depicts the outer limits of the community flood fringe area (outer limits of the community special flood hazard area).

*Community letter of map revision (CoLOMR)* means a letter from the floodplain administrator that provides final approval of a study, based on as-built conditions, that changes the location of the community encroachment lines and/or the community flood fringe lines.

*Community special flood hazard area* is the land subject to a one-percent or greater chance of flooding in any given year from a community base flood. It includes the FEMA floodway, community encroachment area, FEMA flood fringe area, and the community flood fringe area (see attachments).

*Conditional letter of map revision (CLOMR)* means a formal review and comment as to whether a proposed project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective flood insurance rate map or flood insurance study; upon submission and approval of certified as-built documentation, a letter of map revision may be issued by FEMA to revise the effective FIRM.

*Critical facility* means a building used to house a function that is vulnerable or essential to the community. Uses include but are not limited to child and adult daycare facilities, nursing homes, schools, hospitals, fire, police and medic facilities and other uses as deemed by the floodplain administrator.

*Development* means any manmade change to improved and unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations or storage of equipment or materials.

*Disposal* means, as defined in G.S. 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

*Dry public street* means a public street at the intersection of an existing or proposed driveway where the surface of the pavement is at an elevation above the community base flood elevation.

*Dryland access* means a gravel, paved or concrete access route, at least 12 feet wide, which is above the community base flood elevation and connects an habitable building to a dry public street.

*Effective date* means the date flood insurance rate maps and flood insurance studies for a community are officially approved by FEMA and are to be used for local regulation and for compliance with NFIP sanctions.

*Elevated building* means a non-basement building built to have the lowest floor elevated above the ground level by, solid foundation perimeter walls, pilings, columns (posts and piers), or shear walls.

*Encroachment* means the advance or infringement of uses, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain. Building renovations contained within the existing building footprint area are not considered an encroachment.

*Existing manufactured home park or manufactured home subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including, at

a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets) was completed before August 15, 1978.

*Existing building and existing structure* means any building and/or structure for which the "start of construction" commenced before the effective date of the initial flood insurance rate map.

*FEMA* is the Federal Emergency Management Agency.

*FEMA base flood* means the flood, determined using land use conditions at the time of the study, having a one-percent chance of being equaled or exceeded in any given year.

*FEMA base flood elevation (BFE)* means the water surface elevation shown on the flood insurance rate map and in the flood insurance study. Having a one-percent chance of being equaled or exceeded in any given year, determined using land use conditions present at the time of the study.

*FEMA flood fringe area* is the land area located between the FEMA floodway lines and the line depicting the maximum elevation subject to inundation by the FEMA base flood as defined herein (see attachments).

*FEMA flood fringe line* is the line on a map that depicts the outer limits of the FEMA flood fringe area (see attachments).

*FEMA floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA base flood, without cumulatively increasing the water surface elevation more than 0.5 foot. On the Catawba River, the FEMA floodway means the channel of a stream or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA base flood, without cumulatively increasing the water surface elevation more than 1.0 feet (see attachments).

*FEMA floodway lines* are the lateral limits of the FEMA floodway (see attachments).

*FEMA special flood hazard area* is the land subject to a one-percent or greater chance of flooding in any given year from a FEMA base flood. It includes the FEMA floodway, community encroachment area, and the FEMA flood fringe area (see attachments).

*Flood* or *flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters, and/or
2. The unusual and rapid accumulation of run-off of surface waters from any source.

*Flood insurance* means the insurance coverage provided under the National Flood Insurance Program (NFIP).

*Flood insurance rate map (FIRM)* means an official map of a community, in both digital and printed format, on which the Federal Emergency Management Agency has delineated the special flood hazard area and the risk premium zones applicable to the community. The date of Charlotte's original FIRM is August 15, 1978 and this date should be used to determine whether a structure is pre-FIRM or post-FIRM.

*Flood insurance study* is an examination, evaluation, and determination of special flood hazard areas, corresponding water surface elevations, flood insurance risk zones, and other flood data in a community. The study includes a flood insurance study report, and/or flood insurance rate map (FIRM).

*Floodplain* means the land subject to inundation by the community base flood and is encompassed by the community special flood hazard area.

*Floodplain administrator* (or *administrator*) means the person, agent, or his or her designees, appointed to administer, implement and enforce the provisions of this chapter.

*Floodplain development permit* means either an individual floodplain development permit or a general floodplain development permit issued for development in the floodplain per the requirements of section 9-62.

*Floodplain management* means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain.

*Floodplain Regulations Technical Guidance Document* is a document developed by Charlotte-Mecklenburg storm water services staff to more clearly explain the application of the provisions of this chapter, specifically the floodplain development permit provisions, through the use of charts and related written materials. The technical guidance document shall not be a part of this chapter, and shall be solely for illustrative and educational purposes. If there is any discrepancy between the technical guidance document and this chapter, the provisions of this chapter shall control.

*Floodproofing* means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitation facilities, or structures with their contents.

*Flood protection elevation or FPE.* The elevation to which all structures located within the community special flood hazard area or FEMA special flood hazard area must be elevated (or floodproofed if non-residential). This elevation is the community base flood elevation plus two feet of freeboard until such time as the Community special flood hazard area is mapped using new future conditions criteria when it shall be the Community base flood elevation plus one foot, except along the Catawba River, including Lake Wylie and Mountain Island Lake where it is the FEMA base flood elevation plus two feet of freeboard.

*Flood-resistant material* means any building product [material, component or system] capable of withstanding direct and prolonged contact (minimum 72 hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. Pressure-treated lumber or naturally decay-resistant lumbars are acceptable flooring materials. Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. Materials that absorb or retain water excessively after submergence are not flood-resistant. Please refer to Technical Bulletin 2, Flood Damage-Resistant Materials Requirements, and available from the FEMA. Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

*Floodwall* means a wall built along a shore or bank to protect an area from flooding.

*Floodway* means either the FEMA floodway or the community encroachment area, including the area above a bridge or culvert when applicable.

*Floodway engineering analysis* means an engineering analysis of the impact that a proposed encroachment into a floodway is expected to have on the floodway boundaries and flood levels during the occurrence of the base flood discharge. The evaluation shall be prepared by a qualified North Carolina licensed engineer using standard engineering methods and models.

*Flood zone* means a geographical area shown on a flood insurance rate map that reflects the severity or type of flooding in the area.

*Floor.* See *Lowest floor*.

*Freeboard* means the height added to the community base flood elevation (BFE) (or FEMA BFE on the Catawba River) to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, blockage of bridge openings, and the hydrological effect of urbanization of the watershed.

*Functionally dependent facility* means a facility that cannot be used for its intended purpose, unless it is located or carried out in close proximity to water, limited to a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair or seafood processing facilities. The term does not include long-term storage, manufacture, sales or service facilities.

*General floodplain development permit* is a permit issued for certain types of development in the floodplain per section 9-62.

*Habitable building* means a structure designed primarily for, or used for human habitation. This includes, but is not limited to, houses, condominiums, townhomes, restaurants, retail establishments,

manufacturing buildings, commercial buildings, office buildings, manufactured homes, and similar uses. It does not include accessory structures (see definition above).

*Hazardous waste management facility* means a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste as defined in G.S. Ch. 130A, art. 9.

*Highest adjacent grade* means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

*Historic structure* means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the secretary of interior as meeting the requirements for individual listing on the national register;
- (b) Certified or preliminarily determined by the secretary of interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district;
- (c) Individually listed on a local inventory of historic landmarks in communities with a certified local government (CLG) program; or
- (d) Certified as contributing to the historical significance of a historic district designated by a community with a "Certified Local Government (CLG) Program." Certified local government (CLG) programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the state historic preservation officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

*Individual floodplain development permit* means a permit for development in the floodplain that involves activities not listed in subsection 9-62(b)1. and may not qualify for a general floodplain development permit.

*Letter of map revision (LOMR)* means an official revision to the currently effective FEMA FIRM based on as-built conditions and/or more accurate data. It is issued by FEMA and may change FEMA base flood elevations, the location of the FEMA floodway lines and/or the location of the FEMA flood fringe line.

*Letter of map amendment (LOMA)* means a letter from FEMA that officially removes a property or building from the FEMA special flood hazard area (SFHA) that was inadvertently shown in the SFHA on the FIRM.

*Letter of map revision based on fill (LOMR-F)* means a determination that a structure or parcel of land has been elevated by fill above the BFE and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

*Levee* means a manmade structure, usually an earthen embankment, floodwall or a combination of both that is designed and constructed to contain, control or divert the flow of water so as to provide protection from temporary flooding.

*Levee system* means a flood protection system which consists of levee(s) and/or floodwall(s) and associated structures, such as closure and drainage devices.

*Light duty truck* means any motor vehicle rated at 8,500 pounds gross vehicular weight rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less as defined in 40 CFR 86.082-2 and is:

- (a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle,  
or
- (b) Designed primarily for transportation of persons and has a capacity of more than 12 persons; or
- (c) Available with special features enabling off-street or off-highway operation and use.

*Lowest adjacent grade (LAG)* means the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

*Lowest floor* means the lowest floor of the lowest enclosed area (including the basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area, is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this chapter.

*Manufactured home* means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

*Manufactured home park or subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

*Market value* means the value of a building, excluding land value, that is determined by an appraiser certified in North Carolina using the cost approach method. Use of the "income capitalization approach" is not acceptable. Market value must be determined based on the building condition prior to start of construction (for proposed improvements) or before damage occurred (for damage repair). The value of the land and site improvements (landscaping, driveways, detached accessory structures, etc.) is not included. The values of the use and occupancy (business income) are not included. The floodplain administrator may use the tax value of the building in lieu of other methods described herein.

Market value also means the actual cash value (ACV) of a building minus depreciation. Actual cash value is the cost to replace a building on the same parcel with a new building of like-kind quality, minus depreciation due to age, use, and neglect. ACV does not consider loss in value mainly due to outmoded design or location factors. Depreciation accounts for the physical condition of a structure. Depreciation does not take into account functional obsolescence or factors that are external to the structure.

*National Flood Insurance Program (NFIP)* means a federal program that provides insurance coverage for flood damage to qualified buildings in communities that agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding.

*New construction* means construction of a replacement structure commenced after total demolition, or renovation/rehabilitation of an existing structure that results in the partial or complete removal of two external walls and has a total cost equal to or exceeding 50 percent of the market value of the structure before the "start of construction" of the improvement. For flood insurance purposes, new construction also means structures for which the start of construction commenced on or after August 15, 1978, and includes subsequent improvements to such structures (see definition of *Flood insurance rate map*).

*New manufactured home park or subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs) is completed on or after November 27, 1972.

*NFIP*. See *National Flood Insurance Program*.

*Nonconforming building or use* means any legally existing building or use which fails to comply with the provisions of this chapter.

*Non-solid fence* means a fence with at least 75 percent open area and with vertical supports each no more than 25 square inches in cross sectional area).

*No-rise certification* means a certification statement signed by a duly-qualified engineer licensed to practice in the state of North Carolina certifying that a proposed project will not impact the FEMA base flood elevations or the community base flood elevations at modeled cross sections in the vicinity of the proposed project.

*North American Vertical Datum* as corrected in 1988 (NAVD or NAVD 1988) is a vertical control used as a reference for establishing varying elevations within the floodplain. If a datum other than NAVD 1988



is used then use the datum listed as the reference datum on the applicable FIRM panel for use on elevation certificate completion. See Flood Insurance Administration (FIA)-20 parts 1, 8.

*Open house forum* is a public meeting held by the owner of the proposed levee and the director of Mecklenburg County storm water services, or his designee. The purpose of the open house forum is to provide an opportunity for discussion between the owner that has submitted an application for the construction of a levee, nearby property owners, and other interested parties.

*Plot plan* means a scaled drawing of a parcel of land showing the location of significant natural features and existing and proposed manmade features.

*Post-FIRM* means construction or other development for which the "start of construction" occurred on or after the effective date of the initial flood insurance rate map.

*Pre-FIRM* means construction or other development for which the "start of construction" occurred before the effective date of the initial flood insurance rate map.

*Preliminary flood insurance rate map (PFIRM)* means a map(s) released by the Federal Emergency Management Agency (FEMA) for public comment prior to the effective date of the FIRM as established by FEMA. The map may be in both digital and printed format and shows the community and FEMA special flood hazard areas, community encroachment areas and FEMA floodways, FEMA and community base flood elevations, flood insurance risk premium zones and other data. The data and maps are subject to change prior to the effective date.

*Preliminary flood insurance study (PFIS)* means a narrative report released by the Federal Emergency Management Agency for public comment prior to the effective date. Information contained in the PFIS includes a description of past flooding and studies, the study area, engineering methods, community and FEMA base flood elevations, other community and FEMA flood data. The flood insurance rate maps are also included as part of the flood insurance study. The data and maps are subject to change prior to the effective date.

*Principally above ground* means that at least 51 percent of the actual cash value of the structure is above ground.

*Project* means a development activity that is physically separate, functionally independent and not constructed at the same time as another development activity.

*Public safety and/or nuisance* means anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

*Recreational vehicle* means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a car or light duty truck;
- (4) Designed primarily not for use as a permanent dwelling, but as temporarily living quarters for recreational, camping, travel or seasonable use; and
- (5) Is fully licensed and ready for highway use.

*Reference level* is the top of the lowest floor, for regulatory purposes, of structures in the FEMA and/or community special flood hazard area.

*Remedy a violation* means to bring the structure or other development into compliance with this chapter or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impact may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this chapter or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

*Repetitive Loss* means flood-related damages sustained by a structure during any ten-year period for which the total cost of repairs equals or exceeds 50 percent of the market value of the structure before the damage occurred. Repetitive loss damages include flood-related damages sustained prior to November 16, 2018 for which the cost of repairs equaled or exceeded 25 percent of the market value of the structure before the damage occurred if within the relevant ten-year period.

*Riverine* means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

*Salvage yard* means any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

*Solid waste disposal facility* means any facility involved in the disposal of solid waste, as defined in G.S. 130A-290(a)(35).

*Solid waste disposal site* means, as defined in G.S. 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

*Special flood hazard area* means the FEMA special flood hazard area.

*Start of construction* means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as pouring a slab or footing, installation of piles, construction of columns, or any work beyond the state of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not parts of the main structure. For substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

*Structure* means, for floodplain management purposes, a walled and roofed building, a manufactured home, a gas or liquid storage tank, that are principally above ground.

*Substantial Damage* means damage of any origin sustained by a structure over a ten-year period whereby the cost of restoring the structure to the condition before damage occurred would equal or exceed 50 percent of the market value of the structure before the damages occurred. Substantial damage includes flood-related damages sustained by a structure prior to November 16, 2018 for which the cost of repairs at the time of the flood event equaled or exceeded 25 percent of the Market Value of the structure before the damage occurred if within the relevant ten-year period. See definition of "substantial improvement."

*Substantial improvement* means any repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, or combination thereof, where the total cost over a ten-year period equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. Substantial improvement includes any repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, or combination thereof prior to November 16, 2018 for which the cost of repairs at the time of the flood event equaled or exceeded 25 percent of the market value of the structure before the damage occurred or the substantial improvement began if within the relevant ten-year period. The term does not, however, include either:

- (a) Any correction of existing violations of state or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- (b) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.
- (c) Any replacement subject to the requirements of section 9-101(e)3 of this chapter.

For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

*Substantially improved existing manufactured home park or subdivision* means where the repair, reconstruction, rehabilitation, or improvement of the streets, utilities, and pads over a ten-year period equals or exceeds 50 percent of the value of the streets, utilities, and pads before the repair, reconstruction, or improvement commenced.

*Technically measurable* means an activity and/or condition that can be modeled within the stated or commonly known accuracy of a floodway engineering analysis or other engineering computations, and may have an impact on base flood elevations. The floodplain administrator may require a no-rise certification by a licensed engineer to determine if a proposed activity and/or condition meets the technically measurable definition.

*Temperature controlled* means having the temperature regulated by a heating and/or cooling system, built-in or appliance.

*Variance* is a grant of relief to a person from the requirements of this chapter.

*Violation* means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in articles IV and V is presumed to be in violation, until such time as the documentation is provided.

*Watercourse* means a lake, river, creek, stream, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

*Water surface elevation (WSE)* means the height, in relation to NAVD 1988, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Secs. 9-22—9-35. - Reserved.

### ARTICLE III. - GENERAL PROVISIONS

Sec. 9-36. - Lands to which this chapter applies.

This chapter shall apply to all lands in the land use jurisdiction, including the extra-territorial jurisdiction (ETJ) of the City of Charlotte within the area shown on the flood insurance rate maps (FIRM) or any FEMA and/or locally approved revisions to data shown on the FIRMs, as being located within the community special flood hazard areas or land adjacent to the community special flood hazard areas if it is affected by the work that is taking place.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-37. - Basis for establishing the special flood hazard areas.

The FEMA and community special flood hazard areas are those identified in the effective flood insurance study (FIS) for Mecklenburg County dated November 16, 2018, and its accompanying flood insurance rate maps (FIRM), and local or FEMA approved revisions to the FIRM and/or FIS which are adopted by reference and declared to be a part of this chapter and all revisions thereto.

In areas where a preliminary FIRM and preliminary FIS exist, community base flood elevations shown on the preliminary FIRM and preliminary FIS shall be used for local regulatory purposes, if they are

higher than those shown on the effective FIRM and FIS. The initial flood insurance rate maps are as follows for the jurisdictional areas at the initial date:

City of Charlotte dated August 15, 1978,

Mecklenburg County Unincorporated Area, dated June 1, 1981.

(Ord. No. 4912, 6-25-2012; Ord. No. 5294, § 1, 1-27-2014; Ord. No. [5988](#), § 1, 7-27-2015; Ord. No. [9399](#), 9-10-2018)

Sec. 9-38. - Floodplain development permit required.

A floodplain development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities. The floodplain regulations technical guidance document may be used for illustrative purposes to assist in determining the applicable type of floodplain development permit required.

(Ord. No. 4912, 6-25-2012)

Sec. 9-39. - Compliance.

No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

(Ord. No. 4912, 6-25-2012)

Sec. 9-40. - Abrogation and greater restrictions.

It is not intended by this chapter to repeal, abrogate, annul or in any way impair or interfere with any existing provisions of laws or ordinances or any rules, regulations or permits previously adopted or issued, or which shall be adopted or issued, in conformity with law, relating to the use of buildings or premises; nor is it intended by this chapter to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that, where this chapter imposes a greater restriction upon the use of buildings or premises or requires larger yards, courts or other open spaces than are imposed or required by such existing provisions of laws or ordinances, or by such rules, regulations or permits or by such easements, covenants or agreements, the provisions of this chapter shall control.

(Ord. No. 4912, 6-25-2012)

Sec. 9-41. - Interpretation.

In the interpretation and applications of this chapter, all provisions shall be:

- (a) Considered as minimum requirements;
- (b) Liberally construed to meet the purposes and objectives of this regulation as stated in sections 9-4 and 9-5; and
- (c) Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 4912, 6-25-2012)

Sec. 9-42. - Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city, Mecklenburg County, or on any agent, officer or employee thereof for any flood damages that result from reliance on this chapter or by any administrative decision lawfully made hereunder.

(Ord. No. 4912, 6-25-2012)

Sec. 9-43. - Penalties for violation.

Violation of the provisions of this chapter or failure to comply with any of its requirements including violation of conditions and safeguards established in connection with grants of floodplain development permits, variances or conditions, shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$500.00 or imprisoned for not more than 30 days. Each day such violation continues shall be considered a separate offense. For appeals, fines do not accumulate during the time period from receipt of a notice of appeal to the Board of Adjustment decision described in Article VI. Nothing herein contained shall prevent the city or the floodplain administrator from taking such other lawful action as is necessary to prevent or remedy any violation, including but not limited to seeking injunctive relief, orders of abatement, or other similar equitable relief.

(Ord. No. 4912, 6-25-2012)

Sec. 9-44—9-60. - Reserved.

#### ARTICLE IV. - ADMINISTRATION AND ENFORCEMENT

Sec. 9-61. - Designation of floodplain administrator.

The city storm water services manager, or his or her designee, is hereby designated as the floodplain administrator. The administration, implementation and the enforcement of the provisions of this chapter shall be allocated through a properly executed, legally binding interlocal agreement.

(Ord. No. 4912, 6-25-2012; Ord. No. [5988](#) , § 2, 7-27-2015)

Sec. 9-62. - Floodplain development permits and certification requirements.

- (a) A floodplain development permit is required for any development within the community special flood hazard area (CSFHA) and is subject to the conditions below. The floodplain administrator is authorized to create, and amend from time to time as necessary, a technical guidance document to help explain the application of the provisions of this chapter, specifically the floodplain development permit provisions, through the use of charts and related written materials. The floodplain regulations technical guidance documents shall not be a part of this chapter, and shall be solely for illustrative and educational purposes. If there is any discrepancy between the floodplain regulations technical guidance document and this chapter, the provisions of this chapter shall control.
- (b) Floodplain development permits fall into one of two types: General floodplain development permits (GFDP) and individual floodplain development permits (IFDP). If the proposed development activities meet the requirements of the general floodplain development permit, an individual floodplain development permit is not required.

1. *General floodplain development permit.* The intent of the general floodplain development permit (GFDP) is to allow uses or activities in the community special flood hazard area (including the FEMA floodway and community encroachment area) which inherently will not increase FEMA and/or community base flood elevations. The following uses and activities are permitted under a GFDP, without the need for an individual floodplain development permit, floodway engineering analysis or variance, as long as they result in no technically measurable increases in FEMA and/or community base flood elevations. A no-rise certification may be required by the floodplain administrator to demonstrate no technically measurable increases.
    - a. General farming, pasture, horticulture, forestry, wildlife sanctuaries, gardens, lawns, landscaping, mulch 12 inches or less in depth, and other similar activities.
    - b. Utility infrastructure (poles, sewer manholes, vent pipes, underground utilities, etc.), sign poles, non-solid fences, and other similar activities.
    - c. On-grade driveways, trails, sidewalks, boardwalks, roads and road maintenance; storm drainage system construction, repairs and maintenance (major and minor system), and other similar activities. The floodplain administrator must be notified in writing, including a project description and sketch plan, prior to commencement of these activities.
    - d. Interior renovations with a value of less than \$10,000.00, to a structure with its lowest floor below the flood protection elevation. The renovations must meet the requirements of subsection 9-102(f).
    - e. Interior renovations of any value, to a structure with its lowest floor at or above the flood protection elevation. The renovations must meet the requirements of subsection 9-102(f).
  2. *Individual floodplain development permits.* Individual floodplain development permits are required for all projects that do not meet the requirements of a general floodplain development permit. Application for an individual floodplain development permit (IFDP) shall be made by a person with a property interest in the property or with a contract to purchase the property (or their agent) to the floodplain administrator on forms furnished by him or her prior to any development activities proposed to be located within the community special flood hazard area. Requirements for submittal are available from the floodplain administrator.
- (c) Certification requirements.
1. A final as-built elevation certificate (FEMA Form 086-0-33) (for either residential or nonresidential buildings) or floodproofing certificate (FEMA Form 086-0-34) with supporting data, an operational plan, and an inspection and maintenance plan is required after construction is completed and prior to the issuance of a certificate of occupancy or a temporary certificate of occupancy. It shall be the duty of the permit holder to submit to the floodplain administrator a certification of final as-built construction of the elevation or floodproofed elevation of the reference level and all attendant utilities. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized, said certification, operational plan, and inspection and maintenance plan shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The floodplain administrator shall review the certificate data, operational plan, and inspection and maintenance plan submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to the issuance of a certificate of occupancy or temporary certificate of occupancy. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make said corrections required shall result in the floodplain administrator withholding the issuance of a certificate of occupancy or temporary certificate of occupancy.
  2. For proposed development in the community or FEMA special flood hazard area but outside of the community encroachment area and the FEMA floodway, a certification from a registered land surveyor or professional engineer that states that no fill material or other development was placed within the FEMA floodway or community encroachment area of any watercourse, will be required prior to issuance of a certificate of occupancy or temporary certificate of occupancy.

3. For proposed development within the community encroachment area or the FEMA floodway, an as-built topographic map prepared by a registered land surveyor or professional engineer will be required prior to issuance of a certificate of occupancy or temporary certificate of occupancy. This is in addition to a floodway engineering analysis or CLOMR that may be required as specified in section 9-102(e).
  4. If a manufactured home is placed within the floodplain and the elevation of the chassis is 36 inches or higher above adjacent grade, an engineered foundation certification is required.
  5. Certification exemptions. The following structures, if located within the floodplain, are exempt from the elevation/floodproofing certification requirements specified in subsections (a) and (b) above:
    - a. Recreational vehicles meeting requirements of section 9-102(h);
    - b. Temporary structures meeting requirements of section 9-102(i); and
    - c. Accessory structures less than 150 square feet meeting requirements of section 9-102(j).
- (d) Permit application requirements.
1. A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
    - a. The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
    - b. The location of the community flood fringe line, community encroachment line, FEMA flood fringe line and FEMA floodway line as shown on the FIRM or other flood map, or a statement that the entire lot is within the special flood hazard area;
    - c. Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map;
    - d. The FEMA base flood elevation (BFE), community base flood elevation (CBFE) and flood protection elevation (FPE);
    - e. The existing and proposed location of any watercourse that will be altered or relocated as a result of proposed development;
    - f. Certification of the plot plan by a registered land surveyor or professional engineer as deemed necessary by the floodplain administrator.
  2. Proposed elevations of all development within a community or FEMA special flood hazard area including but not limited to:
    - a. Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;
    - b. Elevation in relation to NAVD 1988 to which any nonresidential structure in Zone AE, will be floodproofed; and
    - c. Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed.
  3. If floodproofing, a floodproofing certificate (FEMA Form 81-65) with supporting data and an inspection and operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.
  4. A foundation plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this chapter are met. These details include but are not limited to:
    - a. The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls);

- b. Openings to facilitate automatic equalization of hydrostatic flood forces on walls when solid foundation perimeter walls are used in community special flood hazard area (9-102(c));
  - c. Usage details of any enclosed areas below the lowest floor;
  - d. Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;
  - e. Certification that all other local, state and federal permits required prior to floodplain development permit issuance have been received;
  - f. Documentation for proper placement of recreational vehicles and/or temporary structures, when applicable, to ensure that the provisions of 9-102(h), (i) are met.
  - g. A description of proposed alteration of a watercourse, when applicable, including an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed alteration of a watercourse.
5. If placing fill within the special flood hazard area, a demonstration of compliance with Section 9 and 10 of the Federal Endangered Species Act (ESA) is required. The demonstration of compliance must be provided to the floodplain administrator.
- (e) Permit requirements. The floodplain development permit shall include, but not be limited to:
- 1. A description of the development to be permitted under the floodplain development permit.
  - 2. The special flood hazard area determination for the proposed development.
  - 3. The flood protection elevation required for the reference level and all attendant utilities.
  - 4. The flood protection elevation required for the protection of all public utilities.
  - 5. All certification submittal requirements with timelines.
  - 6. A statement that no fill material or other development shall encroach into the community encroachment area or FEMA floodway of any watercourse unless the requirements of section 9-102(e) are met.
  - 7. The flood openings requirements per section 9-102(c).
  - 8. A statement that all construction materials below the FPE shall be constructed entirely of flood-resistant materials.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-63. - Duties and responsibilities of the floodplain administrator.

The floodplain administrator is authorized to and shall perform, but not be limited to, the following duties:

- (a) Reviewing, approving, and issuing all floodplain development permits in a timely manner to assure that the permit requirements of this chapter have been satisfied.
- (b) Reviewing, approving and issuing all documents applicable to letters of map change.
- (c) Advising the permittee that additional federal or state permits may be required; and if specific federal or state permits are known, requiring that copies of such permits be provided and maintained on file with the floodplain development permit.
- (d) Notifying adjacent communities and the North Carolina Department of Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to



any alteration of a watercourse and submitting evidence of such notification to the Federal Emergency Management Agency.

- (e) Assuring that within available resources, maintenance is provided within the altered or relocated portion of any altered watercourse so that the flood-carrying capacity is maintained.
- (f) Not issuing a floodplain development permit for encroachments within the community encroachment area and/or the FEMA floodway unless the certification and flood hazard reduction provisions of article V are met.
- (g) Reviewing and recording the actual elevation (in relation to NAVD 1988) of the reference level (including basement) of all new or substantially improved structures, in accordance with section 9-62(c).
- (h) Reviewing and recording the actual elevation (in relation to NAVD 1988) to which the new or substantially improved nonresidential structures have been floodproofed, in accordance with section 9-62(c).
- (i) Obtaining certifications from a registered professional engineer or architect in accordance with subsection 9-102(b) when floodproofing is utilized for a particular non-residential structure.
- (j) Making the interpretation of the exact location of boundaries within the FEMA special flood hazard area or the community special flood hazard area when, for example, where there appears to be conflict between a mapped boundary and actual field conditions. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this chapter. Procedures for changing flood hazard area boundaries and lines depicted on the flood insurance rate maps are identified in the national flood insurance program regulations (44 CFR Parts 59-78).
- (k) Permanently maintain all records that pertain to the administration of this chapter and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended.
- (l) Making on-site inspections of projects.
- (m) Serving notices of violation, issuing stop work orders, revoking permits and taking corrective actions.
- (n) Maintaining a copy of the letter of map amendment issued from FEMA when a property owner has received a letter of map amendment (LOMA). (A LOMA is typically applied for and approved when the exact location of boundaries of the FEMA special flood hazard area conflicts with the current, natural topography information at the site.)
- (o) Determining the required information to be submitted with an application for approval of an individual floodplain development permit.
- (p) Reviewing information provided by a property owner or his designated agent for the purpose of making a determination of the total cost of repairs as it relates to a substantial improvement, including a determination of whether a series of repairs, reconstructions or improvements constitute one single alteration such that the total cost of the repairs, reconstructions or improvements will be the cumulative cost from the first alteration.
- (q) Reviewing information provided by a property owner or his designated agent for the purpose of making a determination of whether the proposed construction activities constitute new construction for purposes of this chapter.
- (r) Reviewing and acknowledging FEMA conditional letters of map revision and FEMA letters of map revision.
- (s) Reviewing and approving community conditional letters of map revision and community letters of map revision.
- (t) Making on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the floodplain administrator shall make as many inspections of the work as

may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit.

- (u) Issuing stop-work orders. Whenever a building or part thereof is being constructed, reconstructed, altered or repaired in violation of this chapter, the floodplain administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.
- (v) Revoking floodplain development permits. The floodplain administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentation made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked. Revoked permits may be resubmitted for approval using the requirements of the ordinance in effect at the time of the original submittal unless they were revoked because of the intentional submission of incorrect information by the permittee or his agent, or under other circumstances where allowing resubmittal using the requirement of the ordinance in effect at the time of the original submittal would not be equitable or consistent with public policy. However, base flood elevations that govern the elevation to which the structure is built must comply with the regulations and flood elevations in effect at the time of application for the building permit.
- (w) Making periodic inspections. The floodplain administrator and each member of his inspections department shall have a right, upon presentation of proper credentials and consent of premises owner or an administrative search warrant to inspect areas not open to the public, within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (x) Providing owners of structures in the floodplain with information concerning their flood risk, and (for structures with the lowest floor below the flood protection elevation) inform potential buyers of substantial improvement restrictions through the recordation of a notice in the property chain of title or other similar notice.
- (y) Obtain actual elevation (in relation to NAVD 1988) of the reference level (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with the provisions of section 9-62(c).
- (z) Obtain actual elevation (in relation to NAVD 1988) of all public utilities in accordance with the provisions of section 9-62(c).
- (aa) Maintain a current map repository to include, but not limited to, historical and effective FIS report, historical and effective FIRM and other official flood maps and studies adopted in accordance with the provisions of section 9-37 of this chapter, including any revisions thereto including letters of map change, issued by FEMA. Notify state and FEMA of mapping needs.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-64. - Corrective procedures.

- (a) *Violations to be corrected.* When the floodplain administrator finds violations of applicable state and local laws and notifies the property owner or building occupant or permittee of the violation, the owner or occupant or permittee shall immediately remedy each violation of law cited in the notice.
- (b) *Actions in event of failure to take corrective action.* If the owner or occupant of a building or property shall fail to take prompt corrective action, the floodplain administrator shall give written notice, by certified or registered mail to the last known address or by personal service that:

1. The building or property is in violation of the floodplain regulations;
  2. A hearing will be held before the floodplain administrator at a designated place and time, not later than 20 calendar days after the date of the notice; at which time the owner or occupant shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and
  3. Following the hearing, the floodplain administrator may issue such order to alter, vacate or demolish the building, or to remove fill or other unauthorized encroachment, as appears appropriate.
- (c) *Order to take corrective action.* If, upon a hearing held pursuant to the notice prescribed above, the floodplain administrator shall find that the building or development is in violation of the floodplain regulations, he shall issue an order in writing to the owner or occupant, requiring the owner or occupant to remedy the violation within such period, not less than 60 calendar days, nor more than 180 calendar days. If the floodplain administrator determines that there is imminent danger to public health, safety or welfare or other property, he may order that immediate corrective action be taken, and if no corrective action is taken as ordered, the floodplain administrator, with the written authorization of the city manager, shall have the authority to enter upon the property to perform the work necessary to correct the condition and the owner or occupant shall be responsible for the actual costs incurred.
- (d) *Appeal.* Any owner or occupant who has received an order to take corrective action may appeal the order to the Charlotte Zoning Board of Adjustment (hereinafter referred to as the "board of adjustment" or "board") as provided in article VI, section 9-82. In the absence of an appeal, the order of the floodplain administrator shall be final. The board of adjustment shall hear an appeal within a reasonable time and may affirm, modify and affirm or revoke the order.
- (e) *Failure to comply with order.* If the owner or occupant of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the board of adjustment following an appeal, he/she shall be guilty of a misdemeanor and shall be punished in the discretion of the court. In addition, the owner or occupant shall be subject to civil enforcement as described in article III, section 9-43.

(Ord. No. 4912, 6-25-2012)

Secs. 9-65—9-80. - Reserved.

#### ARTICLE V. - APPEALS AND VARIANCES

Sec. 9-81. - Authority of board of adjustment.

- (a) The board of adjustment shall hear and decide appeals from any order, decision, determination or interpretation made by the floodplain administrator pursuant to or regarding these regulations.
- (b) The board of adjustment shall hear and decide petitions for variances from the requirements of this chapter.

(Ord. No. 4912, 6-25-2012)

Sec. 9-82. - Initiation and filing of appeal.

- (a) An appeal of an order, decision, determination or interpretation made by the floodplain administrator may be initiated by any person aggrieved by any officer, department, board or bureau of the city.
- (b) A notice of appeal in the form prescribed by the board of adjustment must be filed with the board's clerk, with a copy to the floodplain administrator, within thirty (30) days of receipt of the written order, decision, determination or interpretation and must be accompanied by a non-refundable filing fee as

established by the city council. If the notice of the decision is sent by mail, it is presumed received on the third business day after it is sent. Failure to timely file such notice and fee will constitute a waiver of any rights to appeal under this section and the board of adjustment shall have no jurisdiction to hear the appeal.

(Ord. No. 4912, 6-25-2012)

Sec. 9-83. - Standards and hearing procedure.

- (a) The board of adjustment will conduct the hearing on an appeal of an order, decision, determination or interpretation of these regulations in accordance with its normal hearing procedures as set out in the City Zoning Code.
- (b) At the conclusion of the hearing, the board of adjustment may reverse or modify the order, decision, determination or interpretation under appeal upon finding an error in the application of these regulations on the part of the floodplain administrator who rendered the decision, determination or interpretation. In modifying the decision, determination or interpretation, the board will have all the powers of the officer from whom the appeal is taken.

(Ord. No. 4912, 6-25-2012)

Sec. 9-84. - Initiation and filing of variance petition.

- (a) A petition for variance may be initiated only by the owner of the affected property, or an agent authorized in writing to act on the owner's behalf.
- (b) A petition for a variance from these regulations in the form prescribed by the board of adjustment must be filed with the board's clerk, with a copy to the floodplain administrator, and be accompanied by a non-refundable filing fee as established by the city council.

(Ord. No. 4912, 6-25-2012)

Sec. 9-85. - Factors for consideration and determination of completeness.

- (a) In passing upon variances, the board of adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and the:
  1. Danger that materials allowed to be placed in the floodway as a result of the variance may be swept onto other lands to the injury of others during a community base flood;
  2. Danger to life and property due to flooding or erosion damage from a community base flood;
  3. Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage during the community base flood;
  4. Importance of the services provided by the proposed facility to the community;
  5. Necessity to the facility of a waterfront location, where applicable;
  6. Availability of alternative locations, not subject to flooding or erosion damage during a community base flood, for the proposed use;
  7. Compatibility of the proposed use with existing and anticipated development;
  8. Relationship of the proposed use to the Mecklenburg County Floodplain Management Guidance Document, Mecklenburg County Hazard Mitigation Plans, the Mecklenburg County Greenway Plan, and any other adopted land use plans for that area;

9. Safety of access to the property in times of a community base flood for ordinary and emergency vehicles;
  10. Expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters during a community base flood expected at the site; and
  11. Costs of providing governmental services during and after flood events, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical and water systems and streets and bridges.
- (b) A written report addressing each of the above factors shall be submitted with the application for a variance.
  - (c) Upon consideration of the factors listed above and the purposes of this chapter, the board of adjustment may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
  - (d) Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
  - (e) Functionally dependent facilities if determined to meet the definition as stated in article II of this chapter, provided provisions of article VI have been satisfied, and such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or
  - (f) Any other type of development, provided it meets the requirements of this section.

(Ord. No. 4912, 6-25-2012)

Sec. 9-86. - Conditions for variances.

- (a) Variances shall not be issued when the variance will make the structure in violation of other federal, state, or local laws, regulations, or ordinances.
- (b) Variances shall not be issued within any designated floodway if the variance would result in any increase in flood levels during the community and/or FEMA base flood discharge unless the requirements of section 9-102(e) are met.
- (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (d) Variances shall only be issued prior to approval of a floodplain development permit.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-87. - Standards for granting variance.

- (a) Variances shall only be issued upon:
  1. A showing of good and sufficient cause;
  2. A determination that failure to grant the variance would result in exceptional hardship; and
  3. A determination that the granting of a variance will not result in increased flood heights (unless the requirements of section 9-102 (e) are met), additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with other existing local laws or ordinances.

- (b) The fact that the property could be utilized more profitably or conveniently with the variance than without the variance shall not be considered as grounds for granting the variance.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-88. - Miscellaneous conditions.

- (a) In addition to consideration of the items in subsection 9-85(a), if dryland access cannot be obtained, a variance to the requirement for dryland access may be granted by the board of adjustment upon consideration of the following conditions:
  1. A determination that all possible alternatives have been investigated in an attempt to provide the safest access from a proposed habitable building to a dry public street.
  2. The existence of a site plan prepared by a licensed land surveyor or professional engineers indicating that the proposed access to habitable buildings on the property poses the least risk from flooding.
- (b) In addition to consideration of the items in subsection 9-85(a), a variance may be issued by the board of adjustment for solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in special flood hazard areas provided that all of the following criteria are met:
  1. The use serves a critical need in the community.
  2. No feasible location exists for the use outside the special flood hazard areas.
  3. The lowest floor of any structure is elevated above the flood protection elevation or is designed and sealed by a professional engineer or a registered architect 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. There will be no storage of materials or tanks which could flood within the special flood hazard area unless they are contained in a structure as defined in subsection 3 above.
  5. The use complies with all other applicable laws and regulations.
  6. The city has notified the secretary of the state department of crime control and public safety of its intention to grant a variance at least 30 calendar days prior to granting the variance.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-89. - Notification and recordkeeping.

- (a) Any applicant to whom a variance from the FEMA base flood elevation is granted shall be given written notice specifying the difference between the FEMA base flood elevation and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notification shall be maintained with a record of all variance actions.
- (b) The floodplain administrator shall maintain the records of all appeal actions and report any variances regarding FEMA minimum standards to the Federal Emergency Management Agency and the state upon request.

(Ord. No. 4912, 6-25-2012)

Sec. 9-90. - Appeal from board of adjustment.

- (a) Any person aggrieved by the final decision of the board of adjustment to grant or deny a floodplain development permit shall have 30 days to file an appeal to Mecklenburg County Superior Court, as provided in G.S. 160D-406(k).
- (b) Any party aggrieved by the decision of the board of adjustment related to any other order, decision, determination or interpretation of these regulations, including the granting or denial of a variance, shall have 30 days from the effective date if the decision or the receipt of the board's decision, whichever is later, to file a petition for review in the nature of certiorari in Mecklenburg County Superior Court.

(Ord. No. 4912, 6-25-2012)

Secs. 9-91—9-100. - Reserved.

#### ARTICLE VI. - PROVISIONS FOR FLOOD HAZARD REDUCTION

Sect. 9-101. - General standards.

In all special flood hazard areas, the following provisions are required:

- (a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- (b) Manufactured homes shall be anchored to prevent flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, the use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
- (c) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- (d) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (e) All new electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the flood protection elevation. These include but are not limited to HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (i.e., washers, dryers, refrigerator, etc.), hot water heaters, electric wiring, and outlets/switches;
  - 1. Replacements part of a substantial improvement, electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall also meet the above provisions.
  - 2. Replacements that are for maintenance and not part of a substantial improvement, may be installed at the original location provided the addition and/or improvements only comply with the standards for new construction consistent with the code and requirements for the original structure.
  - 3. The cost for replacements that are for maintenance, are not part of a substantial improvement, and that are installed at the original location are not included as substantial improvement costs if the replacements are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the flood protection elevation.
- (f) All new and replacement water supply systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system;
- (g) New and replacement sanitary sewage systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system and discharges from the systems into floodwaters;

- (h) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
- (i) Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this chapter, shall meet the requirements of "new construction" as contained in this chapter;
- (j) Construction of new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted except by variance, in special flood hazard area. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a special flood hazard area only if the structure or tank is either elevated above the community 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;
- (k) Any new critical facility must be located outside of the 500-year (0.2%) flood fringe area and elevated at least one foot above the 500-year (0.2%) flood elevation or the community base flood elevation whichever is greater. The determination of this flood fringe area and elevation will be provided by the floodplain administrator;
  - 1. Subdivisions—All development proposals submitted for review and approval in accordance with the city subdivision ordinance shall also comply with the following provisions:
    - a. Locate and construct public utilities and facilities, such as sewer, gas, electrical and water systems, to minimize flood damage;
    - b. Construct all new streets located in a community special flood hazard area in accordance with the applicable provisions of the subdivision ordinance;
    - c. Design and construct adequate drainage to reduce exposure to flood hazards; and
    - d. Take such other appropriate measures needed to minimize flood damage.
- (m) When a structure is partially located in a community or FEMA special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.
- (n) When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest base flood elevation shall apply.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-102. - Specific standards.

In all community and FEMA special flood hazard areas where community and FEMA base flood elevation data have been provided, as set forth in section 9-37, the following provisions are required:

- (a) *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, elevated to the flood protection elevation. Where an area is impacted by FEMA and/or community base flood elevations from both the Catawba River and a stream flowing into the Catawba River, the higher of the FEMA and/or community base flood elevations will apply.
  - 1. *Community base flood elevation exemption.* Substantial improvement to existing buildings having the lowest floor located at least one foot above the FEMA base flood elevation, but less than the flood protection elevation, are exempt from the requirement to elevate the lowest floor to or above the flood protection elevation. However, the property owner must record an affidavit of floodplain construction below community base flood elevation ("affidavit") with the Mecklenburg County register of deeds office prior to the issuance of a building permit. The affidavit (provided in the floodplain regulation technical guidance



document) will acknowledge that the property owner elected to proceed with the renovations/rehabilitations, and was made aware of the community base flood elevations and that in the future there will be:

- a. Potential for floodlosses;
  - b. Potential for mandatory purchase of flood insurance;
  - c. Potential for FEMA substantial improvement rules to apply; and
  - d. No local funds available for flood mitigation assistance (buyouts, elevations, etc).
2. *Non-substantial improvements notice.* Renovations, rehabilitations, repair, reconstruction, or improvement costing between ten percent and 50 percent of the market value of the existing building and said building having the lowest floor below the flood protection elevation, will require the property owner to record a notice of floodplain improvements (provided in the Floodplain Regulations Technical Guidance Document) with the Mecklenburg County Register of Deeds Office prior to the issuance of a building permit.
- (b) *Nonresidential construction.* New construction or substantial improvement of any commercial, industrial or nonresidential structure shall meet the requirements for residential construction in subsection 9-102(a) above, or the structure may be floodproofed in lieu of elevation, provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in section 9-62.

Floodproofing requirements are provided in the floodplain regulations technical guidance document.

1. *Community base flood elevation exemption.* substantial improvement to existing buildings having the lowest floor located at least one foot above the FEMA base flood elevation, but less than the flood protection elevation, are exempt from the requirement to elevate the lowest floor to or above the flood protection elevation. However, the property owner must record an affidavit of floodplain construction below community base flood elevation ("affdavit") with the Mecklenburg County register of deeds office prior to the issuance of a building permit. The affidavit (provided in the floodplain regulations technical guidance document) will acknowledge that the property owner elected to proceed with the renovations/rehabilitations, and was made aware of the community base flood elevations and that in the future there will be:
    - a. Potential for floodlosses;
    - b. Potential for mandatory purchase of flood insurance;
    - c. Potential for FEMA substantial improvement rules to apply; and
    - d. No local funds available for flood mitigation assistance (buyouts, elevations, etc).
  2. *Non-substantial improvements notice.* Renovations, rehabilitations, repair, reconstruction, or improvement costing between ten percent and 50 percent of the market value of an existing building having the lowest floor below the flood protection elevation, will require the property owner to record a notice of floodplain improvements (provided in the Floodplain Regulations Technical Guidance Document) with the Mecklenburg County Register of Deeds Office prior to the issuance of a building permit.
- (c) *Elevated buildings.* New construction or substantially improved structures with fully enclosed areas formed by foundation and other exterior walls below the community base flood elevation shall meet the following requirements:
1. Enclosed areas shall not be designed for human habitation and shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection

with the premises. The walls shall be designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

2. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
    - a. Provide a minimum of two openings;
    - b. The total net area of all openings must be at least one square inch for every square foot of enclosed area subject to flooding;
    - c. The bottom of all openings shall be no higher than one foot above adjacent grade at the opening;
    - d. Openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions;
    - e. Openings must be on different sides of the enclosed area if possible; and
    - f. If the building has more than one enclosed area, each must have openings.
  3. Foundation enclosures:
    - a. Vinyl or sheet metal skirting is not considered an enclosure for regulatory and flood insurance rating purposes. Therefore such skirting does not require hydrostatic openings as outlined above.
    - b. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this chapter.
  4. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or enter to the living area (stairway or elevator).
  5. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.
  6. The enclosed area shall be constructed entirely of flood resistant materials at least to the flood protection elevation.
  7. The enclosed area shall not be temperature controlled.
- (d) *Dryland access.* Access to habitable buildings during a flood event is extremely hazardous. Dryland access must be provided to new or substantially improved habitable buildings according to the following criteria:
1. Dryland access is required if any portion of either the habitable building or vehicular access route, connecting the habitable building to a public street, is within the floodplain.
  2. Plans and details for the dryland access must be submitted by a registered professional engineer or surveyor and approved by the floodplain administrator.
  3. If dryland access cannot be obtained, a variance to the requirement for dryland access may be granted by the board of adjustment.
  4. Exemptions from dryland access requirements are allowed for the following conditions:
    - a. Substantial improvement to an existing habitable building where the property does not have dryland access.
    - b. Construction of a new habitable building where both the habitable building and the access route connecting it to a public street, are located entirely outside the community encroachment area and where the property does not have any access to a dry public street. Under this exemption, access from the habitable building to the public street must:

- i. Connect to the highest point of the public street adjacent to the property;
    - ii. Be constructed of gravel, pavement or concrete and be at least 12 feet wide; and
    - iii. Be constructed entirely at or above the elevation of highest point of the public street adjacent to the property.
  - c. Replacement of an existing Habitable building where the Lowest floor is below the FPE with a new Habitable building with the Lowest floor above the FPE. Under this exemption, access from the new Habitable building to the public street must:
    - i. Connect to the highest point of the public street adjacent to the property;
    - ii. Be constructed of gravel, pavement or concrete and be at least 12 feet wide;
    - iii. Be constructed entirely at or above the elevation of the highest point of the public street adjacent to the property.
- (e) *FEMA floodway and community encroachment area.* No encroachments requiring an individual floodplain development permit (section 9-62), including fill, new construction, substantial improvements and other development shall be permitted unless the following conditions are met:
  1. FEMA floodway.
    - a. A Floodway Engineering Analysis must be provided by a registered professional engineer and performed in accordance with standard engineering practice indicating that the Encroachment would not result in any (0.00') increase in the FEMA Base Flood Elevations during the occurrence of a FEMA Base Flood, and approved by the Floodplain Administrator; or
    - b. A conditional letter of map revision (CLOMR) from FEMA will be required prior to approval of any encroachment which would cause a rise in the FEMA base flood elevation during the occurrence of the FEMA base flood. A letter of map revision (LOMR) from FEMA must be obtained within six months of completion of the project. Final approval, including certificates of occupancy will not be issued until a letter of map revision is issued.
    - c. Encroachments into the FEMA floodway must also meet the requirements of subsection 9-102(e)2. below.
  2. Community encroachment area.
    - a. A Floodway engineering analysis must be provided by a registered professional engineer and performed in accordance with standard engineering practice indicating that the Encroachment would not result in increased flood heights of greater than 0.10' during the occurrence of a community base flood.
    - b. A community conditional letter of map revision (CoCLOMR) from the floodplain administrator is required for any change which would cause a rise of more than 0.10' in the community base flood elevation. Impacted property owners must be notified prior to approval of a CoCLOMR. If approved and constructed, as-built plans must be submitted and approved by the floodplain administrator and a community letter of map revision (CoLOMR) issued within six months of completion of the project. Final approval, including certificates of occupancy will not be issued until a community letter of map revision has been issued.
    - c. Projects impacting existing habitable buildings that increase the community base flood elevation more than 0.00 feet will not be allowed without a variance.
  3. Temporary encroachments. Certain temporary encroachments into the community encroachment area and/or the FEMA floodway may be exempt from meeting the requirements of subsections 9-102(e)1. and 2. Examples of temporary encroachments include but are not limited to: sediment control devices including basins, check dams diversions, etc, temporary stream crossings, haul roads/construction entrances, storage of equipment, soil stockpiling. The following conditions that must be met to qualify for the exemption:
    - a. The proposed encroachment shall not be in place more than three months and is renewable for up to one year with written approval from the floodplain administrator.

Temporary sediment control devices may be kept in place longer than one year if required by the appropriate regulatory agency, and

- b. Supporting documentation, including a Floodway Engineering Analysis (if required by the Floodplain Administrator) must be submitted by a registered professional engineer indicating that the proposed project will not impact any existing habitable building or overtop any roadway surfaces.
  - c. The temporary encroachment will require an individual floodplain development permit unless it is included in another IFDP.
4. No manufactured homes shall be permitted, except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring and the elevation standards of section 9-102(g) are met.

*(f) Additions/improvements.*

1. Additions and/or improvements to non-compliant portions of pre-FIRM structures whereas the addition-and/or improvements in combination with any interior modifications to the existing structure are:
  - a. Not a substantial improvement, the addition or improvement must:
    - i. Be designed to minimize flood damages.
    - ii. Not have an enclosed area lower than that of the existing structure.
    - iii. Not add additional non-conforming area.
    - iv. Be constructed of flood resistant materials.
  - b. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards of subsections 9-102(a) and (b).
2. Additions and/or improvements to post-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure are:
  - a. Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.
  - b. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards of subsections 9-102(a) and (b).
3. Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall require only the addition to comply with the standards of subsections 9-102(a) and (b).
4. Customary maintenance and/or repair are not considered additions and/or improvements.

*(g) Manufactured homes.*

1. New and replaced manufactured homes shall be elevated such that the lowest floor of the manufactured home is elevated at least the flood protection elevation.
2. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, or lateral movement, either by certified engineered foundation system, or in accordance with the regulations for mobile homes and modular housing adopted by the commissioner of insurance pursuant to G.S. 143-143.15. Additionally, when the elevation would be met by raising the chassis at least 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. When the elevation of the chassis is above 36 inches in height an engineering certification is required.
3. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivision located within the special flood hazard area. This plan shall be filed with and approved by the floodplain administrator and the local emergency management coordinator.

4. All enclosures or skirting below the lowest floor shall meet the requirements of section 9-102(c).
- (h) *Recreational vehicles.* Recreational vehicles shall either:
1. Be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions), or
  2. Meet all the requirements for new construction.
- (i) *Temporary structures.* Prior to issuance of a floodplain development permit for a temporary structure the following requirements must be met:
1. All applicants must submit to the floodplain administrator a plan for removal of such structure(s) in the event of a hurricane or flash flood notification. The plan must include the following information:
    - a. A specified time period for which the temporary use will be permitted. The time specified may not exceed three months, and is renewable up to one year;
    - b. The name, address, and phone number of the individual responsible for the removal of the structure;
    - c. The time frame prior to the event at which a structure will be removed;
    - d. A copy of the contract or other suitable instrument with a trucking company to ensure the availability of removal equipment when needed; and
    - e. Designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be removed.
  2. The above information shall be submitted in writing to the floodplain administrator for review and written approval.
- (j) *Accessory structure.* When accessory structures (sheds, detached garages, etc.), are to be placed in the community and/or FEMA special flood hazard area the following criteria shall be met:
1. Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
  2. Accessory structures shall be designed to have a low flood damage potential;
  3. Accessory structures shall be firmly anchored in accordance with section 9-101(a);
  4. Service facilities such as electrical shall be elevated in accordance with subsection 9-101(e);
  5. Accessory structures shall have hydrostatic openings per section 9-102(c)2.;
  6. Accessory structures under 150 square feet do not require an elevation or floodproofing certificate;
  7. Accessory structures shall not be temperature-controlled.
- (k) *Parking spaces.* The lowest level of any parking space required for new or substantially improved non-single family habitable buildings must be no more than 0.5 feet below the community base flood elevation. Exemption from the parking requirement is allowed if all of the following conditions are met:
1. Replacement of an existing Habitable building where the Lowest floor is below the FPE with a new Habitable building with the Lowest floor above the FPE;
  2. The owner provides a flood warning system (including controls, flood warning sensors, visual/audio alarms etc.) designed by a North Carolina Professional Engineer and approved by the Floodplain Administrator;
  3. The owner provides a flood warning system maintenance plan that includes annual testing requirements approved by the Floodplain Administrator;
  4. The owner provides a cabling system or other restraint designed by a North

Carolina Professional Engineer to prevent off-site flotation of vehicles during a flood event that is approved by the Floodplain Administrator; and

5. A flood warning sign is posted with wording approved by the Floodplain Administrator.
- (l) *Tanks.* When gas and liquid storage tanks are to be placed within a special flood hazard area, the following criteria shall be met:
1. *Underground tanks.* Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads

during conditions of the community and/or FEMA base flood, including the effects of buoyancy assuming the tank is empty;

2. *Above-ground tanks, elevated.* Above-ground tanks in flood hazard areas shall be elevated to or above the flood protection elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the community and/or FEMA base flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;
  3. *Above-ground tanks, not elevated.* Above-ground tanks that do not meet the elevation requirements of section 9-102(b) of this chapter shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the community and/or FEMA base flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions;
  4. *Tank inlets and vents.* Tank inlets, fill openings, outlets and vents shall be:
    - a. At or above the flood protection elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the community and/or FEMA base flood; and
    - b. Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the community and/or FEMA base flood.
- (m) *Levees.* Levees will be treated as development in the floodplain and are subject to all applicable sections of this chapter.
1. Levees shall not be constructed solely to protect vacant property from flooding.
  2. With the exception of a levee that protects a building or feature that must be located in the vicinity of a stream to be functional such as a stream monitor, water/sewer facility or other uses approved by the floodplain administrator, proposed levees require the approval of the director of Mecklenburg County storm water services, (director), or his designee, regardless of their location within the floodplain.
  3. An open house forum shall be held prior to consideration of approval of a proposed levee. The open house forum will initiate a 30-day comment period for the director or his designee to receive comments from the public. The open house forum shall be conducted by the owner of the proposed levee and the director of Mecklenburg County storm water services, or his designee.
  4. Owners of land adjacent to a proposed levee shall be notified of the open house forum and be provided an opportunity to submit written comments during the 30-day comment period. Notification is to occur through regular mail, as well as a sign being placed at a conspicuous place at the creek and along the public and private road(s) of the properties that would be protected by the proposed levee.
  5. After the end of the 30-day comment period, but no more than 60 days from the end of the comment period, the director shall approve or disapprove the application or request more information from the owner of the levee. If the director determines that the additional information is sufficiently significant, the director may offer an additional 30-day comment period to all parties involved. Consistent with article VI, the director's decision may be appealed to the zoning board of adjustment.
  6. Regardless of whether the proposed levee would meet FEMA certification requirements, floodplain lines and flood elevations will not be modified on the landward side of the levee based on the location, performance or any other aspects of the levee.

7. An instrument must be recorded in the chain of title for all parcels protected by a levee indicating the level of protection provided by the levee and the maintenance requirements as described in subsection 8.g. below.
  8. Levee permitting requirements. Prior to the issuance of a floodplain development permit for construction of a proposed levee, the applicant must submit the following information in writing to the floodplain administrator for review and written approval:
    - a. Plans and/or specifications showing the location of the proposed levee is as far away from the adjacent creek as reasonably possible;
    - b. A copy of the written approval for the levee received from the director of Mecklenburg County storm waterservices;
    - c. Verification of notification to owners of land adjacent to the proposed levee (those within 500 feet of the property lines of the parcel on which the proposed levee is to be located or within a distance equal to the length of the proposed levee, whichever is greater). Notification is also to include properties that are in the community special flood hazard area and within the hydraulic modeling limits as described below;
    - d. Copies of all written comments received from property owners referenced above;
    - e. If the levee is proposed to be located within the community encroachment area, a floodway engineering analysis must be provided by a registered professional engineer and performed in accordance with standard engineering practice. In addition to the requirements of section 9-102(e) the analysis shall also:
      - i. Show no increase in water surface elevations on any existing habitable building using the current and future discharges for the 10-, 25-, 50-, 100-year frequency flows;
      - ii. Account for all feasible future levees in the area as deemed appropriate by the floodplain administrator;
    - f. A copy of the contract with the entity responsible for construction of the proposed levee;
    - g. A copy of the maintenance plan for the levee which has been certified by a NC professional engineer, which shall include a description of the process by which the levee will be inspected annually and provide for updated plans to be provided annually to property owners and residents intended to benefit from the levee.
  9. Levees constructed on an individual single family residential parcel are exempt from the requirements of subsections 9-102(l)2., 3., 4., 5., 7. and 8.
- (n) *Fill.* Proposed placement of fill within the special flood hazard area requires demonstration of compliance with Section 9 and 10 of the Federal Endangered Species Act (ESA). The demonstration of compliance must be provided to the floodplain administrator.

(Ord. No. 4912, 6-25-2012; Ord. No. [9399](#) , 9-10-2018)

Sec. 9-103. - Standards for streams with drainage areas of one square mile or greater not having established community or FEMA base flood elevations and community encroachment areas and FEMA floodways.

All streams in Mecklenburg County with drainage areas of one square mile or greater, have established community and FEMA base flood elevations and community encroachment areas and FEMA floodways.

(Ord. No. 4912, 6-25-2012)



## ARTICLE VII. - LEGAL STATUS PROVISIONS

### Sec. 9-104. - Legal status provisions.

#### (a) *Effect on rights and liabilities under the existing floodplain regulations.*

1. This chapter in part comes forward by re-enactment of some of the provisions of the floodplain regulations enacted November 27, 1972, as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this chapter shall not affect any action, suit or proceeding instituted or pending. All provisions of the floodplain regulations of Charlotte enacted on November 27, 1972, as amended, which are not reenacted herein, are repealed.
2. The date of the initial flood damage prevention ordinance for Mecklenburg County is December 4, 1972.

#### (b) *Effect upon outstanding floodplain development permits.*

1. Nothing herein contained shall require any change in the plans, construction, size or designated use of any development or any part thereof for which a floodplain development permit has been granted by the floodplain administrator before the time of passage of this floodplain regulation chapter; provided, however, that when construction is not begun under such outstanding permit within a period of two years subsequent to passage of this chapter or any revision thereto, such permit shall become void and construction or use shall be in conformity with the provisions of this chapter.
2. Any application(s) for a floodplain development permit received prior to the effective date of these floodplain regulations shall be reviewed under the regulations in effect at the time of the initial application.
3. Any incomplete application(s) for a floodplain development permit will be valid only for 90 days after the floodplain administrator has requested additional information from the applicant or his agent. If 90 days after the owner or his agent has received the request for additional information the applicant has failed to submit reasonably complete information that demonstrates a good faith effort to provide all the additional information requested, as determined by the floodplain administrator, the application will become void. Any subsequent submittals will be considered as new applications and reviewed under the regulations in effect on the date the subsequent submittal is received by the floodplain administrator.

#### (c) *Expiration of floodplain development permits issued after floodplain regulation adoption.*

1. Individual floodplain development permits issued pursuant to this chapter expire two years after the date of issuance unless the work has commenced within two years after the date of issuance, or the issuance of the permit is legally challenged in which case the permit is valid for two years after the challenge has been resolved.
2. Incomplete application(s) for an individual floodplain development permit:
  - a. Will be valid only for 90 days after the floodplain administrator has requested additional information from the applicant or his agent.
  - b. If 90 days after the owner or his agent has received the request for additional information the applicant has failed to submit reasonably complete information that demonstrates a good faith effort to provide all the additional information requested, as determined by the floodplain administrator, the application will become void. Any subsequent submittals will be considered as new applications and reviewed under the regulations in effect on the date the subsequent submittal is received by the floodplain administrator.

(Ord. No. 4912, 6-25-2012)