



**Amherst County
Department of Planning and Zoning**

TO: Planning Commission
FROM: Austin R. Mitchell, Assistant Zoning Admin. / Planner
DATE: February 16, 2017
SUBJECT: Ordinance 2017-0002 Flood Hazard Overlay District

The attached ordinance is intended to modify the County's existing Flood Hazard Overlay District regulations. The proposed changes have been reviewed by the Floodplain Manager with the Virginia Department of Conservation & Recreation and the County Attorney. Staff believes that the modifications will ensure that the County's ordinance is compliant with State standards with respect to regulating flood zones.

Attachment

- Ordinance 2017-0002



**Amherst County Board of Supervisors
County Ordinance No. 2017-0002**

AN ORDINANCE, NO. 2017-0002

Adding § 714 to Article VII of Appendix A to the Amherst County Code to establish provisions governing development in areas susceptible to flooding.

Approved as to form and legality by the County Attorney

PUBLIC HEARING: Planning Commission, February 16, 2017

FIRST READING: Board of Supervisors, March 7, 2017

PUBLIC HEARING: Board of Supervisors, March 21, 2017

THE COUNTY OF AMHERST HEREBY ORDAINS:

§ 1. That Section 714 be and hereby is added to Appendix A to the Code of the County of Amherst, as follows:

714. – Flood Hazard Overlay District (FH).

Intent and Definitions

714.01. Intent and applicability.

1. Section 714 of Appendix A to the Amherst County Code, pursuant to the authority granted under Virginia Code §15.2-2280, establishes provisions intended to prevent the loss of property and life, 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:

- a. 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;
- b. Restricting or prohibiting certain uses, activities, and development from locating within areas subject to flooding;
- c. Requiring all uses, activities, and developments situate in a flood hazard district to be flood-proofed against flooding and flood damage; and
- d. Protecting individuals from buying lands and structures which are unsuited for intended purposes because of flood hazards.

2. These provisions shall apply to all privately and publicly owned lands within the jurisdiction of Amherst County and identified as areas of special flood hazard according to the Flood Insurance Rate Map (FIRM) provided to the County by the Federal Emergency Management Agency (FEMA) and dated September 19, 2007.

3. 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 Section 714 and any other applicable laws and regulations that apply to uses within the County.

4. The degree of flood protection this Section 714 seeks to ensure is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study, but does not constitute total flood protection. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. Compliance with this Section 714 will not ensure that districts outside the floodplain district or land uses permitted within such district will be free from flooding or flood damages.

714.02. Superimposed districts. The Flood Hazard Overlay District is superimposed over other existing districts, and the special requirements of this District shall apply in addition to the requirements of the zoning district within which a property is located.

714.03. Definition of terms. Terms defined herein are applicable only to this Section 714, Flood Hazard Overlay District (FH).

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

Base flood elevation (BFE). The Federal Emergency Management Agency designated one percent annual chance water surface elevation. The water surface elevation of the base flood in relation to the datum specified on the County's Flood Insurance Rate Map. For the purposes of this Section 714, the one hundred (100) year flood or one percent (1%) annual chance flood.

Basement. Any area of a building having its floor sub-grade (below ground level) on all sides.

BZA. Board of Zoning Appeals.

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.

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.

Existing construction. Structures for which construction commenced before the effective date of the FIRM or commenced before July 17, 1978, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

FEMA. The Federal Emergency Management Agency.

Flood or flooding. A general or temporary condition of partial or complete inundation of normally dry land areas from (i) the overflow of inland or tidal waters or (ii) the unusual and rapid accumulation or runoff of surface waters from any source. This includes mudflows which 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.

The terms also may refer to the collapse or subsidence 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.

Flood Insurance Rate Map (FIRM). An official map of a community, on which the Floodplain Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is referred to as a Digital Flood Insurance Rate Map (DFIRM).

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 or flood-related erosion hazards.

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

Floodplain Administrator. The person having general responsibility for administering the provisions of this Section 714; usually the Zoning Administrator.

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.

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.

Historic structure. Any structure that is: (i) listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (ii) 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; (iii) 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 (iv) 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) by the Secretary of the Interior in states without approved programs.

Hydrologic and Hydraulic Engineering Analysis. Analyses performed by a licensed professional engineer, in accordance with standard engineering practices that are accepted by the Virginia Department

of Conservation and Recreation and FEMA, used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.

Letters of Map Change (LOMC). A Letter of Map Change is an official FEMA determination, by letter, that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

1. Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property or structure is not located in a special flood hazard area.
2. Letter of Map Revision (LOMR): A revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. A Letter of Map Revision Based on Fill (LOMR-F) is a determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood. In order to qualify for this determination, the fill must have been permitted and placed in accordance with this Section 714.
3. Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study.

Lowest floor. The lowest floor, including a basement, of the lowest enclosed area. 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. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days.

Manufactured Home Park/Subdivision. A parcel, or contiguous parcels, of land divided into two (2) or more lots for rent or sale.

NFIP. National Flood Insurance Program

New construction. For the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after July 17, 1978, including 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 this Section 714, including any subsequent improvements to such structures.

Recreational vehicle. A vehicle which is (i) built on a single chassis; (ii) four hundred (400) square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) 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 (SFHA). The land in the floodplain subject to a one percent (1%) or greater chance of being flooded in any given year as determined in accordance with this Section 714.

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 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, including a manufactured home, or a gas or liquid storage tank that is principally above ground.

Substantial damage. Damage of any origin sustained by a structure when the cost of restoring the structure to its before damaged condition would equal or exceed fifty (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 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.

USBC. The Uniform Statewide Building Code at Ch. 6 of Title 36 of the Code of Virginia (1950), as amended (§§ 36-97 et seq.).

Violation. The failure of a structure or other development to be fully compliant with the requirements imposed by this Section 714. A structure or other development without the elevation certificate, other

certifications, or other evidence of compliance required by this Section 714, is presumed to be in violation until such time as that documentation is provided.

Watercourse. Any stream or river.

Administration, Permit Application, Appeals

714.04. Administration.

1. The zoning administrator shall act as Floodplain Administrator to administer and implement the provisions of this Section 714 with the assistance of the Amherst County Building Official. The Floodplain Administrator may:
 - a. Delegate duties and responsibilities set forth in Section 714 to qualified technical personnel, plan reviewers, inspectors, and other employees.
 - b. Enter into a written agreement or written contract with another community or private sector entity to administer specific provisions of Section 714. Administration of any part of Section 714 provisions by another entity shall not relieve the County of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. §59.22.
2. The duties and responsibilities of the Floodplain Administrator include but are not limited to:
 - a. Review applications for permits to determine whether proposed activities will be located in flood hazard areas.
 - b. Interpret floodplain boundaries and provide available base flood elevation and flood hazard information.
 - c. Review applications to determine whether proposed activities will be reasonably safe from flooding, and require new construction and substantial improvements to meet the requirements of these regulations.
 - d. Review applications to determine whether all necessary permits have been obtained from the applicable Federal, State or local agencies from which prior or concurrent approval is required. In particular, permits from state agencies for any: construction, reconstruction, repair, or alteration of a dam, reservoir, or waterway obstruction (including bridges, culverts, structures); and any alteration of a watercourse, which affects its course, current, or cross section, including any change to the 100-year floodplain of any free-flowing non-tidal waters of the State.
 - e. Verify that applicants proposing an alteration of a watercourse have notified adjacent communities, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), and other appropriate agencies (VADEQ, USACE, VMRC), and have submitted copies of such notifications to FEMA.
 - f. Approve applications and issue permits to develop in flood hazard areas if the requirements of this Section 714 have been met, or disapprove applications if the requirements have not been met.
 - g. Inspect, or cause to be inspected permitted buildings, structures, and other developments to determine compliance with this Section 714.
 - h. Review Elevation Certificates and require incomplete or deficient certificates to be corrected.

- i. Submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain FIRMs, including hydrologic and hydraulic engineering analyses prepared by or for the County, within six months after such data and information becomes available, if the analyses indicate changes in base flood elevations.
- j. Maintain and keep records that are necessary for the administration of this Section 714, including:
 - (i) Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and current studies and maps) and Letters of Map Change; and
 - (ii) documentation supporting issuance and denial of permits, Elevation Certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been flood-proofed, other required design certifications, variances, and records of enforcement actions taken to correct violations of these regulations.
- k. Enforce the provisions of this Section 714, investigate violations, issue notices of violations or stop work orders, and require permit holders to take corrective action.
- l. Inform the BZA of the intent of this Section 714, and for each application for a variance, prepare a detailed staff report.
- m. Administer the requirements related to proposed work on existing buildings, including (i) making determinations as to whether buildings and structures located in flood hazard areas and damaged by any cause are considered to have been substantially damaged; (ii) making reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct; and (iii) prohibiting the non-compliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property, or stabilize a building or structure in order to prevent additional damage.
- n. Undertake other actions including issuing press releases, public service announcements, and other information related to permit requests and repair of damaged structures; coordinating with other Federal, State, and local agencies to assist with substantial damage determinations; providing owners of damaged structures information related to the proper repair of damaged structures in special flood hazard areas; and assisting property owners with documentation necessary to file claims for Increased Cost of Compliance coverage under NFIP flood insurance policies.
- o. Notify the FEMA if the County's boundaries are modified and (i) provide a map that clearly delineates the revised boundaries or the land area for which the authority to regulate pursuant to this Section 714 has either been assumed or relinquished; and (ii) If the FIRM for any annexed land area includes special flood hazard areas that have flood zones which have regulatory requirements that are not set forth in this Section 714, prepare amendments to this Section 714 to adopt the FIRM and appropriate requirements. A copy of the amended Code provisions shall be provided to Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA.
- p. At FEMA's request, complete and submit a report concerning participation in the NFIP which may request information regarding the number of buildings in the SFHA, number of permits issued for development in the SFHA, and number of variances issued for development in the SFHA.
- q. Take into account flood, mudslide and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use throughout the entire County, whether or not those hazards have been specifically delineated geographically (e.g. via mapping or surveying).

714.05. Permit Requirement.

1. All uses, activities, and development occurring within any floodplain district, including placement of manufactured homes, shall be undertaken only upon the issuance of a valid zoning permit and in strict compliance with the provisions of this Section 714, and all other applicable law, including the USBC and the Amherst County Subdivision Regulations. The Floodplain Administrator shall issue a permit to only those applications that comply with all applicable state and federal laws. No use, activity, or development shall adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.

2. Prior to any proposed alteration or relocation of any channels or of any watercourse in a special flood hazard area, 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). 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), the Federal Emergency Management Agency, and other required agencies. The flood carrying capacity within an altered or relocated portion of any watercourse shall be the same as in the original watercourse.

714.06. Site Plans and Development Applications. All applications for a permit authorizing development within any floodplain district shall contain the following information:

1. The elevation of the base flood at the site.
2. The elevation of the lowest floor of proposed habitable structures, including basement.
3. For non-residential structures to be flood-proofed, the elevation to which the structure will be flood-proofed.
4. Topographic information showing existing and proposed ground elevations.

714.07. Appeals procedures for administrative decisions regarding Flood Hazard District requirements.

1. Appeals

Any person aggrieved by a decision of the Floodplain Administrator with respect to the provisions of this Section 714 may appeal to the BZA. Any such appeal shall be filed, in writing, within thirty (30) days after the date of the decision by the Floodplain Administrator. Upon receipt of an appeal, the BZA shall set a time and place for hearing the appeal, which shall be not less than ten (10) nor more than thirty (30) days from the date of the receipt of the appeal. Notice of the time and place of the hearing shall be given to all parties. The determination by the BZA shall be final in all cases.

2. Appeals Seeking a Variance

In deciding appeals seeking a variance to the requirements imposed by this Section 714, the BZA shall address the following factors:

- a. The repair or rehabilitation of historic structures will depend 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.
- b. 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 the Floodway District that will cause any increase in flood levels during the one hundred (100) year flood.
- c. The danger that materials may be swept on to other lands or downstream to the injury of others.
- d. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.
- e. The susceptibility of the proposed structure or facility and its contents to flood damage, and the effect of such damage on the individual owners.
- f. The importance of the services provided by the proposed structure or facility.
- g. The requirements of the structure or facility for a waterfront location.
- h. The availability of alternative locations not subject to flooding for the proposed use.
- i. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
- j. The relationship of the proposed use to the comprehensive plan and flood plain management program for the area.
- k. The safety of access to the property in time of flood of ordinary and emergency vehicles.
- l. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site.

The BZA may refer any application and accompanying documentation pertaining to any request for 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 adequacy of the plans for protection and other related matters.

3. Granting of Variance

Variances shall be granted only if the BZA has determined: (i) that the variance constitutes the minimum relief to any exceptional hardship; and (ii) that the granting of the variance will not result in: (a) unacceptable or prohibited increases in flood heights; (b) additional threats to public safety; (c) extraordinary public expense; (d) create nuisances; (e) cause fraud or victimization of the public; or (f) conflict with County Code.

The BZA shall notify the applicant for a variance in writing that the granting of a variance to construct below the one hundred (100) year flood evaluation increases risks to life and property and will result in increased premium rates for flood insurance.

A record of the above notification, as well as all actions on the requested variances, including justification for their issuance, shall be maintained by the Floodplain Administrator. Any variances which are granted shall be noted in the annual report submitted to the Federal Insurance Administration.

Establishing the Boundaries of Areas within the Flood Hazard Overlay District

714.08. Use and Interpretation of FIRMs. The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. Should a dispute arise concerning the boundaries of any of the districts, the BZA shall make the necessary determination in accordance with the provision of subsection 714.07.

The following shall apply to the use and interpretation of FIRMs and data:

1. Where field-surveyed topography indicates that ground elevations:
 - a. Are below the base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as special flood hazard area and subject to the requirements of this Section 714;
 - b. Are above the base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a Letter of Map Change that removes the area from the special flood hazard area.
2. In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified, and in areas where FEMA has not identified special flood hazard areas, any other flood hazard data available from a Federal, State, or other source shall be reviewed and reasonably used.
3. Base flood elevations and designated floodway boundaries on FIRMs and in FISs shall take precedence over base flood elevations and floodway boundaries by any other sources if such sources show reduced floodway widths or lower base flood elevations.
4. Other sources of data shall be reasonably used if such sources show increased base flood elevations or larger floodway areas than are shown on FIRMs and in FISs.
5. If a Preliminary Flood Insurance Rate Map or a Preliminary Flood Insurance Study has been provided by FEMA:
 - a. Upon the issuance of a Letter of Final Determination by FEMA, the preliminary flood hazard data shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering these regulations.
 - b. Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data and be used where no base flood elevations or floodway areas are provided on the effective FIRM.
 - c. Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary base flood elevations or floodway areas exceed the base flood elevations or designated floodway widths in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change or appeal to FEMA.

714.09. Establishment of floodplain districts. The various floodplain districts shall include special flood hazard areas. The basis for the delineation of these districts shall be the FIS and FIRMs for Amherst County prepared by the Federal Emergency Management Agency and Federal Insurance Administration, dated September 19, 2007, and any subsequent revisions or amendments thereto. The boundaries of the Special Flood Hazard Area and Floodplain Districts are established as shown on the FIRM which is incorporated in this Section 714, and which shall be kept on file at the offices of the Floodplain Administrator.

In addition, Amherst County may identify and regulate new local flood hazard or ponding areas. These areas may be delineated on a "Local Flood Hazard Map" using the best available topographic data and locally derived information such as flood of record, historic high water marks or approximate study methodologies.

1. The Floodway District (FW) is delineated for purpose of this Section 714, using the criteria that a certain area within the flood plain 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. These areas included in this district are specifically defined in the FIS and shown on the flood boundary and floodway map.

2. The Special Floodplain District (SFD) shall be those areas identified as an AE Zone on the maps accompanying the FIS for which one percent annual chance flood elevations have been provided and the floodway has not been delineated.

3. The Approximated Flood Plain District (AFP) shall be that floodplain area for which no detailed flood profiles or elevations are provided, but where a one hundred (100) year flood plain boundary has been approximated on the FIRMs. Such areas are shown as Zone A on the maps accompanying the FIS. For these areas, the one percent annual chance flood elevations and floodway information from federal, state, and other acceptable sources shall be used, when available. Where the specific one hundred (100) year 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 and U.S. Geological Survey Flood Prone Quadrangles, then the application for the proposed use, development or activity shall determine this elevation in accordance with hydrologic and 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 and computations shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator.

714.10. District boundary changes. The County may revise the boundaries of any of the flood plain districts in cases where base flood elevations may have increased or decreased resulting from physical changes affecting flooding conditions. As soon as practicable, but no later than six months after the date such information becomes available, the County shall notify FEMA of the changes by submitting supporting technical or scientific data. Upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements may be adjusted.

Standards Applicable to Development

714.11. General Standards. The following standards shall apply to all development undertaken pursuant to the requirements of this Section 714:

1. New construction and substantial improvements shall be constructed in accordance with the USBC and this ordinance, including being properly anchored to prevent flotation, collapse or lateral movement of the structure.

2. Standards for residential construction: New construction or substantial improvement of any residential structure, including manufactured homes, shall have the lowest floor, including basement, elevated one foot above base-flood elevation.

3. 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.

4. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

5. New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

6. Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities, including duct work, shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

7. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

8. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

9. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

10. Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined here in shall comply with all requirements of this Section 714 that do not preclude the structure's continued designation as a historic structure. Documentation that a specific requirement of County Code will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from the requirements of County Code will be the minimum necessary to preserve the historic character and design of the structure.

714.12. Specific Standards. In all special flood hazard areas where base flood elevations have been provided in the FIS or generated by a certified professional, the following provisions shall apply:

1. Standards for existing structures: The substantial damage or improvement of any structure shall require full compliance with the following provisions:

- a. Existing structures or uses located in the Floodway District shall not be expanded or enlarged unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed expansion would not result in any increase in the base flood elevation.
- b. Any modification, alteration, repair, reconstruction or improvement of any kind to a structure or use, regardless of its location in a flood plain district, to an extent or amount of less than fifty (50) percent of its market value shall be elevated or flood-proofed to the greatest extent possible and shall conform to the Virginia USBC.
- c. The modification, alteration, repair, reconstruction or improvement of any kind to a structure or use, regardless of its location within the Flood Hazard Overlay District, to an extent or amount of fifty (50) percent or more of its market value shall be undertaken only in full compliance with the

provisions of this Section 714, and the entire structure shall conform to the requirements of the USBC.

2. Standards for non-residential construction: New construction or substantial improvement of any commercial, industrial, or non-residential building shall have the lowest floor, including basement, elevated one foot above base-flood elevation. Buildings located in all A1-30, AE, and AH zones may be flood-proofed 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 the Floodplain Administrator.

3. Fully enclosed areas of new construction or substantially improved structures, which are below the regulatory flood protection elevation shall:

- a. 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).
- b. Be constructed entirely of flood resistant materials below the regulatory flood protection elevation;
- c. Include, in Zones A and AE 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:
 - i. Provide a minimum of two openings on different sides of each enclosed area subject to flooding.
 - ii. 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.
 - iii. If a building has more than one enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.
 - iv. The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade.
 - v. Openings may be equipped with screens, louvers, or other opening coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
 - vi. Foundation enclosures made of flexible skirting are not considered enclosures for purposes of this Section 714, and, therefore, do not require openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires openings as outlined above.

4. Standards for Manufactured Homes and Recreational Vehicles:

- a. All manufactured homes placed, or substantially improved: (i) on individual lots or parcels, (ii) in expansions to existing manufactured home parks or subdivisions, and (iii) in a new or existing manufactured home park or subdivision, in which a manufactured home has incurred substantial damage as the result of a flood, must meet all the requirements for new construction, including all applicable elevation and anchoring requirements established by the USBC and this ordinance.
 - b. All recreational vehicles placed on sites must:
 - i. Be on the site for fewer than 180 consecutive days;
 - ii. Be fully licensed and ready for highway use such that it is on its wheels or a jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - iii. Meet all the applicable building code requirements for manufactured homes.
5. Standards for utilities and facilities:
- a. Sanitary sewer facilities. All new replacement sanitary sewer facilities and private package sewage treatment plants, including all pumping stations of flood waters into the systems and discharges from the systems into the flood waters, shall be located and constructed to minimize or eliminate flood damage and impairments.
 - b. Water facilities. All new or replacement facilities shall be designed to minimize or eliminate flood damages.
 - c. Drainage Facilities. All storm drainage facilities shall be designed to convey the flow of surface water without damage to persons or property. The system shall be structured to direct drainage away from buildings and on-site waste disposal sites. The Floodplain Administrator may require a primarily underground system to accommodate larger, less frequent floods.
 - d. Utilities. All utilities such as gas lines, electrical and telephone systems shall be located, elevated (if possible), and constructed to minimize the chance of impairment during a flooding occurrence.
 - e. Streets and sidewalks. Streets and sidewalks shall be designed to minimize their potential for increasing and aggravating the levels of flood flow. Drainage openings shall be designed to sufficiently discharge flood flows without unduly increasing flood heights.

714.14. Elevation and Construction Standards.

In all identified flood hazard areas where base flood elevations have been provided in the FIS or generated by a certified professional, the following provisions shall apply:

Residential Construction

New construction or substantial improvement of any residential structure (including manufactured homes) in Zones A1-30, AE, AH and A with detailed base flood elevations shall have the lowest floor, including basement, elevated at least one foot above the base flood level.

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 one foot above the base flood elevation. Buildings located in all A1-30, AE, and AH zones may be flood-proofed 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 the Floodplain Administrator.

714.15. Standards for Subdivision Proposals.

1. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
2. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and,
3. Base flood elevation data shall be obtained from other sources or developed using detailed methodologies comparable to those contained in a FIS for subdivision proposals and other proposed development proposals (including manufactured home parks and subdivisions) that exceed fifty lots or five acres, whichever is the lesser.

Development Activities by District

714.16 Floodway District activities. The following provisions shall apply within the Floodway District:

1. Within any floodway area, no encroachments including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice, that the proposed encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge. 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. All studies, analyses, computations, and other supporting documentation shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator.
2. Development activities which increase the water surface elevation of the base flood may be allowed, provided that the applicant first applies, with Amherst County's endorsement, for a conditional Flood Insurance Rate Map and floodway revision, and receives FEMA approval.
3. The placement of manufactured homes is prohibited, except in an existing manufactured home park. A replacement manufactured home may be placed on a lot provided anchoring, elevation, and encroachment standards are met.

714.17. *Prohibited uses in the Floodway District.* The following structures and uses are hereby prohibited in the Floodway District:

1. Structures designed or used for human habitation.
2. The storage or processing of materials that are pollutants, buoyant, flammable, poisonous, or explosive, or which otherwise could be injurious to human, animal or plant life in time of flooding or that has high flood damage potential.
3. Garbage and waste disposal facilities including any further encroachment upon the floodway at existing sites.
4. Placement of fill material.
5. Permanent structures.

714.18. *Approximated Flood Plain District Activities.* The following provisions shall apply within the Approximated Floodplain District:

1. The lowest floor shall be elevated to or above the base flood level of one foot above base-flood elevation. During the permitting process, the Floodplain Administrator shall obtain:
 - a. The elevation of the lowest floor, including the basement, of all new and substantially improved structures; and
 - b. The hydrologic and hydraulic study; and
 - c. If the structure has been flood-proofed in accordance with the requirements of this Section 714, the elevation in relation to mean sea level to which the structure has been flood-proofed.
2. Base flood elevation data shall be obtained from other sources or developed using detailed methodologies comparable to those contained in a Flood Insurance Study for subdivision proposals and other proposed development proposals, including manufactured home parks and subdivisions, that exceed fifty lots or five acres, whichever is the lesser.

714.19. *Special exceptions within the Approximated Flood Plain District.* The following uses may be permitted as special exceptions:

1. Single-family dwelling, two-family dwelling and multi-family dwelling consisting of no more than four (4) units which are constructed, altered or moved so that the elevation of the lowest floor, including the basement, shall be at least one (1) foot above base flood elevation. Such structures shall have a means of ingress and egress to land outside the floodplain which is above the regulatory base flood elevation. The means of pedestrian ingress and egress shall be a minimum of fifteen (15) feet wide, or five (5) feet wide if equipped with handrails or other safety features. Such structures will also have a means of ingress and egress to land outside the floodplain for emergency vehicles.
2. Commercial uses: New construction of, and substantial improvements to, commercial structures which are elevated to a point above the one hundred (100) year flood level. Accessory land uses such as yards, parking areas, and railroad tracks may be placed at lower elevations.

3. Manufacturing and industrial uses: New construction and substantial improvement of manufacturing and industrial structures which are situated one (1) foot above the base flood elevation, or adequately flood-proof in accordance with the requirements of this Section 714. Accessory land uses such as yards and parking areas may be at lower elevations. In considering permit applications, the County shall give due consideration to needs of industry whose business requires that it be located in flood plain areas, or which presently exist in floodplain area and for whom failure to make improvements to their industrial processes would cause major employment and economic hardships for employees and the community.

4. Utilities, railroads, streets, bridges, public utility facilities, roads, railroad tracks, and bridges which are constructed so as not to increase the regulatory flood stage more than one (1) foot in any one reach or for the cumulative effect of several reaches and will be compatible with local comprehensive floodplain development plans.

5. Storage of materials: Storage of materials that are pollutants, buoyant, flammable, explosive, or which otherwise could be injurious to human, animal or plant life in time of flooding or that have high flood damage potential shall be stored one (1) foot above the flood protection elevation, flood-proofed, or protected by structural measures consistent with the standards set forth herein.

6. Sanitary waste treatment and disposal: No new construction, addition or substantial improvements to existing sanitary sewer facilities will be allowed unless emergency plans and procedures for action to be taken in the event of flooding are prepared, filed with, and approved by the State Board of Health. These emergency plans and procedures must show in detail steps taken against the possible introduction of any pollutants or toxins into the flood waters. There shall be no disposal of garbage or solid waste material within the Approximated Flood Plain District.

7. All manufactured homes placed, or substantially improved: (i) on individual lots or parcels, (ii) in expansions to existing manufactured home parks or subdivisions, and (iii) in a new or existing manufactured home park or subdivision, in which a manufactured home has incurred substantial damage as the result of a flood, must meet all the requirements for new construction, including all applicable elevation and anchoring requirements established by the USBC.

8. All manufactured homes placed, or substantially improved, in an existing manufactured home park or subdivision where no manufactured home has incurred substantial damage as a result of flooding must be elevated so that:

- a. The lowest floor of the manufactured home is elevated no lower than one (1) foot above the base flood elevation; or
- b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than one foot above base flood elevation; and
- c. The manufactured home must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.

714.20. *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.

2. Development activities in Zones A1-30, AE, and AH, on Amherst 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 Amherst County's endorsement, for a conditional Flood Insurance Rate Map revision, and receives the approval of the Federal Emergency Management Agency.

714.21. Penalty for violations. Any person who fails to comply with any of the requirements or provisions of this Section 714, shall be subject to the provisions of Section 1002 of Appendix A to the Amherst County Code.

In addition, 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 or noncompliance with this article shall not excuse the violation or noncompliance, or permit it to continue. All persons in conflict with Section 714 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 section may be declared to be a public nuisance by the Building Official and shall be abatable as such.

§ 2. That Section 709 of Article VII to Appendix A of the Amherst County Code be and is hereby repealed.

§ 3. That this ordinance shall be in force and effect upon adoption.

Adopted this 21st day of March, 2017.

Claudia D. Tucker, Chair
Amherst County Board of Supervisors

ATTEST:

Dean C. Rodgers, Clerk
Amherst County Board of Supervisors

Ayes _____

Nays _____

Abstentions _____