

Amendment No. 1 Article X. Floodplain Development

- I. Amend the Article X Floodplain Development Ordinance, Section 275-76, General provisions by adding the words in bold as follows:

§ 275-76. General provisions.

- A. This article, adopted pursuant to the authority of RSA 674:16, shall be known as the "Town of Bedford Floodplain Development Ordinance." The regulations in this article shall overlay and supplement the regulations in the Town of Bedford Zoning Ordinance, and shall be considered part of the Zoning Ordinance for purposes of administration and appeals under state law.
- B. **The purpose of this article is to promote public health, safety, and general welfare; minimize hazards to persons and property from flooding; to protect watercourses from encroachment; and to maintain the capability of floodplains to retain and carry off floodwaters.**
- C. **Certain areas of the Town of Bedford are subject to periodic flooding, causing serious damages to properties within these areas. Relief is available in the form of flood insurance as authorized by the National Flood Insurance Act of 1968. Therefore, the Town has chosen to become a participating community in the National Flood Insurance Program (NFIP) and agrees to comply with the requirements of the National Flood Insurance Act of 1968 (P.L. 90-488, as amended) as detailed in this article.**
- D. If any provision of this article differs or appears to conflict with any provision of the Zoning Ordinance or other ordinance or regulation, the provision imposing the greater restriction or more stringent standard shall be controlling.
- E. The following regulations in this article shall apply to all lands designated as special flood hazard areas by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study for the County of Hillsborough, N.H., dated September 25, 2009, or as amended, together with the associated Flood Insurance Rate Maps (**FIRM**) dated September 25, 2009, or as amended, which are declared to be a part of this article and are hereby incorporated by reference.

- II. Amend the Article X Floodplain Development Ordinance, Section 275-77, General provisions by deleting the words in strikethrough and adding the words in bold as follows:

§ 275-77. Definitions.

The following definitions shall apply only to this article and shall not be affected by the provisions of any other ordinance of the Town of Bedford:

ACCESSORY STRUCTURE - A structure that is: 1) detached from and clearly

incidental and subordinate to the principal use or structure on a lot, 2) located on the same lot as the principal structure or use, 3) clearly and customarily related to the principal structure or use, and 4) only used for vehicle parking, storage, or primarily building access. Examples include garages, garden and tool sheds, and playhouses.

AREA OF SPECIAL FLOOD HAZARD - The land in the floodplain within the Town of Bedford subject to a one-percent or greater possibility of flooding in any given year. The area is designated on the FIRM as Zones A and AE.

BASE FLOOD - The flood having a one-percent possibility of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION (BFE) - The elevation of surface water resulting from the “base flood.”

BASEMENT - Any area of a building having its floor subgrade on all sides.

BUILDING - See "structure."

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, drilling operation or storage of equipment or materials.

ENCLOSED AREA - An area created by a crawlspace or solid walls that fully enclose an area below an elevated building.

FEMA - The Federal Emergency Management Agency.

FLOOD or FLOODING - A general and temporary condition of partial or complete inundation of normally dry land areas from:

- A. The overflow of inland or tidal waters; and
- B. The unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD INSURANCE STUDY - An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination and determination of mudslide or flood-related erosion hazards.

FLOOD INSURANCE RATE MAP (FIRM) - An official map incorporated with this article, on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the Town of Bedford.

FLOOD INSURANCE STUDY - An official report incorporated with this article in which

FEMA has delineated both the “special flood hazard areas” and the risk premium zones applicable to the Town of Bedford.

FLOODPLAIN or FLOOD-PRONE AREA - Any land area susceptible to being inundated by water from any source. (See definition of “**flood**” or “flooding.”)

FLOODPLAIN MANAGEMENT REGULATIONS - Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance, and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

FLOOD OPENING - An opening in a foundation or enclosure wall that allows automatic entry and exit of floodwaters. See FEMA “Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures.”

FLOOD PROOFING - Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures and their contents.

FLOOD PROOFING, DRY - Making a structure watertight below the level that needs flood protection to prevent floodwaters from entering.

FLOOD PROOFING, WET - Permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding by allowing flood waters to enter the structure.

FLOODWAY - See “regulatory floodway.”

~~FREEBOARD— A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.~~

~~FUNCTIONALLY DEPENDENT USE— A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking and port facilities that are necessary for the loading/unloading of cargo or passengers and ship building/repair facilities but does not include long term storage or related manufacturing facilities.~~

HIGHEST ADJACENT GRADE - The highest natural elevation of the ground surface prior to **the implementation of construction techniques such as fill, berming, or landscaping** next to the proposed walls of a structure.

HISTORIC STRUCTURE - Any structure that is:

- A. 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;
- B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered Historic District or a district preliminarily determined by the Secretary to qualify as a registered Historic District;
- C. 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
- D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - (1) By an approved state program as determined by the Secretary of the Interior; or
 - (2) 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 an enclosure is not built so as to render the structure in violation of the applicable **state and local codes**. ~~nonelevation design requirements of this article.~~

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" includes park trailers, travel trailers, and other similar vehicles placed on site for greater than 180 days.

MARKET VALUE – For the purposes of this ordinance, market value is determined by the value of the building or structure as calculated in the Bedford Tax Assessment.

MEAN SEA LEVEL - The National Geodetic Vertical Datum (NGVD) of 1929, **North American Vertical Datum (NAVD) of 1988**, or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

NEW CONSTRUCTION - For the purposes of determining insurance rates, structures for which the start of construction commenced on or after the effective date of the initial FIRM

or after December 31, 1974, whichever is later, 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.

NON-RESIDENTIAL STRUCTURE – A commercial or mixed-use building where the primary use is commercial or non-habitational.

~~ONE HUNDRED YEAR FLOOD~~ – See "base flood."

RECREATIONAL VEHICLE -A vehicle which is:

- A. Built on a single chassis;
- B. Four hundred square feet or less when measured at the largest horizontal projection;
- C. Designed to be self-propelled or permanently towable by a light-duty truck; and
- D. Designed primarily as temporary living quarters for recreational, camping, or seasonal use and not for use as a permanent dwelling.

REGULATORY 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 increasing the water surface elevation. These areas are designated as floodways on the FIRM.

RESIDENTIAL STRUCTURE - A non-commercial building designed for habitation by one or more families or a mixed-use building that qualifies as a single-family, multi-family, or other residential building.

RIVERINE – Relating to, formed by, or resembling a river, including tributaries, streams, brooks, etc.

SPECIAL FLOOD HAZARD AREA - See "Area of Special Flood Hazard."

START OF CONSTRUCTION - Includes substantial improvements and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date.

- a. The "actual start" means either the first placement of permanent construction of a structure on 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 manufactured home on a foundation.
- b. 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 part of the main structure.

STRUCTURE - For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

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 **40 percent** ~~50%~~ 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 40 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:**

- a. 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**
- b. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."**

~~A. Any combination of repairs, reconstruction, alteration, or improvements to a structure in which the cumulative cost equals or exceeds 50% of the market value of the structure. The market value of the structure should equal:~~

~~(1) The appraised value prior to the start of the initial repair or improvement;
or~~

~~(2) In the case of damage, the value of the structure prior to the damage occurring.~~

~~B. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. This term includes structures which have incurred substantial damage, regardless of actual repair work performed. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or 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 floodplain management regulations. ~~The failure of a structure or other development after the adoption of the initial FIRM to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR 60.3(b)(5), (e)(4), (e)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided. The sections of this article that correspond to the sections of the CFR are §§ 275-79C, 275.81B(2), 275-80D and 275-80C(4).~~

WATER SURFACE ELEVATION – The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, **North American Vertical Datum (NAVD) of 1988**, or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains.

III. Amend the Article X Floodplain Development Ordinance, Section 275-79, General requirements, by deleting the words in strikethrough and adding the words in bold as follows:

§ 275-79. General requirements.

- A. The Building Code Official shall review all building permit applications for new construction or substantial improvements to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is located in a special flood hazard area, all new construction or substantial improvements shall be:
- (1) Designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - (2) Constructed with flood damage-resistant materials ~~resistant to flood damage~~;
 - (3) Constructed by methods and practices that minimize flood damages;
 - (4) Constructed with electrical, heating, ventilation, plumbing, and air-conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- B. Where new or replacement water and sewer systems (including on-site systems) are proposed in a special flood hazard area, the applicant shall provide the Building Code Official with assurance that these systems will be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters, and on-site waste disposal systems will be located to avoid impairment

to them or contamination from them during periods of flooding.

C. For all new or substantially improved structures located in Zones A and AE, the applicant shall furnish the following information to the Building Code Official: the as-built elevation (in relation to **Mean Sea Level NGVD**) of the lowest floor (including basement) including whether or not such structures contain a basement; if the structure has been flood proofed, the as-built elevation (in relation to **Mean Sea Level NGVD**) to which the structure was flood proofed; any certification of flood proofing. The Building Code Official shall maintain these records for public inspection, and shall furnish such information upon request.

D. The Building Code Official shall not grant a building permit until the applicant certifies that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1334.

IV. Amend the Article X Floodplain Development Ordinance, Section 275-80, Alteration or relocation of watercourses, by deleting the words in strikethrough and adding the words in bold as follows:

§ 275-80. Alteration or relocation of watercourses.

A. Riverine situations.

(1) Prior to the alteration or relocation of a watercourse, the applicant for such authorization shall notify the Wetlands Bureau of the New Hampshire Environmental Services Department and submit copies of such notification to the Building Code Official, in addition to the copies required by the RSA 482-A:3.

(2) Further, the applicant shall be required to submit copies of said notification to those adjacent communities as determined by the Building Code Official, including notice of all scheduled hearings before the Wetlands Bureau.

B. Certification of maintenance of flood-carrying capability. The applicant shall submit to the Building Code Official, certification provided by a registered professional engineer, assuring that the flood-carrying capacity of an altered or relocated watercourse can and will be maintained.

C. Watercourses with a designated regulatory floodway.

(1) Along watercourses with a designated regulatory floodway, no encroachments, including fill, new construction, substantial improvements, and other development are allowed within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in

accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the base flood discharge.

- (2) In Zone A, the Building Code Official shall obtain, review, and reasonably utilize any floodway data available from federal, state, or other sources as criteria for requiring that development meet the floodway requirements of this section.

D. Watercourses without a designated regulatory floodway. Along watercourses that have not had a regulatory floodway designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zone AE on the FIRM, unless it is demonstrated by the applicant that the cumulative effect of the proposed development, when combined with all existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

- V. Amend the Article X Floodplain Development Ordinance, Section 275-81, Flood hazard areas defined, by deleting the words in strikethrough and adding the words in bold as follows:

§ 275-81. Flood hazard areas defined **and requirements for development.**

A. In special flood hazard areas, the Building Code Official shall determine the **base flood elevation** ~~one-hundred-year flood elevation~~ in the following order of precedence according to the data available:

- (1) In Zone AE, refer to the elevation data provided in the community's Flood Insurance Study and accompanying FIRM.
- (2) In Zone A, the Building Code Official shall obtain, review, and reasonably utilize any **base flood elevation** ~~one-hundred-year flood elevation~~ data available from any federal, state or other sources including data submitted for development proposals submitted to the community (i.e. subdivisions, site approvals). **Where a base flood elevation is not available or not known for Zone A, the base flood elevation shall be determined to be at least 2 feet above the highest adjacent grade.**

~~(3) In Zone AO, the flood elevation is determined by adding the elevation of the highest adjacent grade to the depth number specified on the FIRM or, if no depth number is specified on the FIRM, at least two feet.~~

B. The Building Code Official's **base flood elevation** ~~one-hundred-year flood elevation~~ determination will be used as criteria for requiring in Zones A and AE that:

- (1) All new construction or substantial improvement of residential structures have the lowest floor (including basement) elevated **at least one foot** ~~to~~ ~~or~~ ~~above the hundred-year flood elevation~~ **base flood elevation**; and
- (2) That all new construction or substantial improvements of nonresidential structures have the lowest floor (including basement) elevated **at least one foot above the base flood elevation** ~~to~~ ~~or~~ ~~above one hundred-year flood level~~, or together with attendant utility and sanitary facilities shall:
 - (a) Be flood proofed so that below the **base flood elevation** ~~one-hundred-year flood elevation~~ the structure is watertight with walls substantially impermeable to the passage of water;
 - (b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and
 - (c) Be certified by a registered professional engineer or architect that the **dry floodproofing** design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. **Such certification shall be provided to the Floodplain Administrator in the form of a completed and signed Floodproofing Certificate for Non-Residential Structures.**
- (3) **All new residential structures or residential developments and all new non-residential structures and non-residential developments shall have all driveways and/or all road access or streets constructed with the driving surface at least one foot above the base flood elevation in order to ensure safe ingress and egress during a 100-year flood.**
- (4) **New construction or substantial improvement of a small, detached accessory structure with a gross area of 500 square feet or less does not have to meet the elevation or non-residential dry floodproofing requirements as detailed in this article if the following wet flood proofing standards are met:**
 - (a) **The structure has unfinished interiors and is not used for human habitation;**
 - (b) **The structure is not located in the floodway;**
 - (c) **The structure is not used for storage of hazardous materials;**
 - (d) **The structure is wet flood proofed and designed to allow for the automatic entry and exit of flood water as detailed in this**

article;

- (e) **The structure shall be firmly anchored to prevent flotation, collapse and lateral movement;**
 - (f) **When possible, the structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters and be placed further from the source of flooding than the primary structure; and**
 - (g) **Service facilities such as electrical, mechanical and heating equipment shall be elevated or dry floodproofed to or above the base flood elevation.**
- (5) All manufactured homes to be placed or substantially improved within special flood hazard areas shall be elevated on a permanent foundation such that the lowest floor of the manufactured home **is at least one foot above the base flood elevation** ~~is at or above the base flood level and be~~ securely anchored to resist floatation, 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 requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
- (6) Recreational vehicles placed on sites within Zone A and AE shall either:
- (a) Be on the site for fewer than 180 consecutive days; or
 - (b) Be fully licensed and on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions and ready for highway use; or
 - (c) Meet all standards of this ordinance ~~Section 60.3(b) (1) of the National Flood Insurance Program Regulations~~ and the elevation and anchoring requirements for manufactured homes in Section 275-81.B.(3) of this ordinance ~~Paragraph (c) (6) of Section 60.3.~~
- (7) For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding are permitted, provided they meet the following requirements:
- (a) The enclosed area is unfinished or flood-resistant, usable solely for the parking of vehicles, building access or storage;
 - (b) The area is not a basement; and

- (c) The area shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - i. A minimum of two **flood** openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - ii. The bottom of all **flood** openings shall be no higher than one foot above grade.
 - iii. Openings may be equipped with screens, louvers, or other coverings or devices, provided that they permit the automatic entry and exit of floodwater.

VI. Amend the Article X Floodplain Development Ordinance, Section 275-82, Variance and appeals, by deleting the words in strikethrough and adding the words in bold as follows:

§ 275-82. Variances and appeals.

- A. Any order, requirement, decision, or determination of the Building Code Official made under this article may be appealed to the Zoning Board of Adjustment as set forth in RSA 676:5.
- B. If the applicant, upon appeal, requests a variance as authorized by RSA 674:33, ~~l(b)~~, the applicant shall have the burden of showing in addition to the usual variance standards under state law that:
 - (1) The variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense;
 - (2) If the requested variance is for activity within a designated regulatory floodway, no increase in flood levels during the base flood discharge will result; and
 - (3) The variance is the minimum necessary, considering the flood hazard, to afford relief.
- C. The Zoning Board of Adjustment shall notify the applicant in writing that the issuance of a variance to construct below the base flood ~~level~~ **elevation** will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and such construction below the base flood ~~level~~ **elevation** increases risks to life and property. Such notification shall be maintained with a record of all variance actions.

D. The community shall:

- (1) Maintain a record of all variance actions, including their justification for their issuance; and
- (2) Report such variances issued in its annual or biennial report submitted to FEMA's Federal Insurance Administrator.