

SECTION 11

SPECIAL FLOOD HAZARD ZONE REGULATIONS

11.1 Purpose

- A. It is the purpose of these regulations to promote the health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
- B. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion or in flood heights or velocities;
- C. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- D. Control the alteration of natural flood plains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;
- E. Control filling, grading, dredging and other development which may increase erosion or flood damage;
- F. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

11.2 Objectives

The objectives of these regulations are:

- A. To protect human life and health;
- B. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- C. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in flood plains;
- D. To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and,

- E. To insure that potential home buyers are notified that property is in a flood area.

11.3 Basis

The basis for establishing the Special Flood Hazard Area is the Federal Insurance Administration's scientific and engineering report entitled "The Flood Insurance Study for the Town of Haddam, Connecticut, Middlesex County," effective August 28, 2008, with accompanying Flood Insurance Rate Maps and Flood Boundary and Floodways Maps, as amended or revised. Such Study, maps and other supporting data, and any revisions thereto, are adopted by reference and declared to be a part of these regulations.

11.4 General Provisions

- A. A building permit, zoning permit, site plan approval and/or special exception shall be obtained before construction or development begins within any special flood hazard area. The applicant should review the Zoning Regulations with the Zoning Enforcement Officer to determine which permit approval process, or processes, are to be followed for the particular land use which is being proposed.
- B. The Zoning Enforcement Officer shall notify adjacent communities and the Connecticut Department of Energy and Environmental Protection, Inland Water Resources Division prior to any alteration or relocation of a watercourse, and evidence of such notification shall be sent to the Federal Insurance Administration. Maintenance shall be provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.
- C. The Zoning Enforcement Officer shall advise applicant 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 any local permit. Such additional permit requirements may include, but are not limited to: Stream Channel Encroachment Line Permit, Water Diversion Permit, Dam Safety Permit, Corps of Engineers 404 Permit.
- D. The applicant shall provide information with the application which would show that any proposed building sites will be reasonably safe from flooding.
- E. Construction, reconstruction, extension of any building or structure, or any other development, including but not limited to mining, dredging, filling, grading, paving, excavation or drilling operations shall be prohibited in the Special Flood Hazard Area, except in conformance with these regulations.

- F. When base flood elevation data or floodway data have not been provided, the Zoning Enforcement Officer shall obtain, review and reasonably utilize any base flood evaluation of floodway data available from Federal, State or other source in order to administer Section 11.5 and 11.7 of these regulations.
- G. The Zoning Enforcement Officer shall record and maintain the following:
 - 1. the as-built elevation (in relation to mean sea level) of the lowest floor (including basement) of all or new or substantially improved structures,
 - 2. the elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed.
 - 3. certification as to floodway heights, and
 - 4. any and all certifications required under Section 11 of these regulations.
- H. The Zoning Enforcement Officer shall make the necessary interpretation, where needed, as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions).

11.5 General Standards

- A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic or hydrostatic load, including the effects of buoyancy.
- B. All new construction and substantial improvements shall be constructed with materials resistant to flood damage.
- C. All new construction and substantial improvements to structures shall be constructed to ensure that electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- D. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

- F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
- G. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- H. All manufactured homes (including “mobile” homes placed on a site for 180 consecutive days or longer) to be placed or substantially improved shall be installed using methods and practices which minimize flood damage. Elevation construction standards include piling foundations placed no more than 10 feet apart, and the provision of reinforcement for piers more than six feet above ground level.
- I. A building permit, zoning permit, site plan approval and/or special exception/permit shall be obtained before construction or development begins within any special flood hazard area. The applicant should review the Zoning Regulations with the Zoning Enforcement Officer to determine which permit approval process, or processes, are to be followed for the particular land use which is being proposed.
- J. In a zone where base flood elevations have been determined, but before a floodway is designated, no new construction, substantial improvement, or other development (including fill) shall be permitted which will increase base flood elevations more than one (1) foot at any point along the watercourse when all anticipated development is considered cumulatively with the proposed development.
- K. Use of land, construction other activities permitted within this Section shall be subject to approval by all applicable federal or state agencies.

11.6 Specific Standards

The following provisions shall apply in all areas of special flood hazard A1-30, AE, AH or A zones where base flood elevation data has been provided in accordance with Section 11.4F or 11.7D of these regulations.

- A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.
- B. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

1. be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 2. have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall review and/or develop structural design specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with acceptable standards of practice for meeting the provisions of the subsection. Such certification shall be provided to the Zoning Enforcement Officer.
- C. All manufactured homes (including “mobile” homes placed on a site for 180 consecutive days or longer) to be placed or substantially improved shall be
- 1) elevated so that the lowest floor is above the base flood elevation and
 - 2) placed on a permanent foundation which itself is securely anchored and to which the structure is securely anchored so that it will resist flotation, lateral movement, and hydrostatic and hydrodynamic pressures. Anchoring may include, but not limited to, the use of over-the-top or frame ties to ground anchors.

Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

1. Encroachments, including fill, new construction, substantial improvements, and other developments shall be prohibited unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood discharge. When utilizing data other than that provided by the Federal Emergency Management Agency, a regulatory floodway must be adopted which is designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one foot at any point.
2. All new construction and substantial improvements in the floodway shall comply with flood hazard reduction provisions noted in this Section.

11.7 Standards For Subdivision Proposals

- A. In all special flood hazard areas the following requirements shall apply:
- B. All subdivision proposals shall be consistent with the need to minimize flood damage;
- C. All subdivision proposals shall have public utilities and facilities such

as sewer, gas, electrical and water systems located and constructed to minimize flood damage;

- D. All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards; and
- E. Base flood elevation data shall be provided for all subdivision proposals and other proposed development (including manufactured home parks and subdivisions).

11.8 Warning and Disclaimer of Liability

The degree of flood protection required by this regulation is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. 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 that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This regulation shall not create liability on the part of the Town of Haddam or by any officer or employee thereof for any flood damages resulting from reliance on this ordinance or any administrative decision lawfully made thereunder.

11.9 Adoption Date of Regulation – See Section 01 of these regulations.

11.10 Effective Date of Regulations – See Section 01 of these regulations.

11.11 Citation of Statutory Authorization

The Legislature of the State of Connecticut has in Title 7, Chapter 98, Section 7-148(c)(7)(A) and in Title 8, Chapter 124, Section 8-2 of the General Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.

11.12 Disclaimer of Liability Section - See Section 11.08 of these Regulations.

11.13 Severability Section

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

11.14 Abrogation and Greater Restriction Section

This regulation is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this regulation and another ordinance, regulation easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

11.15 Compensatory Storage

The water holding capacity of the floodplain, except those areas that 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.

11.16 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.

11.17 Aboveground Oil Tanks

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.

11.18 Portion of Structure in Flood Zone

If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in the SFHA. 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.

11.19 Structures in Two Flood Zones

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., V zone is more restrictive than A 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.)

11.20 No Structures Entirely or Partially Over Water

New construction, substantial improvements and repair to structures that have sustained substantial damage cannot be constructed or located entirely or partially over water.

11.21 That For New Construction or Substantial Improvements

Require that fully enclosed areas below the lowest floor that are usable solely for the parking of vehicles, building access, or limited storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit offload waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following criteria: a minimum of two 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

11.22 Variance – See Section 30 to these regulations.

11.23 Enforcement – See Section 30 to these regulations.

11.24 Violation/Penalty – See Section 30 to these regulations.