

Sec. 44-429. Floodplain Management Overlay (FPM-O)

Purpose: The flood hazard areas in the jurisdiction of Catawba County are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas by uses vulnerable to floods or other hazards.

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

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

The objectives of this Chapter are:

- ◆ *To protect human life, safety and health;*
- ◆ *To minimize expenditure of public money for costly flood control projects;*
- ◆ *To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;*
- ◆ *To minimize prolonged business losses and interruptions;*
- ◆ *To minimize damage to public facilities and utilities, (i.e. water and gas mains; electric, telephone, cable and sewer lines; streets; and bridges) located in flood prone areas;*
- ◆ *To help maintain a stable tax base by providing for the sound use and development of flood prone areas; and*
- ◆ *To ensure that potential homebuyers are aware that property is in a special flood hazard area.*

(Ord. No. 2007-14 7/9/2007)

Sec. 44-429.01. Statutory authorization.

The state has, in Part 6, Article 21 of Chapter 143; Parts 3 and 4 of Article 18 of Chapter 153A; and Part 121, Article 6 of Chapter 153A 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. 2007-14, 7/9/2007)

Sec. 44-429.02. Legal status provisions.

This Chapter in part comes forward by reenactment of some of the provisions of the flood damage prevention ordinance enacted on September 3, 1980, as amended, and it is not the intention to repeal but rather to reenact and continue to enforce without interruption such existing provisions, so that all rights and liabilities that have accrued are reserved and may be enforced. The enactment of this Article shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of the County enacted on September 3, 1980, as amended, which are not reenacted in this Article are repealed.

The dates of the initial Flood Insurance Rate Maps for each municipal jurisdiction within Catawba County are as follows:

Brookford	December 18, 1979
Catawba	September 3, 1980
Claremont	March 3, 2003
Conover	September 3, 1980
Hickory	August 3, 1981
Long View	September 3, 1980
Maiden	September 3, 1980
Newton	September 3, 1980

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.03. Effect upon outstanding floodplain development permits.

Nothing contained in this Chapter shall require any change in the plans, construction, size or designated use of any development, or any part for which a floodplain development permit has been granted by the planning director before the time of passage of this Chapter; provided, however, that if construction is not begun under such outstanding permit within a period of 6 months subsequent to the date of issuance of the outstanding permit, the construction or use shall be in conformity with the provisions of this Chapter.

Sec. 44-429.04. General provisions.

- (a) *Lands to which this Chapter applies.* This Chapter shall apply to all special flood hazard areas (SFHA) within the jurisdiction of Catawba County.
- (b) *Basis for establishing the special flood hazard areas.* The special flood hazard areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRM) for Catawba County dated September 5, 2007, which are adopted by reference and declared to

be a part of this Chapter. The initial Flood Insurance Rat Maps are as follows for the jurisdictional areas at the initial date:

Catawba County Unincorporated Area, dated September 3, 1980

- (c) *Establishment of floodplain development permit.* A floodplain development permit shall be required in conformance with the provisions of this Chapter prior to the commencement of any development activities within special flood hazard areas as determined in Sec. 44-429.04(b).
- (d) *Compliance.* No structure or land shall be located, extended, converted, altered, or developed in any way without full compliance with the terms of this Chapter and other applicable regulations.
- (e) *Abrogation and greater restrictions.* This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- (f) *Interpretation.* In the interpretation and application of this Chapter, all provisions shall be considered as minimum requirements:
 - (1) Considered as minimum requirements;
 - (2) Liberally construed in favor of the board of commissioners; and
 - (3) Deemed to neither limit nor repeal any other powers granted under state statutes.
- (g) *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. Actual 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 County or by any officer or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made hereunder.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.05. Definitions.

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

Accessory structure (Appurtenant Structure) - 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.

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

Appeal - a request from a review of the planning director's interpretation of any provision of this Chapter.

Area of shallow flooding - a designated AO on a community's flood insurance rate map (FIRM) with base flood depths determined to be from 1 to 3 feet, where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard- see special flood hazard area (SFHA)

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

Base flood - the flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE) - a determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a "Special Flood Hazard Area", it may be obtained from engineering studies available from a Federal, State or other source using FEMA approved engineering methodologies. This elevation, when combined with the "Freeboard", establishes the "Regulatory Flood Protection Elevation."

Building see "Structure"

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

Development - any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures; mining, dredging, filling, grading, paving, excavation, or drilling operations; or storage of equipment or materials.

Disposal defined as in NCGS 130A-290(a)(6).

Elevated building - a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

Encroachment - the advance or infringement of uses, fill, excavation, buildings, structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Existing manufactured home park or manufactured home subdivision - a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which

the manufactured homes are affixed, including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads was completed before the initial effective date of the floodplain management regulations adopted by the community.

Flood or flooding - a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters; and/or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood boundary and floodway map (FBFM) - an official map of a community, issued by the Federal Emergency Management Agency, on which the special flood hazard areas and the floodway are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).

Flood hazard boundary map (FHBM) - an official map of a community, issued by the Federal Emergency Management Agency (FEMA), where the boundaries of the special flood hazard areas have been designated as zone A.

Flood insurance - the insurance coverage provided on the National Flood Insurance Program.

Flood insurance rate map (FIRM) - an official map of a community, issued by the Federal Emergency Management Agency, on which both the special flood hazard areas and the risk premium zones applicable to the community are delineated.

Flood insurance study (FIS) - an examination, evaluation, and determination of flood hazard areas, corresponding water surface elevations (if appropriate), flood insurance risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps (FBFM) if published.

Flood prone area- see Floodplain.

Floodplain or flood prone area - any land area susceptible to being inundated by water from any source.

Floodplain development permit - any type of permit that is required in conformance with the provisions of this Chapter, prior to the commencement of any development activity.

Floodplain management - 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, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

Floodplain management regulations - this Chapter, building code, health regulations, special purpose Chapters of the County Code, and other applications of police power. This term

describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

Floodproofing - 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.

Floodway - the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Flood zone - a geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

Floor - the top surface of an enclosed area in a building, including basement, for example, the top of slab in concrete slab construction or the top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Freeboard - the height added to the base flood elevation (BFE) 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 effects of urbanization of the watershed. The Base Flood elevation plus the freeboard establishes the Regulatory Flood Protection Elevation.

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

Hazardous waste management facility - a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste as defined in NCGS Article 9 of Chapter 130A.

Highest adjacent grade (HAG) - the highest natural elevation of the ground surface, prior to construction, next to the walls of the proposed structure.

Historic structure - any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a

district preliminarily determined by the Secretary of the Interior 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 CLG Program.

Certified Local Government (CLG) Programs are approved by the U.S. Department of Interior in cooperation with the N.C. 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.

Letter of map amendment (LOMA) - a letter provided by FEMA certifying the property is not in the floodplain.

Lowest adjacent grade (LAG) - the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building. For zones A and AO, use the natural grade elevation prior to construction.

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

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

Manufactured home park or subdivision - a parcel, or contiguous parcels of land divided into 2 or more manufactured home lots for rent or sale. (Also see new manufactured home park.)

Market value - the building value, excluding the land value and that of any accessory structures or other improvements on the lot, established by independent certified appraisal, replacement cost depreciated by age of building and quality of construction (actual cash value), or adjusted tax assessed values.

Mean sea level - for the purposes of the NFIP, the National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected in 1988, or other vertical control datum use as a reference for establishing varying elevations within the floodplain to which base flood elevations (BFE) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

New construction - structures for which the start of construction commenced on or after the effective date of the initial floodplain management regulations and includes any subsequent improvements to such structures.

Nonconforming building or development - any legally existing building or development which fails to comply with the current provisions of this Chapter.

Non-encroachment area - the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot as designated in the Flood Insurance Study report.

Planning director - the individual appointed to administer and enforce the floodplain management regulations.

Post-FIRM - 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 - construction or other development for which the start of construction occurred before the effective date of the initial Flood Insurance Rate Map.

Principally above ground - at least 51% of the actual cash value of the structure is above ground.

Public safety and/or nuisance - 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 (RV) - a vehicle, which is:

- (a) Built on a single chassis;
- (b) 400-square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towed by a light-duty truck; and
- (d) Not designed for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Reference level - the portion of a structure or other development that must be compared to the regulatory flood protection elevation to determine regulatory compliance. For structures within special flood hazard areas designated as Zone A1-A30, AE, A, A99 or AO, the reference level is the top of the lowest floor or bottom of lowest attendant utility including ductwork, whichever is lower.

Regulatory flood protection elevation - the elevation, in relation to mean sea level, to which the reference level of all structures and other development located within special flood hazard areas must be protected. Where base flood elevations (BFE) have been

determined, this elevation shall be the BFE plus 2 feet of freeboard. Where no BFE has been established, this elevation shall be at least 2 feet above the highest adjacent grade.

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

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

Salvage yard - 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 - any facility involved in the disposal of solid waste, as defined in NCGS 130A-290(a)(35).

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

Special flood hazard area (SFHA) - the land in the floodplain subject to a one percent or greater chance of being flooded in any given year as determined in Sec. 44-429.04(b) of this Chapter.

Start of construction includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure, including a manufactured home, on a site, such as pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufacture home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, 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 part of the main structure. For a 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 - a walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above ground. For floodplain management purposes, "principally above ground" means other manmade facilities or infrastructure principally above ground.

Substantial damage - damage of any origin sustained by a structure during any one year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. (See also definition of substantial improvement.)

Substantial improvement - any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one year period for which the cost equals or exceeds 50% 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. The term does not 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.

Variance - a grant of relief from the requirements of this Chapter.

Violation - the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in the Floodplain Management Overlay District is presumed to be in violation until such time as that documentation is provided.

Water surface elevation (WSE) - the height, in relation to mean sea level (existing grade in case of Zone AO), of floods of various magnitudes and frequencies in the floodplains of riverine areas.

Watercourse - a lake, river, creek, stream, wash, 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.

(Ord. No. 2007-14, 7/9/2007)

ADMINISTRATION AND ENFORCEMENT

Sec. 44-429.06. Designation of planning director.

The planning director is appointed to administer and implement the provisions of this Chapter.

Sec. 44-429.07.

Floodplain development application, permit and certification requirements.

Application requirements. Application for a floodplain development permit shall be made to the planning director before any development activities located within special flood hazard areas. The following items must be presented to the planning director to apply for a floodplain development permit:

- (a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - (1) 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;
 - (2) The boundary of the special flood hazard area as delineated on the FIRM or other flood map as determined in Sec. 44-429.04(b), or a statement that the entire lot is within the special flood hazard area;
 - (3) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Sec. 44-429.04(b);
 - (4) The boundary of the floodway(s) or non-encroachment area(s) as determined in Sec. 44-429.04(b);
 - (5) The Base Flood Elevation (BFE) where provided as set forth in Sec. 44-429.04(b), 44-429.10 or Sec. 44-429.16;
 - (6) The old and new location of any watercourse that will be altered or relocated as a result of proposed development;
- (b) Proposed elevation, and method thereof, of all development within a special flood hazard area including but not limited to:
 - (1) Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
 - (2) Elevation in relation to mean sea level to which any non-residential structure in Zone AE, A or AO will be flood-proofed; and
 - (3) Elevation in relation to mean sea level to which any proposed utility systems will be elevated or floodproofed.
- (c) If floodproofing, a floodproofing certificate (FEMA Form 81-65) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.
- (d) 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:

- (1) The proposed method of elevation, if applicable (for example, fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls);
 - (2) Openings to facilitate automatic equalization of hydrostatic flood forces on walls in accordance with Sec. 44-429.15(d)(3), when solid foundation perimeter walls are used in Zones A, AO, AE, and A1-30.
- (e) Usage details of any enclosed areas below the lowest floor.
 - (f) 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;
 - (g) Certification that all other local, state and federal permits required prior to floodplain development permit issuance have been received. (h) Documentation for placement of recreational vehicles and/or temporary structures, when applicable, to ensure that the provisions of Sec. 44-429.15(f) and (g) of this Chapter are met.
 - (i) A description of proposed watercourse alteration or relocation, 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 watercourse alteration or relocation.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.08. Permit requirements.

At a minimum, the floodplain development permit must include:

- (a) A description of the proposed development;
- (b) The special flood hazard area determination for the proposed development in accordance with available data specified in Sec. 44-429.04(b);
- (c) The regulatory flood protection elevation required for the reference level and all attendant utilities;
- (d) The regulatory flood protection elevation required for the protection of all public utilities;
- (e) All certification submittal requirements with timelines;
- (f) A statement that no fill material shall encroach into the floodway or non-encroachment area of any watercourse, as applicable;
- (g) The flood openings requirements, if in Zone A, AO, AE or A1-30; and
- (h) Limitations of below BFE enclosure uses (if applicable), (i.e., parking, building access and limited storage only).

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(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.09. Certification requirements.

(a) *Elevation certificates:*

- (1) An elevation certificate (FEMA Form 81-31) or floodproofing certificate (FEMA Form 81-65) is required after the reference level is established. Within 7-calendar days of establishment of the reference level elevation, it is the duty of the permit holder to submit to the planning director, a certification of the elevation of the reference level, in relation to mean sea level. Elevation certification must be prepared and certified by, or under the direct supervision of, a registered land surveyor or professional engineer. Any work done within the 7-day calendar period, and prior to submission of the certification, is at the permit holder's risk. The planning director shall review the certificate data submitted. Deficiencies detected by such review must be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.
- (2) A final as-built elevation certificate (FEMA Form 81-31) is required after construction is completed and prior to certificate of compliance/occupancy issuance. The permit holder has the duty to submit to the planning director a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The planning director shall review the certificate data submitted. Deficiencies must be corrected by the permit holder immediately and prior to certificate of compliance/occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a certificate of compliance/occupancy.

- (b) If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a floodproofing certificate (FEMA Form 81-65), with supporting data, an operational plan, and an inspection and maintenance plan, is required prior to the actual start of any new construction. The permit holder has the duty to submit to the planning director a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification must be prepared and certified by, or under the direct supervision of, a professional engineer or architect. The planning director shall review the certificate data, operational plan, and the inspection and maintenance plan submitted by the permit holder. Deficiencies detected by such review must be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a certificate of compliance/occupancy.

- (c) If a manufactured home is placed within Zone A, AO, AE, or A1-30 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required in accordance with the provision of Sec. 44-429.15(c)(2).
- (d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified 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 showing the location of the proposed watercourse alteration or relocation must all be submitted by the permit applicant prior to issuance of a floodplain development permit.
- (e) Certification Exemptions. The following structures, if located within Zone A, AO, AE or A1-30, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) above:
 - (1) Recreational Vehicles meeting requirements of Section 44-429.15(f)(1);
 - (2) Temporary Structures meeting requirements of Section 44-429.15(g); and
 - (3) Accessory Structures less than 150 square feet meeting requirements of Section 44-429.15(h).

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.10. Duties and responsibilities of the planning director.

At a minimum, the planning director is responsible for the following:

- (a) Review all floodplain development applications and issue permits for all proposed development within special flood hazard areas to assure that the requirements of this Chapter have been satisfied;
- (b) Review all proposed development within special flood hazard areas to assure that all necessary local, state and federal permits have been received. (c) Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA;
- (d) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained;
- (e) Prevent encroachments within floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Sec. 44-429.16 are met;
- (f) Obtain actual elevation (in relation to mean sea level) of the reference level, (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with Sec. 44-429.09;

- (g) Obtain actual elevation (in relation to mean sea level) to which the new or substantially improved structures and all utilities have been floodproofed in accordance with the provisions of Sec. 44-429.09;
- (h) Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with the provisions of Sec. 44-429.09;
- (i) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the provisions of Sec. 44-429.09 and Sec. 44-429.15(b);
- (j) Where interpretation is needed as to the exact location of boundaries of the special flood hazard areas, floodways, or non-encroachment areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary has 30 days to appeal the interpretation as provided in this Article;
- (k) When BFE data has not been provided in accordance with Sec. 44-429.04(b), obtain, review and reasonably utilize any base flood elevation (BFE) data, along with floodway data or non-encroachment area data available from a federal, state or other source, including data developed pursuant to Sec. 44-429.16(b)(2), in order to administer the provisions of this Chapter;
- (l) When BFE data is provided but no floodway or non-encroachment area data has been provided in accordance with Sec. 44-429.04(b), obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a federal, state, or other source in order to administer the provisions of this Chapter
- (m) When the lowest floor and the lowest adjacent grade of a structure or the lowest ground elevation of a parcel or structure in a special flood hazard area is above the BFE, advise the owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the LOMA issued by FEMA in the floodplain development permit file;
- (n) 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;
- (o) Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the planning director 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 Chapter and the terms of the permit. In exercising this power, the planning director has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action;
- (p) Issue stop-work orders as required. Whenever a building or part of a building is being constructed, reconstructed, altered, or repaired in violation of this Chapter,

the planning director may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing or in charge of the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stopped, and the condition(s) under which the work may be resumed. Violation of a stop -work order constitutes a misdemeanor;

- (q) Revoke floodplain development permits as required. The planning director may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, and specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable state or local law may also be revoked;
- (r) Make periodic inspections throughout the special flood hazard areas within the jurisdiction of the community. The planning director shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action;
- (s) Follow through with corrective procedures of Sec. 44-429.11;
- (t) Review, provide input, and make recommendations for variance requests;
- (u) Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and/or other official flood maps/studies adopted under Sec. 44-429.04(b) of this Chapter, including any revisions thereto including Letters of Map Change, issued by the state and/or FEMA. Notify the state and FEMA of mapping needs;
- (v) Coordinate revisions to FIS reports and FIRM, including Letters of Map Revision Based on Fill (LOMR-F) and Letters of Map Revision (LOMR).

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.11. Corrective procedures.

- (a) *Violations to be corrected.* When the planning director finds violations of applicable state and local laws, he must notify the owner or occupant of the building of the violation. The owner or occupant must each immediately remedy each of the violations of law cited in such notification.
- (b) *Actions in event of failure to take corrective actions.* If the owner of a building or property fails to take prompt corrective action, the planning director shall give the owner written notice, by certified or registered mail, to the owner's last known address or by personal service, stating:
 - (1) That the building or property is in violation of the floodplain management regulations;
 - (2) That a hearing will be held before the planning director at a designated place and time, not later than 10 days after the date of the notice, at which

time the owner is entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and

- (3) That following the hearing, the planning director may issue an order to alter, vacate, or demolish the building, remove fill as applicable.
- (c) *Order to take corrective action.* If, upon a hearing held pursuant to the notice prescribed above, the planning director shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, they shall issue an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than 60 calendar days, nor more than 180 calendar days. Where the planning director finds that there is imminent danger to life or other property, he may order that corrective action be taken in such lesser period as may be feasible.
- (d) *Appeal.* Any owner who has received an order to take corrective action may appeal from the order to the board of adjustment by giving notice of appeal in writing to the secretary of the board of adjustment within 10 days following issuance of the final order. In the absence of an appeal, the order of the planning director 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 orders.* If the owner 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 pursuant to this Chapter, he or she shall be guilty of a misdemeanor and shall be punished in accordance with the law.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.12. Variance procedures.

- (a) The board of adjustment shall act as the appellate board and hear and decide requests for variances from the requirements of this Chapter.
- (b) Any person aggrieved by the decision of the board of adjustment may appeal such decision to the court, as provided in NCGS Chapter 7A.
- (c) Variances may be issued for:
 - (1) 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;
 - (2) Functionally dependent facilities if determined to meet the definition as stated in Sec. 44-429.05, provided provisions of Sec. 44-429.12(i)(2), (3), and (5) 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; and

- (3) Any other type of development, provided it meets the requirements of this Chapter.
- (d) In passing upon such applications, the board of adjustment shall consider all technical evaluations, all relevant factors, all standards specified in this Chapter along with the following:
- (1) The danger that materials may be swept onto other lands to the injury of others;
 - (2) The danger to life and property due to flooding or erosion damage;
 - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (4) The importance of the services provided by the proposed facility to the community;
 - (5) The necessity of the facility of a waterfront location as defined in Sec. 44-429.05 of this Chapter as a functionally dependent facility, where applicable;
 - (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (7) The compatibility of the proposed use with existing and anticipated development;
 - (8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (10) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters, and the effects of wave action, if applicable, expected at the site; and
 - (11) Costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
- (e) A written report addressing each of the above factors must be submitted with the application for a variance.
- (f) 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 and objectives of this Chapter.
- (g) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the BFE and the elevation to which the structure is to be built and that such construction below the BFE increases risks to life and property, and that the issuance of a variance to construct a structure below

the BFE will result in increased premium rates for flood insurance up to \$25 per \$100 of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.

- (h) The planning director shall maintain the records of all appeal actions and report any variances to FEMA and the state upon request.
- (i) Conditions for variances:
 - (1) Variances shall not be issued when the variance will make the structure in violation of other federal, state, or local laws, regulations, or Chapters;
 - (2) Variances shall not be issued within any designated floodway or non-encroachment area if the variance would result in any increase in flood levels during the base flood discharge;
 - (3) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;
 - (4) Variances shall only be issued prior to development permit approval
 - (5) Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship; and
 - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense; create a nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or Chapters.
- (j) A variance may be issued for solid waste disposal facilities or sites, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in special flood hazard areas provided that all of the following 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 area;
 - (3) The reference level of any structure is elevated or floodproofed to at least the regulatory flood protection elevation;
 - (4) The use complies with all other applicable federal, state and local laws; and
 - (5) The County has notified the Secretary of the North Carolina 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. 2007-14 7/9/2007)

Sec. 44-429.13. 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 variance or special exceptions, shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall be charged with a misdemeanor. Each day a violation continues shall be considered a separate and distinct offense. Nothing contained within this Chapter shall prevent the County from taking other lawful action as is necessary to prevent or remedy any violation.

PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 44-429.14. General standards.

In all areas of special flood hazard the following are required:

- (a) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure;
- (b) All new construction and substantial improvements must be constructed with materials and utility equipment resistant to flood damage;
- (c) All new construction or substantial improvements must be constructed by methods and practices that minimize flood damages;
- (d) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities must be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the regulatory flood protection elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, hot water heaters, and electric outlets/switches;
- (e) All new and replacement water supply systems must be designed to minimize or eliminate infiltration of floodwaters into the systems;
- (f) New and replacement sanitary sewage systems must be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
- (g) On-site waste disposal systems must be located and constructed to avoid impairment to them or contamination from them during flooding;
- (h) Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this Chapter, must meet the requirements of new construction as contained in this Chapter;
- (i) Nothing in this Chapter prevents the repair, reconstruction, or replacement of a building or structure existing on September 3, 1980, the effective date of the original ordinance, and located totally or partially within the floodway, non-encroachment area, or stream setback, provided that the bulk of the building or

structure below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback is not increased and provided that the repair, reconstruction, or replacement meets all of the other requirements of this Chapter;

- (j) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in special flood hazard areas, except by variance as specified in Sec. 44-429.12(j). 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 or floodproofed to at least the regulatory flood protection elevation and certified in accordance with the provisions of Sec. 44-429.09;
- (k) All subdivision and other development proposals must be consistent with the need to minimize flood damage;
- (l) All subdivision and other development proposals must have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- (m) All subdivision and other development proposals must have adequate drainage provided to reduce exposure to flood hazards; and
- (n) All subdivision proposals and other development proposals must have received all necessary permits from those governmental agencies for which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (o) When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.
- (p) 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. 2007-14 7/9/2007)

Sec. 44-429.15. Specific standards.

All special flood hazard areas where BFE data has been provided, as set forth in Sec. 44-429.04 (b) or Sec. 44-429.16, the following provisions, in addition to the provisions of Sec. 44-429.14, are required.

- (a) *Residential construction.* New construction and substantial improvement of any residential structure, including manufactured homes, shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Sec. 44-429.05 of this Chapter.

- (b) *Nonresidential construction.* New construction and substantial improvement of any commercial, industrial, or nonresidential structure, must have the referenced level including basement, elevated no lower than the regulatory flood protection elevation, as defined in Sec. 44-429.05 of this Chapter. Structures located in A, AO, AE and A1-30 zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the required flood protection 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 effect of buoyancy. For AO Zones, the floodproofing elevation shall be in accordance with Section 44-429.19(b). A registered professional engineer or architect must certify that the standards of this subsection are satisfied. Such certification must be provided to the official as set forth in Sec. 44-429.09, along with operational and maintenance plans.
- (c) *Manufactured homes.*
- (1) New and replacement manufactured homes must be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation, as defined in Sec. 44-429.05 of this Chapter.
 - (2) Manufactured homes must be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement either by certified engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured/Mobile Homes, 1995 Edition, and any revision thereto adopted by the commissioner of insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis at least 36 inches or less above the grade at the site, the chassis must be supported by reinforced piers or an engineered foundation. When the elevation of the chassis is above 36 inches in height, an engineering certification is required.
 - (3) All enclosures or skirting shall be in accordance with Sec. 44-429.15(d).
 - (4) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan must be filed and approved by the planning director and the local emergency management coordinator.
- (d) *Elevated buildings.* Fully enclosed area, of new construction and substantially improved structures, which is below the regulatory protection elevation:
- (1) Cannot be designed or used for human habitation, but may only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area must be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The

interior portion of the enclosed area must not be finished or partitioned into separate rooms, except to enclose storage areas;

- (2) Must be constructed entirely of flood resistant materials at least to the regulatory flood protection elevation; and
- (3) Must include, in Zones A, AO, AE, and A1-30, measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet the following minimum design criteria;
 - a. A minimum of 2 flood openings on different sides of each enclosed area subject to flooding;
 - b. The total net area of all openings must be at least one square inch for each square foot of enclosed area subject to flooding;
 - c. If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - d. The bottom of all required openings can be no higher than one foot above the adjacent grade;
 - e. Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and
 - f. Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, do not require flood openings. Masonry or wood underpinning, regardless of structural status, are considered to be an enclosure and requires openings as outlined above.

(e) *Additions/improvements.*

- (1) Additions and/or improvements to pre-FIRM structures when 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 must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.
 - b. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- (2) 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 for new construction.

- (3) Additions and/or improvements to post-FIRM structures when 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 for new construction.
- (f) *Recreational vehicles.* Recreational vehicles must 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 the requirements for new construction.
- (g) *Temporary non-residential structures.* Prior to the issuance of a floodplain development permit, for a temporary structure, applicants must submit to the planning director a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information must be submitted in writing for review and written approval:
 - (1) A specified time period for which the temporary use will be permitted. Time specified may not exceed 3 months, renewable up to one year;
 - (2) The name, address and phone number of the individual responsible for the removal of the temporary structure;
 - (3) The time-frame prior to the event during which a structure will be removed (for example, a minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);
 - (4) A copy of the contract or other suitable instrument with entity responsible for physical removal of the structure; and
 - (5) The designation, accompanied by documentation, of a location outside the special flood hazard area, to which the temporary structure will be moved.
- (h) *Accessory structures.* When accessory structures (sheds, detached garages, etc.) are to be placed within a special flood hazard area, the following criteria must be met:
 - (1) Accessory structures cannot be used for human habitation, (including work, sleeping, living, cooking or restroom areas);
 - (2) Accessory structures cannot be temperature-controlled;
 - (3) Accessory structures must be designed to have low flood-damage potential;

- (4) Accessory structures must be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
- (5) Accessory structures must be firmly anchored in accordance with the provisions of Sec. 44-429.14(a);
- (6) All service facilities, such as electrical, must be installed in accordance with the provisions of Sec. 44-429.14(d);
- (7) Flood openings to facilitate automatic equalization of hydrostatic flood forces must be provided below regulatory flood protection elevation in conformance with the provisions of Sec. 44-429.15(d)(3); and
- (8) An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with the provisions of Sec. 44-429.09.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.16. Standards for floodplains without established base flood elevations.

Within the Special Flood Hazard areas designated as approximate zone A and established in Sec. 44-429.04(b) where no BFE data has been provided by FEMA, the following provisions, in addition to the provisions of Sec. 44-429.14, apply:

- (a) No encroachments, including fill, new construction, substantial improvements, or new development, are permitted within a distance of 20 feet from each side from the top of each bank or 5 times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments will not result in any increase in flood levels during the occurrence of the base flood discharge.
- (b) The BFE used in determining the regulatory flood protection elevation must be determined based on the following criteria:
 - (1) When BFE data is available from other sources, all new construction and substantial improvements within such areas must comply with all applicable provisions of this Chapter and must be elevated or floodproofed in accordance with standards in Sec. 44-429.14 and Sec.44-429.15.
 - (2) When floodway data is available from a federal, state, or other source, all new development within floodway areas shall also comply with the requirements of Sec. 44-429.15 and Sec. 44-429.18.
 - (3) All subdivision, manufactured home park and other development proposals located within special flood hazard areas must provide BFE data if development is greater than 5 acres or has more than 50 lots/manufactured home sites. The BFE data must be adopted by

reference in accordance with Sec. 44-429.04(b) and utilized in implementing this Chapter.

- (4) When BFE data is not available from a federal, state, or other source as outlined above, the reference level must be elevated or floodproofed (nonresidential) to or above the regulatory flood protection elevation as defined in Sec. 44-429.05. Requirements of Sec. 44-429.15 shall also apply.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.17. Standards for riverine floodplains with BFE but without established floodways or non-encroachment areas.

Along rivers and streams where BFE data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a special flood hazard area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

- (a) Standards outlined in Sec. 44-429.14 and Sec. 44-429.15.
- (b) Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.18. Floodways and non-encroachment areas.

Areas designated as floodways or non-encroachment areas are located within the special flood hazard areas established in Sec. 44-429.04(b). The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Sec. 44-429.14, and Sec. 44-429.15 shall apply to all development within such areas:

- (a) No encroachments, including fill, new construction, substantial improvements and other developments, are to be permitted unless:
 - (1) It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the planning director prior to issuance of floodplain development permit, or
 - (2) A Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.

- (b) If Sec. 44-429.18(a) is satisfied, all development must comply with all applicable provisions of this Chapter.
- (c) No manufactured homes are permitted, except replacement manufactured homes in an existing manufactured home park or subdivision, provided the following provisions are met:
 - (1) The anchoring and the elevation standards of Sec. 44-429.15(c); and
 - (2) The no encroachment standards of Sec. 44-429.16(a) are met.

(Ord. No. 2007-14, 7/9/2007)

Sec. 44-429.19. Standards for areas of shallow flooding (AO zones).

Located within the special flood hazard areas established in Sec. 44-429.04(b) are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Sec. 44-429.14 and Sec. 44-429.15, all new construction and substantial improvements of all structures must meet the following requirements:

- (a) The reference level must be elevated at least as high as the depth number specified on the FIRM in feet, plus a freeboard of 2 feet, above the highest adjacent grade; or at least 2 feet above the highest adjacent grade plus a freeboard of 2 feet if no depth number is specified.
- (b) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as listed above so that the structure, together with attendant utility and sanitary facilities, below that level must be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as in accordance with Sec. 44-429.09 and Sec. 44-429.15(b).
- (c) Adequate drainage paths must be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

(Ord. No. 2007-14, 7/9/2007)