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PLANNING AND ZONING COMMISSION
TOWN OF HARTLAND, CONNECTICUT
EAST HARTLAND, CONNECTICUT 06027

RE: Comprehensive Review of Hartland's Flood Plain Use Regulation (Section IV-6)

Definitions:

BASE FLOOD ELEVATION (BFE): Means the elevation of the crest of the base flood or 100-year flood. The height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas.

BASEMENT: Means any area of the building having its floor subgrade (below ground level) on all sides.

COST: Means, as related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure shall be established by a detailed written contractor's estimate. The estimate shall include, but not be limited to: the cost of materials (interior finishing components, structural components, utility and service equipment); sales tax on materials; building equipment and fixtures, including heating and air conditioning and utility meters; labor; building appliances; demolition and site preparation; repairs made to damaged parts of the building worked on at the same time; contractor's overhead; contractor's profit; and grand total. Items to be excluded include: cost of plans and specifications; survey costs; permit fees; outside improvements such as septic systems, water supply wells, landscaping, sidewalks, fences, yard lights, irrigation systems, and detached structures such as garages, sheds, and gazebos.

DEVELOPMENT: Means any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings or other structures; the construction of additions, alterations or substantial improvements to buildings or structures; the placement of buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials;

the storage, deposition, or extraction of materials; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA): Means the federal agency that administers the National Flood Insurance Program (NFIP).

FLOOD or FLOODING: Means a general and temporary condition of partial or complete inundation of normally dry land areas from either the overflow of inland or tidal waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD INSURANCE RATE MAP (FIRM): Means the official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to a community.

FLOOD INSURANCE STUDY (FIS): Means the official study of a community in which the Federal Emergency Management Agency (FEMA) has conducted a technical engineering evaluation and determination of local flood hazards, flood profiles and water surface elevations. The Flood Insurance Rate Maps (FIRM), which accompany the FIS, provide both flood insurance rate zones and base flood elevations, and may provide the regulatory floodway limits.

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 one (1.0) foot. For the purposes of these regulations, the term "Regulatory Floodway" is synonymous in meaning with the term "Floodway".

FUNCTIONALLY DEPENDENT USE OR FACILITY: Means a use or facility that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. The term does not include seafood processing facilities, long term storage, manufacturing, sales or service facilities.

HISTORIC STRUCTURE: Means any structure that is: (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historic 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: Means the lowest floor of the lowest enclosed area (including basement).

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. The term "manufactured home" also includes park trailers, travel trailers, recreational vehicles and other similar vehicles placed on a site for greater than 180 consecutive days.

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.

MARKET VALUE: Means the market value of the structure shall be determined by an independent appraisal by a professional appraiser prior to the start of the initial repair or improvement, or in the case of damage, the value of the structure prior to the damage occurring.

NEW CONSTRUCTION: Means for 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.

RECREATIONAL VEHICLE: Means a vehicle which is: (a) built on a single chassis; (b) four hundred (400) 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 not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

SPECIAL FLOOD HAZARD AREA (SFHA): Means the land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year. SFHAs are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on the Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. SFHAs include, but are not necessarily limited to, the land shown as Zones A and AE. The SFHA is also called the Area of Special Flood Hazard.

START OF CONSTRUCTION: Means, for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97348), includes substantial improvement and 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 one hundred and eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; or does it include excavation for a basement, footings, piers, or foundations or the erections of temporary forms; not does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE: Means a walled and roofed building which is principally above ground, including a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.

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 the damage occurred.

VARIANCE: Means a grant of relief by a community from the terms of the floodplain management regulation that allows construction in a manner otherwise prohibited and where specific enforcement would result in unnecessary hardship

VIOLATION: Means a failure of a structure or other development to be fully compliant with the community's floodplain management ordinance. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION: Means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

MEAN SEA LEVEL (MSL) – Means for the purposes of the National Flood Insurance Program, the **North American Vertical Datum (NAVD) of 1988** or other datum, to which base flood elevations shown on a community's **Flood Insurance Rate Map (FIRM)** are referenced

Section IV – 6 Flood Plain Use Regulation: Within the Flood Plain, all encroachments including fill and new construction are prohibited unless certification by a professional engineer registered in the State of Connecticut is provided and that:

Flood Plain: A flood plain is designated as an area which would experience inundation during the 100 year base flood defined by the **Federal Emergency Management Agency (FEMA)**. Such areas are shown on the National Flood Insurance Program (**NFIP**) Flood Insurance Rate Map (**FIRM**), as revised, on file with the Town Clerk.

- A. The lowest **floor** of the structure (including cellar or basement if present), is elevated . . .
- B. The **New Construction or Development** shall not result in any **(0.00)** increase in base flood elevations during the 100-year flood.

(1) Compensatory Storage. The water holding capacity of the floodplain, except those areas which are tidally influenced, shall not be reduced. Any reduction caused by filling, new construction or substantial improvements involving an increase in footprint to the structure, shall be compensated for by deepening and/or widening of the floodplain. Storage shall be provided on-site, unless easements have been gained from adjacent property owners; it shall be provided within the same hydraulic reach and a volume not previously used for flood storage; it shall be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the municipality.

(2) Equal Conveyance. Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the community, encroachments resulting from filling, new construction or substantial improvements involving an increase in footprint of the structure, are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any (0.00 feet) increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage shall not be constructed in such a way so as to cause an increase in flood stage or flood velocity.

C. The following amendments apply specifically to all **Special Flood Hazard Areas** within the jurisdiction of Hartland. The areas of special flood hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study and Flood Insurance Rate Maps dated **September 26, 2008** and other supporting data, and any **subsequent** revision thereto, are adopted by reference and declared to be a part of this regulation. **Since mapping is legally adopted by reference into this regulation it must take precedence when more restrictive until such time as a map amendment is obtained.**

D. The degree of flood protection required by this regulation is considered the minimum reasonable for regulatory purposes and is based on scientific and engineering consideration and research. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This regulation does not imply or guarantee that land outside the Special Flood Hazard Area or uses permitted in such areas will be free from flooding and flood damages. This regulation shall not create liability on the part of the Town of Hartland or by any officer or employee thereof for any flood damages that result from reliance on this regulation or any administrative decision lawfully made thereunder. The Town of Hartland, its officers and employees shall assume no liability for another person's reliance on any maps, data or information provided by the Town of Hartland.

1. That the Building Official and Zoning Administrator shall review all building permits for new construction or substantial improvements to determine whether proposed sites will be safe from flooding. If a proposed building site in a location that has flood hazard, any proposed new construction or substantial improvement will be prohibited;

2. The Building Official and Zoning Administrator and Town Sanitation Agency shall review subdivision proposals and other proposed new development to assure that (a) all such proposals are consistent with the need to minimize flood damage, (b) all public utilities and infrastructure **(such as sewer, gas, electrical, water systems)** shall not be placed in flood hazard areas, (c) **adequate drainage is provided to reduce exposure to flood hazards**, and (d) **base flood elevation data is provided for all subdivision proposals, regardless of the number of lots. If base flood elevation data is not available, the applicant shall provide a hydrologic and hydraulic engineering analysis performed by a Connecticut licensed professional engineer that generates BFEs for all subdivision proposals and other proposed development. When base flood elevation data or floodway data have not been provided for any development or new construction, the Building Official and Zoning Administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source in order to administer the provisions of this regulation.**

3. Duties and responsibilities of the Building Official:

- a. Advise permittee that additional Federal or State permits may be required, and if specific Federal or State permit requirements are known, require that copies of such permits be provided and maintained on file with the development permit; possibly including but not limited to: Water Diversion Dam Safety, Corps of Engineers 404;
- b. Notify adjacent communities and the Department of Environmental Protection Water Resources Unit prior to any alteration or relocation of watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;
- c. Maintain the carrying capacity of altered or relocated watercourses;
- d. Maintain a record of any variance given from this amendment. **Obtain, record and maintain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new construction, substantial improvements or repair to a structure that has sustained substantial damage.**

4. General Statutes

- a. Residential construction: No new construction or substantial improvement of any residential structure shall be permitted in a flood hazard area. The town of Hartland is zoned Residential (R).
- b. No Manufactured home or recreational vehicle will be allowed in a floodplain area for more than a total of 180 days. Hartland will provide a 30-day trailer permit and a 30-day extension if necessary, but for all intents and purposes, trailers are not allowed in Hartland without the express permission of the Board of Selectman. **Recreational vehicles must be fully licensed and ready for highway. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.**
- c. **Non-residential construction - All new construction, substantial improvements, and repair to structures that have sustained substantial damage which are commercial, industrial or non-residential structures shall have the bottom of the lowest floor, including basement, elevated to or above the base flood elevation (BFE).**
- d. **New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.**
- e. **Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of the structure must either be elevated above the base flood elevation (BFE) on a concrete pad, or be securely anchored with tie-down straps to prevent flotation or lateral movement, have the top of the fill pipe extended above the BFE, and have a screw fill cap that does not allow for the infiltration of flood water.**
- f. **If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in these zones. The entire structure must meet the construction requirements of the flood zone. The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. Decks or porches that extend into a more restrictive flood zone will require the entire structure to meet the standards of the more restrictive zone.**

- g. If a structure lies within two or more flood zones, the construction standards of the most restrictive zone apply to the entire structure (i.e., A zone is more restrictive than X zone; structure must be built to the highest BFE). The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. (Decks or porches that extend into a more restrictive zone will require the entire structure to meet the requirements of the more restrictive zone.)
- h. New construction, substantial improvements and repair to structures that have sustained substantial damage cannot be constructed or located entirely or partially over water unless they are a functionally dependent use or facility.

5. Floodways

Located within Special Flood Hazard Areas (SFHA) are areas designated as floodways on the community's Flood Insurance Rate Maps (FIRM). Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and has erosion potential, no encroachments, including fill, new construction, substantial improvements, repairs to substantially damaged structures and other developments shall be permitted unless certification, with supporting technical data, by a Connecticut licensed professional engineer is provided demonstrating that encroachments shall not result in any (0.00 feet) increase in flood levels during occurrence of the base flood discharge. Fences in the floodway must be aligned with the flow and be of an open design.

When BFEs have been determined on the community's FIRM but a floodway has not been designated, the Building Official and Zoning Administrator must require that no new construction, substantial improvements, repair to structures which have sustained substantial damage or other development, including fill, shall be permitted which will increase the water surface elevation of the base flood more than one (1.0) foot at any point within the community when all existing and anticipated development is considered cumulatively with the proposed development. The Building Official and Zoning Administrator may request floodway data of an applicant for watercourses without FEMA-published floodways. When such data is provided by an applicant or whenever such data is available from any other source (in response to the municipality's request or not), the community shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one (1.0) foot at any point within the community.

Once these revisions are made to Hartland's floodplain regulations and the community formally adopts these revisions and the new effective FEMA FIS and FIRMs, Hartland will be fully compliant with program standards. Please provide this office with a draft copy of the revised regulations at least one month prior to formal adoption by the Town. With those revisions, please provide a schedule for public hearing and adoption. Once the revised regulations are adopted, this office will need a certified copy to forward to FEMA Region I. **Final adoption should take place no later than September 26, 2008** the effective date for the Town's updated FIS and FIRMs, which FEMA stated in its recent *Letter of Final Determination*.