

(~~strikethrough text~~ means delete text, **highlighted text** means add text).

## Article IX FLOODPLAIN DEVELOPMENT ORDINANCE

- A. This ordinance, adopted pursuant to the authority of RSA 674:16, shall be known as the Town of Bradford Floodplain Development Ordinance. The regulations in this ordinance shall overlay and supplement the regulations in the Town of Bradford's Zoning Ordinance, and shall be considered part of the Zoning Ordinance for purposes of administration and appeals under state law. If any provision of this ordinance 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.
- B. The following regulations in this ordinance shall apply to all lands designated as special flood hazard areas by the Federal Emergency Agency (FEMA) in its "Flood Insurance Study for the **County of Merrimack, Town of Bradford**, New Hampshire" **dated April 19, 2010 or as amended**, together with the associated Flood Insurance Rate Maps dated April 19, 2010, or as amended, which is declared to be a part of this ordinance and is hereby incorporated by reference.
- C. Definition of Terms: The following definitions shall apply only to this Floodplain Development Ordinance, and shall not be affected by the provisions of any other ordinance of the Town of Bradford.
1. "Area of Special Flood hazard" is land in the floodplain within the Town of Bradford subject to a 1 percent or greater possibility of flooding in any given year. The area is designated as Zones A and AE on the Flood Insurance Rate Map.
  2. "Base Flood" means the flood having a one-percent possibility of being equated or exceeded in any given year.
  3. **"Base Flood Elevation" (BFE) means the elevation of surface water resulting from the "base flood."**
  4. "Basement" means any area of a building having its floor subgrade on all sides.
  5. "Building" — see "structure"
  6. "Development" means 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.
  7. "FEMA" means Federal Emergency Management Agency.
  8. "Flood" or "Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:
    - a. the overflow of inland or tidal water
    - b. the unusual and rapid accumulation or runoff of surface waters from any source
  9. "Flood **Insurance Elevation** Study" means an examination, evaluation, and determination of flood hazards and if appropriate, corresponding water surface elevations, or an examination and determination of mudslide **and**/or flood related erosion hazards.

10. "Flood Insurance Rate Map" (Firm) means an official map incorporated with the ordinance, on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the Town of Bradford.

~~11. "Flood Insurance Study" see "flood elevation study"~~

12. "Floodplain" or "Flood-prone area" means any land area susceptible to being inundated by water from any source (see definition of "Flooding")

13. "Flood proofing" means 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 sanitation facilities, structures and their contents.

14. "Floodway" — see "Regulatory Floodway"

15. **Flood Opening** means 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."

~~16. "Functionally dependent use" means 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.~~

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

18. "Historic Structure" means any structure that is:

- a. Listed individually in the National Register of Historic Places (a listed maintained by the Department of Interior) or preliminarily determined by the Secretary if the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminary 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 but 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 Interior, or
  - 2) Directly by the Secretary of the Interior in states without approved programs.

19. "Lowest Floor" means the lowest floor if 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 non-elevation design requirements of this ordinance.
20. "Manufactured Home" means 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 attached 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 consecutive days. This includes manufactured homes located in a manufactured home park or subdivision.
21. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
22. "Mean sea level" means 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 communities Flood Insurance Rate Map are referenced.
23. "New construction" means, for purposes of determining insurance rates, structures for which the start of construction commenced on or after the effective date of an 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.
24. ~~"100-year flood" — see "base flood"~~
25. "Recreational Vehicle" means a vehicle which is:
  - a. Built on a single chassis; and
  - b. 400 square feet or less when measured at the largest horizontal projection; and
  - c. Designed to be self-propelled or permanently towable by a light duty truck; and
  - d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.
26. "Regulatory floodway" means 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.
27. "Special flood hazard area" — see "Area Special Flood Hazard"
28. "Structure" means 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.
29. "Start of Construction" includes substantial improvements, 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.
30. "Substantial damage" means 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 damage occurred.
31. "Substantial improvement" means 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:
- 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."
- ~~any combination of repairs, reconstruction, alteration, or improvements to a structure in which the cumulative cost equals or exceeds fifty percent of the market value of the structure. The market value of the structure should equal:~~
- ~~c. The appraised value prior to the start of the initial repair or improvement; or~~
  - ~~d. In the case of damage, the value of the structure prior to the damage occurring.~~
- ~~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".~~
32. "Violation" means 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 evaluation certificate, other certifications, or other evidence of compliance required in sections G, J(2b), or I (5) is presumed to be in violation until such time as that documentation is provided.
33. "Water surface elevation" means 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.

- D. All proposed development in any special flood hazard area shall require a building permit.
- E. The building Inspector 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:
1. Be designated (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. Be constructed with materials resistant to flood damage,
  3. Be constructed by methods and practices that minimize flood damages and,
  4. Be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment, and other services facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- F. 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 Inspector with assurance that these systems will be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems will be located to avoid impairment to them or contamination from them during periods of flooding.
- S. For all new or substantially improved structures located in Zone A or AE, the applicant shall furnish the following information to the Building Inspector:
1. The as-built elevation (in relation to **mean sea level NGVD**) of the lowest floor (including basement) and include whether or not such structures contain a basement,
  2. 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 and,
  3. Any certification of flood proofing.
- The Building Inspector shall maintain for public inspection, and shall furnish such information upon request.
- H. The Building Inspector 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 and state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U. S. C. 1334.
- I. In riverine situations, prior to the alteration or relocation of a watercourse the applicant for such authorization shall notify the Wetlands Bureau of New Hampshire Department of Environmental Services and submit copies of such notification to the Planning Board, in addition to the copies required by the RSA 482-A:3.
1. Further, the applicant shall be required to submit copies of said notification to those adjacent communities as determined by the Planning Board, including notice of all scheduled hearings before NH Wetlands Bureau and, as applicable, the Bradford

Planning board.

2. The applicant shall submit to the Planning Board, certification provided by a registered professional engineer, assuring that the flood carrying capacity of an altered or relocated watercourse can and will be maintained.
3. The Planning Board shall obtain, review and reasonably utilize any floodway data available from Federal, State, or other sources as criteria for requiring that all development located Zone A meet the following flood way requirements "No encroachments, including fill, new construction, substantial improvements, and other development are allowed within the floodway that would result in any increase in flood levels within the community during the base flood discharge".
4. Until a Regulatory Floodway is designated along watercourses; 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.
5. Along watercourse 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 the standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the base flood discharge.

#### J. Flood Hazard Area

1. In special flood hazard areas the Building Inspector shall confirm the **base flood elevation** ~~100-year flood elevation~~ in the following order of precedence according to the data available.
  - a. In Zone AE, refer to the elevation data provided in Bradford's Flood Insurance Study and accompanying FIRM.
  - b. In Zone A, the Building Inspector shall obtain, review, and reasonably utilize any **base flood elevation** ~~100-year flood elevation~~ data available from any federal, state or other source including data submitted for development proposals 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.**
2. The **base flood elevation** ~~100-year flood elevation~~ confirmed by the Building Inspector shall be used as criteria for requiring the following in Zones A and AE:
  - a. All new construction or substantial improvements of residential structures have the lowest floor (including basement) elevated to or above the **base flood elevation** ~~100-year flood elevation~~;
  - b. That all new construction or substantial improvements of non-residential structures have the lowest floor (including basement) elevated to or above the **base flood elevation** ~~100-year flood level~~; or together with attendant utility and sanitary facilities, shall:
    - 1) Be flood proofed so that below the **base flood elevation** ~~100-year flood elevation~~ the structure is watertight with walls substantially impermeable

**Commented [PK1]:** Preliminary maps for Bradford include new Regulatory Floodways. This requirement needs to be added to the regulations in order to remain compliant when the new maps become effective.

to the passage of water;

- 2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy; and,
  - 3) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section.
- c. 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 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.
- d. 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:
- 1) The enclosed area is unfinished or flood resistant, usable solely for the parking of vehicles, building access or storage
  - 2) The area is not a basement
  - 3) 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: a minimum of two flood openings having a total net area of not less than one square inch for every square foot enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one-foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.
- e. Proposed structures to be located on slopes in special flood hazard areas shall include adequate drainage paths to guide floodwaters around and away from proposed structures.
- f. Recreational vehicles placed on site within Zones A and AE shall either:
- 1) Be on site fewer than 180 consecutive days;
  - 2) Be fully licensed, on 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
  - 3) Meet all standards of Section 60.3 (b) (1) of the National Flood Insurance Program Regulations and the elevation and anchoring requirements for "manufactured homes" in paragraph (c) (6) of section 60.3.

K. Variances and Appeals

1. Any order, requirement, decision or determination of the Building Inspector made under the ordinance may be appealed to the Zoning Board of Adjustment as set forth in RSA 676:5.
2. If the applicant, upon appeal, requests a variance as authorized by RSA 674:33, I ~~(b)~~, the applicant shall have the burden of showing in addition to the usual variance standards under state law:
  - a. That the variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense.
  - b. That if the requested variance is for activity within a designated regulatory floodway, no increase in flood levels during the base flood discharge will result.
  - c. That the variance is the minimum necessary, considering the flood hazard, to afford relief.
3. The Zoning Board of Adjustment shall notify the applicant in writing that:
  - 1) The issuance of a variance to construct below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and,
  - 2) Such construction below the base flood level increases risk to life and property. Such shall be maintained with a record of all variance actions.
4. The community shall:
  - a. Maintain a record of all variance actions, including their justification for their issuance, and
  - b. Report such variances issued in its annual or biennial report submitted to FEMA's Federal Insurance Administrator.