

CHAPTER 76.
FLOODPLAIN MANAGEMENT

ARTICLE I
General provisions

§76-1. *Authority.*

This ordinance is adopted pursuant to the authority granted to localities by Va. Code § 15.2 - 2280. Specifically, the authority to protect floodplains is found in the Code of Virginia § 10.1-600 et seq. the Flood Damage Reduction Act (§ 10.1-600 et seq.) establishes the Federal National Flood Insurance Act 42 U.S.C. § 4001 et seq. as the appropriate reference point for floodplain protection.

§76-2. *Purpose.*

The purpose of these provisions is to prevent the loss of life and property, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

- (1) Regulating uses, activities, and development which, alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities, and frequencies;
- (2) Restricting or prohibiting certain uses, activities, and development from locating within districts subject to flooding;
- (3) Requiring all those uses, activities, and developments that do occur in flood-prone districts to be protected and/or flood proofed against flooding and flood damage as required by the Virginia Uniform Statewide Building Code; and,
- (4) Protecting individuals from buying land and structures which are unsuited for intended purposes because of flood hazards.

§76-3. *Applicability.*

These provisions shall apply to all lands within the jurisdiction of Northumberland County, Virginia, and identified as being in the 100-year floodplain by the Federal Insurance Administration.

§76-4. *Compliance and liability.*

- (1) No land shall hereafter be developed and no structure shall be located, relocated, constructed, reconstructed, enlarged, or structurally altered except in full compliance with the terms and provisions of this ordinance and any

other applicable ordinances and regulations which apply to uses within the jurisdiction of this ordinance.

- (2) The degree of flood protection sought by the provisions of this ordinance is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study. Larger floods may occur on rare occasions. Flood heights may be increased by manmade or natural causes, such as ice jams and bridge openings restricted by debris. This ordinance does not imply that districts outside the floodplain district, or that land uses permitted within such district will be free from flooding or flood damages.
- (3) Records of actions associated with administering this ordinance shall be kept on file and maintained by the Northumberland County Office of Building and Zoning.
- (4) This ordinance shall not create liability on the part of Northumberland County, Virginia or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

§76-5. Abrogation and greater restrictions.

This ordinance supersedes any ordinance currently in effect in flood-prone districts. However, any underlying zoning district shall remain in full force and effect to the extent that its provisions are more restrictive than this district.

§76-6. Severability.

If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance shall be declared invalid for any reason whatever, such decision shall not affect the remaining portions of this ordinance. The remaining portions shall remain in full force and effect; and for this purpose, the provisions of this ordinance are hereby declared to be severable.

§76-7. Penalty for violations.

Any person who fails to comply with any of the requirements or provisions of this article or directions of the Building Official or any authorized employee of Northumberland County shall be guilty of a misdemeanor and subject to the penalties therefore. In addition to the above penalties, all other actions are hereby reserved, including an action in equity for the proper enforcement of this article. The imposition of a fine or penalty for any violation of, or noncompliance with, this article shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations or noncompliances within a reasonable time. Any structure constructed, reconstructed, enlarged, altered or relocated in noncompliance with this article may be declared by Northumberland County to be a public nuisance and abatable as such. Flood insurance may be withheld from structures constructed in violation of this article.

ARTICLE II
Definitions

§76-8. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

Base flood/one-hundred year flood: The flood having a one percent chance of being equaled or exceeded in any given year. A flood that, on the average, is likely to occur once every 100 years (i.e., that has a one-percent chance of occurring each year, although the flood may occur in any year)

Base flood elevation (BFE): The Federal Emergency Management Agency designated 100-year water surface elevation, ~~as reported in Flood Insurance Study, Northumberland County, Virginia (Unincorporated Areas) 1988, Federal Emergency Management Agency (Community Number 510084).~~ The water surface elevation of the base flood in relation to the datum specified on the community's Flood Insurance Rate Map. For the purposes of this ordinance, the one hundred (100) year flood or 1% annual chance flood.

Basement: That portion of a building that is partly or completely below grade.

Breakaway wall: A wall that is not part of the structural support of the building and is intended through its design and construction to the elevated portion of the building or supporting foundation system.

Coastal high hazard area: An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

Development: Any manmade 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.

Encroachment: The advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Flood or flooding:

1. A general or temporary condition of partial or complete inundation of normally dry land areas from
 - a. the overflow of inland or tidal waters;
 - b. the unusual and rapid accumulation or runoff of surface waters from any source;
 - c. mudflows which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and

- flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current; or,
- d. the collapse or subsistence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

Flood Insurance Rate Map (FIRM): an official map of a community, on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that is available digitally is called a Digital Flood Insurance Rate Map (DFIRM). Northumberland County's FIRM's (Community # 510107) include the following panels: 0015, 0018, 0019, 0020, 0038, 0039, 0060, 0080, 0085, 0090, 0095, 0101, 0102, 0105, 0106, 0108, 0109, 0115, 0120, 0128, 0129, 0140, 0143, 0144, 0145, 0163, 0185, 0205, 0210, 0220, 00227, 0229, 0230, 0233, 0234, 0235, 0237, 0239, 0240, 0245, 0255, 0275, 0302, 0304, 0305, 0306, 0308, 0310, 0312, 0316, 0320, 0350.

Flood Insurance Study (FIS): an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudflow and/or flood-related erosion hazards.

Floodplain: Any land area susceptible to being inundated by water from any source.

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 a designated height.

Flood proofing: any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Freeboard: A factor of safety usually expressed in feet above a flood level for purposes of floodplain management.

Highest adjacent grade: the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure: Any structure that is

1. listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on

the National Register;

2. 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 to qualify as a registered historic district;
3. individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or,
4. individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either
 - a. by an approved state program as determined by the Secretary of the Interior; or,
 - b. directly by the Secretary of the Interior in states without approved programs.

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 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 Federal Code 44CFR §60.3.

Manufactured home: As defined by the Virginia Uniform Statewide Building Code.

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

New construction: For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after ~~March 4, 1988~~ July 4, 1989, and includes any subsequent improvements to such structures. For floodplain management purposes, *new construction* means structures for which the *start of construction* commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

Primary frontal dune: A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent the beach and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is distinct change from a relatively steep slope to a relatively mild slope.

Recreational vehicle: A vehicle which is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck;
and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

Special flood hazard area: The land in the floodplain subject to a one (1%) percent or greater chance of being flooded in any given year as determined in Article 3, Section 3.2 of this ordinance.

Start of construction: For other than new construction and substantial improvement, under the Coastal Barriers Resource Act (P.L. – 97-348), means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement 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 on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured 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, 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 part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

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

Substantial damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which 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. The term does not, however, include either:

1. any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or

2. any alteration of a *historic structure*, provided that the alteration will not preclude the structure's continued designation as a *historic structure*.

Violation: The failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Sec. 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Watercourse: A lake, river, creek, bay, 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.

ARTICLE III Establishment of Floodplain Areas

§76-9. *Description of districts.*

(1) *Basis of districts.* The floodplain district shall include areas subject to inundation by waters of the 100-year flood. The basis for the delineation of the district shall be the 100-year flood elevations or profiles contained in the Flood Insurance Study (FIS) and the Flood Insurance Rate Maps (FIRMs) for Northumberland County, Virginia prepared by the Federal Emergency Management Agency, Federal Insurance Administration, dated September 17, 2010, as amended.

(2) *District Boundaries.* The boundaries of the Special Flood Hazard Area and Floodplain Districts are established as shown on the Flood Insurance Rate Map which is declared to be a part of this ordinance and which shall be kept on file at the Northumberland County Land Use offices.

- a. The Floodway District is delineated, for purposes of this ordinance, using the criterion that certain areas within the floodplain must be capable of carrying the waters of the one hundred (100)-year flood without increasing the water surface elevation of that flood more than one (1) foot at any point. The areas included in this District are specifically defined in the above-referenced Flood Insurance Study and shown on the accompanying Flood Insurance Rate Map.
- b. The Special Floodplain District shall be those areas identified as an AE Zone on the maps accompanying the Flood Insurance Study for which one hundred (100)-year flood elevations have been provided.
- c. The Approximated Floodplain District shall be those areas

identified as an A or A99 Zone on the maps accompanying the Flood Insurance Study. In these zones, no detailed flood profiles or elevations are provided, but the one hundred (100)-year floodplain boundary has been approximated. For these areas, the one hundred (100)-year flood elevations and floodway information from federal, state, and other acceptable sources shall be used, when available. Where the specific one hundred (100)-year flood elevation cannot be determined for this area using other sources of data, such as the U.S. Army Corps of Engineers Flood Plain Information Reports, U.S. Geological Survey Flood-prone Quadrangles, etc., then the applicant for the proposed use, development and/or activity shall determine this elevation in accordance with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a through review by the governing body.

- d. The Coastal High Hazard District shall be those areas identified as V, VE, or V Zones on the maps accompanying the Flood Insurance Study.

(3) *Overlay concept.*

- a. The floodplain district described above shall be overlays to the existing underlying area as shown on the Official Zoning Ordinance Map, and as such, the provisions for the floodplain district shall serve as a supplement to the underlying district provisions.
- b. Any conflict between the provisions or requirements of the floodplain districts and those of any underlying district, the more restrictive provisions and/or those pertaining to the floodplain districts shall apply.
- c. In the event any provision concerning a floodplain district is declared inapplicable as a result of any legislative or administrative actions or judicial decision, the basic underlying provisions shall remain applicable.

§76-10. *Official map.*

The boundaries of the floodplain district are established as shown on the flood insurance rate map which is declared to be a part of this ordinance and which

shall be kept on file at the Northumberland County Office of Building and Zoning.

§76-11. *District boundary changes.*

The delineation of any of the floodplain districts may be revised by the Northumberland County Board of Supervisors where natural or manmade changes have occurred and/or where more detailed studies have been conducted or undertaken by the U.S. Army Corps of Engineers or other qualified agency, or an individual documents the need for such change. However, prior to any such change, approval must be obtained from the Federal Insurance Administration.

§76-12. *Interpretation of district boundaries.*

Initial interpretations of the boundaries of the floodplain district shall be made by the zoning administrator. Should a dispute arise concerning the boundaries of any of the districts, the Board of Zoning Appeals shall make the necessary determination. The person questioning or contesting the location of the district boundary shall be given a reasonable opportunity to present his case to the board and to submit technical evidence if desired.

§76-13. *Submitting Technical Data.*

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.

ARTICLE IV
Development Regulations

§76-14. *Permit requirements.*

All uses, activities, and development occurring within any floodplain district, including placement of manufactured homes, shall be undertaken only upon the issuance of a zoning permit. Such development shall be undertaken only in strict compliance with the provisions of the ordinance and with all other applicable codes and ordinances, such as the Virginia Uniform Statewide Building Code and the Northumberland County Subdivision Ordinance. Prior to the issuance of any such permit, the zoning administrator shall require all applications to include compliance with all applicable state and federal laws. Under no circumstances shall any use, activity, and/or development adversely affect the capacity of the

channels or floodway of any watercourse, drainage ditch, or any other drainage facility or system.

1. *Site Plans and Permit Applications.* All applications for development within any floodplain district and all building permits issued for the floodplain shall incorporate the following information:

- (a) The elevation of the Base Flood at the site.
- (b) The elevation of the lowest floor (including basement).
- (c) For structures to be flood-proofed (non-residential only), the elevation to which the structure will be flood-proofed.
- (d) Topographic information showing existing and proposed ground elevations.

2. *General Standards.* The following provisions shall apply to all permits:

- (a) New construction and substantial improvements shall be according to the VA USBC, and 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, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state anchoring requirements for resisting wind forces.
- (c) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (d) New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (e) Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities, including ductwork, shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (f) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (g) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems 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) Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall insure proper drainage along streets, and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.
- (j) Prior to any proposed alteration or relocation of any channels or of any watercourse, stream, etc., within this jurisdiction a permit shall

be obtained from the U. S. Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission (a joint permit application is available from any of these organizations). Furthermore, in riverine areas, notification of the proposal shall be given by the applicant to all affected adjacent jurisdictions, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and the Federal Insurance Administration.

- (k) The flood carrying capacity within an altered or relocated portion of any watercourse shall be maintained.

3. *Specific Standards.* In all special flood hazard areas where base flood elevations have been provided in the Flood Insurance Study or generated according to Article 4, section 4.6, the following provisions shall apply:

- (a) *Residential Construction.* New construction or substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor, including basement, elevated at least two feet above the base flood level.

- (b) *Non-Residential Construction.* New construction or substantial improvement of any commercial, industrial, or non-residential building (or manufactured home) shall have the lowest floor, including basement, elevated at least two feet above the base flood level. Buildings located in all A1-30, AE, and AH zones may be floodproofed in lieu of being elevated provided that all areas of the building components below the elevation corresponding to the BFE plus one foot are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification, including the specific elevation (in relation to mean sea level) to which such structures are floodproofed, shall be maintained by zoning administrator.

~~(b)~~

- (c) ~~(e)~~ *Elevated Buildings.* Fully enclosed areas, of new construction or substantially improved structures, which are below the regulatory flood protection elevation shall:

1. not be designed or used for human habitation, but shall 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 shall 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).
2. be constructed entirely of flood resistant materials below the regulatory flood protection elevation;

3. 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. Provide a minimum of two openings on different sides of each enclosed area subject to flooding.
 - b. The total net area of all openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding.
 - c. If a building has more than one enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.
 - d. The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade.
 - e. Openings may be equipped with screens, louvers, or other opening coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
 - f. Foundation enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires openings as outlined above.

(d) *Manufactured Homes.* All manufactured homes placed, or substantially improved, on individual lots or parcels, in expansions to existing manufactured home parks or subdivisions, in a new manufactured home park or subdivision or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood, must meet all the requirements for new construction, including the elevation and anchoring requirements in Article 4, section 4.2 (A) and (B), and section 4.3 (A).

(e) *Recreational Vehicles.* All recreational vehicles placed in AE or VE Zones must either:

- (i) Be on site for fewer than 180 consecutive days;
- (ii) 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 security devices and has no permanently attached additions); or,
- ~~(d)~~(iii) Meet all the requirements for manufactured homes in AE-Zones.

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§76-15. District provisions.

- A. *Standards for the Floodway District.* The following provisions shall apply within the Floodway District:
- (1) Encroachments, including fill, new construction, substantial improvements and other developments are prohibited unless certification such as hydrologic and hydraulic analyses (with supporting technical data) is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough review by the zoning administrator. Development activities which increase the water surface elevation of the base flood may be allowed, provided that the {developer or applicant} first applies – with Northumberland County’s endorsement – for a conditional Flood Insurance Rate Map and floodway revision, and receives the approval of the Federal Emergency Management Agency.
 - (2) If Article 4, Section 4.6 (A) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 4.
 - (3) The placement of manufactured homes (mobile homes) is prohibited, except in an existing manufactured homes (mobile homes) park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring, elevation, and encroachment standards are met.
- B. *Standards for the Special Floodplain District.* The following provisions shall apply within the Special Floodplain District:
- (1) Until a regulatory floodway is designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within the areas of special flood hazard, designated as Zones A1-30 and AE on the Flood Insurance Rate Map, unless it is demonstrated 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 Northumberland County.
 - (2) Development activities in Zones A1-30, AE, and AH, on Northumberland County’s Flood Insurance Rate Map which increase the water surface elevation of the base flood by more than one foot may be allowed, provided that the applicant first applies – with Northumberland County’s endorsement – for a conditional Flood Insurance Rate Map revision, and receives the approval of the Federal Emergency Management Agency.
- C. *Standards for Approximated Floodplain.* The following provisions shall apply with the Approximate Floodplain District: Note: This section is a slightly higher standard than what is required by law. For the bare minimum

regulation for this section, please see 44 CFR 60.3(b).

- (1) The Approximated Floodplain District shall be that floodplain area for which no detailed flood profiles or elevations are provided, but where a one hundred (100)-year floodplain boundary has been approximated. Such areas are shown as Zone A on the maps accompanying the Flood Insurance Study. For these areas, the one hundred (100)-year flood elevations and floodway information from federal, state, and other acceptable sources shall be used, when available. Where the specific one hundred (100)-year flood elevation cannot be determined for this area using other sources of data, such as the U. S. Army Corps of Engineers Floodplain Information Reports, U. S. Geological Survey Flood-Prone Quadrangles, etc., then the applicant for the proposed use, development and/or activity shall determine this elevation. For development proposed in the approximate floodplain the applicant must use technical methods that correctly reflect currently accepted technical concepts, such as point on boundary, high water marks, or hydrologic and hydraulic analyses. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough review by the zoning administrator.
- (2) The zoning administrator reserves the right to require hydrologic and hydraulic analyses for any development.
 - (a) When such base flood elevation data is utilized, the lowest floor shall be elevated at least one foot above the base flood level. During the permitting process, the zoning administrator shall obtain:
 - 1) the elevation of the lowest floor (including the basement) of all new and substantially improved structures; and,
 - 2) if the structure has been flood-proofed in accordance with the requirements of this article, the elevation (in relation to mean sea level) to which the structure has been flood-proofed.

D. *Coastal High Hazard District.* These areas have special flood hazards associated with wave action, therefore the following additional provisions shall apply:

- (1) All new construction shall be located 100 feet landward of the reach of mean high tide;
- (2) There shall be no fill used as structural support;
- (3) There shall be no alteration of sand dunes which would increase potential flood damage;
- (4) Within V-Zones on the Flood Insurance Rate Map, obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures, and whether or not such structures contain a basement;
- (5) All new construction and substantial improvements elevated on pilings and columns must have the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) elevated at least one foot above the base flood level and the pile or column foundation

and structure attached thereto must be anchored to resist floatation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (one-percent annual chance) A registered professional engineer or architect shall develop or review the structural design and methods of construction and shall certify that design and methods of construction to be used are in accordance with accepted standards;

- (6) Provide that all new construction and substantial improvements, within ~~zones V1-30 and V~~Zone VE on the community's FIRM, have the space below the lowest floor either free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design ~~stage-safe~~ loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:
 - (a) Breakaway wall collapse shall result from a water load less than which would occur during the base flood; and
 - (b) The elevated portion of the building and supporting foundation shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Water loading values used shall have a one percent chance of being equaled or exceeded in any given year. Wind loading values used shall be those required by applicable state or local building standards. Such enclosed space shall be usable solely for parking of vehicles, building access or storage.
- (7) All manufactured homes to be placed or substantially improved within V-Zones shall comply with the same standards as set forth for conventional housing in V-Zones and meet the standards for manufactured homes in section 3(f) 3(d); and,
- (8) All recreational vehicles placed in V-Zones shall be in compliance with Article 19 -- Major Recreational Vehicles of the Northumberland County Zoning Ordinance and be:
 - (a) on site for fewer than 180 consecutive days;
 - (b) 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 security devices, and has no permanently attached additions.), or
 - (c) meet the same standards as for conventional housing in V-Zones.

ARTICLE V
Variances

§76-16. Variances.

Variances shall be issued only upon (i) a showing of good and sufficient cause, (ii) after the Board of Zoning Appeals has determined that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) after the Board of Zoning Appeals has determined that the granting of such variance will not result in (a) unacceptable or prohibited increases in flood heights, (b) additional threats to public safety, (c) extraordinary public expense; and will not (d) create nuisances, (e) cause fraud or victimization of the public, or (f) conflict with local laws or ordinances.

While the granting of variances generally is limited to a lot size less than one-half acre, deviations from that limitation may occur. However, as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases. Variances may be issued by the Board of Zoning Appeals for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of this section.

Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of this section are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

In passing upon applications for variances, the Board of Zoning Appeals shall satisfy all relevant factors and procedures specified in other sections of the zoning ordinance and consider the following additional factors:

- (a) The danger to life and property due to increased flood heights or velocities caused by encroachments. No variance shall be granted for any proposed use, development, or activity within any floodway that will cause any increase in the 100-year flood elevation.
- (b) The danger that materials may be swept on to other lands or downstream to the injury of others.
- (c) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.
- (d) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners.
- (e) The importance of the services provided by the proposed facility to the community.
- (f) The requirements of the facility for a waterfront location.
- (g) The availability of alternative locations not subject to flooding for the proposed use.

- (h) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
- (i) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
- (j) The safety of access by ordinary and emergency vehicles to the property in time of flood.
- (k) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.
- (l) The repair or rehabilitation of historic structures upon a 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.
- (m) Such other factors which are relevant to the purposes of this ordinance.

The board of zoning appeals may refer any application and accompanying documentation pertaining to any request for a variance to any engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights and velocities, and the adequacy of the plans for flood protection and other related matters.

Variations shall be issued only after the Board of Zoning Appeals has determined that the variance will be the minimum required to provide relief.

The board of zoning appeals shall notify the applicant for a variance, in writing, that the issuance of a variance to construct a structure below the 100-year flood elevation (a) increases the risks to life and property and (b) will result in increased premium rates for flood insurance.

A record shall be maintained of the above notification as well as all variance actions, including justification for the issuance of the variances. Any variances which are issued shall be noted in the annual or biennial report submitted to the Federal Insurance Administrator.

ARTICLE VI Existing Structures

§76-17. Existing structures in floodplain districts. A structure or use of a structure or premises which lawfully existed before the enactment of these provisions, but which is not in conformity with these provisions, may be continued subject to the following conditions:

- (a) Existing structures in the floodway area shall not be expanded or enlarged unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed expansion would not result in any increase in the 100-year flood elevation.
- (b) Any modification, alteration, repair, reconstruction, or improvement of any kind to a structure and/or use located in any floodplain area to an extent or

amount of less than 50 percent of its market value, shall be elevated and/or flood proofed to the greatest extent possible.

- (c) The modification, alteration, repair, reconstruction, or improvement of any kind to a structure and/or use, regardless of its locations in a floodplain area, to an extent or amount of 50 percent or more of its market value shall be undertaken only in full compliance with the provisions of this ordinance and the Virginia Uniform Statewide Building Code.

§76-18. Adoption.

Adopted this 12th day of August, 2010.