

Chapter 9

FLOODPLAIN MANAGEMENT*

- Art. I.** **In General, §§ 9-1—9-20**
Art. II. **Administration, §§ 9-21—9-30**
Art. III. **Flood Hazard Reduction, §§ 9-31—9-39**

***Editor's note**—Ord. of 12-17-10 amended Ch. 9 in its entirety and enacted similar provisions as set out herein. The former Ch. 9 derived from Ord. of 12-7-92, §§ 1.3, 2.1, 3.1—3.7, 4.1, 5.1—5.4, 6.4, 7-1—7-3, 7.4—7.6; and Ord. of 9-26-95.

Cross references—Flood and erosion control board, § 2-171 et seq.; buildings and building regulations, Ch. 6; planning, Ch. 15.

State law reference—Flood control and beach erosion, G.S. § 25-69 et seq.



ARTICLE I. IN GENERAL

Sec. 9-1. Statutory authorization.

The Legislature of the State of Connecticut has in G.S. title 7, chapter 98, § 7-148(c)(7)(A) delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore the Board of Selectmen of the Town of Madison, Connecticut does ordain as follows.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-2. Findings of fact.

(a) The flood hazard areas of the Town of Madison are subject to periodic inundation which can result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-3. Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

- (3) Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters;
- (4) Control filling, grading, dredging and other development which may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-4. Objectives.

The objectives of this chapter are:

- (1) To protect human life and health;
- (2) To minimize expenditure of public money for costly flood control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in floodplains;
- (6) 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 flood blight areas;
- (7) To insure that potential home buyers are notified that property is in a flood hazard area; and
- (8) To ensure continued eligibility of owners of property in the Town of Madison for participation in the National Flood Insurance Program.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-5. Definitions.

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a

common load bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load bearing walls is a new structure.

Appeal means a request for a review of the town engineer's interpretation of any provision of this chapter or a request for a variance.

Area of special flood hazard is the land in the floodplain within a community subject to one (1) percent or greater chance of flooding in any given year.

Base flood means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

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 that portion of a building having its floor subgrade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building means any structure built for support, shelter, or enclosure for any occupancy or storage.

Coastal high hazard area means the area subject to the high velocity waters caused by, but not limited to, hurricane wave wash. The area is designated on the FIRM as zones VE or V.

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 elements, structural elements, utility and service equipment),

sales tax on materials, building equipment and fixtures, including heating and air conditioning and utility meters, labor, built-in 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 manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations or permanent storage of equipment or materials.

Elevated building means a non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured home are to be affixed (including, as a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before September 15, 1978, the effective date of the floodplain management ordinance adopted by the Town of Madison.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Federal Emergency Management Agency (FEMA) is the federal agency that administers the National Flood Insurance Program (NFIP).

Finished living space means as related to fully enclosed areas below the base flood elevation, a

space that is, but is not limited to, heated and/or cooled, contains finished floors (tile, linoleum, hardwood, etc.), has sheetrock walls that may or may not be painted or wallpapered, and other amenities such as furniture, appliances, bathrooms, fireplaces and other items that are easily damaged by floodwaters and expensive to clean, repair or replace.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal water; and
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated areas of special flood hazard, floodways and risk premium zones applicable to the community.

Flood insurance study (FIS) is the official report by the Federal Emergency Management Agency which contains flood profiles and the water surface elevation of the base flood.

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) foot.

Floor means the top surface of an enclosed area in a building (including basement) i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage use solely for parking vehicles.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair or seafood processing facilities. The term does not include long term storage, manufacture, sales or service facilities.

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

Historic structure means any structure that is:

- (1) 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;
- (2) 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;
- (3) 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
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior; or
 - b. 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). 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.

Manufactured home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved property.

Manufactured home park or subdivision a parcel, or contiguous parcels, or land divided into two (2) or more manufactured home lots for rent or sale.

Market value means the market value of the structure shall be determined based on the latest town assessment of the structure adjusted to current value by a factor determined in the latest issue of the Marshall Valuation Services Comparative Cost Multiples published by Marshall and Swift (in the event that the aforementioned publication is no longer available an alternative factor may be developed by the town engineer's office), 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.

Mean sea level means for 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 are referenced.

North American Vertical Datum (NAVD) as corrected in 1988 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means structures (or improvements to such structures) for which the "start of construction" commenced on or after the effective date of the floodplain management ordinance of September 15, 1978.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after September 15, 1978, the effective date of the floodplain management ordinance adopted by the Town of Madison.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred (400) square feet or less when measured at the largest horizontal projection;

- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

Sand dunes means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within one hundred eighty (180) days of the permit date. The actual start date means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footing, installation of piles, construction of columns, or any work beyond the stage of excavation or 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; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of 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 that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade 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 fifty (50) percent of the market value of the structure before the damage occurred. "Substantial damage" also means flood-related damages sustained by a structure on

two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damage occurred.

Substantial improvement means any combination of repairs, reconstruction, alteration, or improvements to a structure, taking place during a one-year period, in which the cumulative cost equals or exceeds fifty (50) percent of the current 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 market value of the structure shall be based on the latest town assessment adjusted to current value by a factor determined in the latest issue of the Marshall Valuation Services Comparative Cost Multiples published by Marshall and Swift. In the event the aforementioned publication is no longer available an alternative factor may be developed by the town engineer's office. 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. The term does not, however, include 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.

Variance is a grant of relief from the requirements of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.

Violation means 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, flood-proofing certificates or required floodway

encroachment calculations is resumed 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 and riverine areas. (Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-6. Land to which this chapter applies.

The ordinance from which this chapter is derived shall apply to all special flood hazard areas within the jurisdiction of the Town of Madison. (Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-7. Basis for establishing the special flood hazard areas.

(a) The special flood areas identified by the Federal Emergency Management Agency (FEMA) in its flood insurance study (FIS) for New Haven County, Connecticut, dated July 8, 2013, and accompanying flood insurance rate maps (FIRM), dated July 8, 2013 (Panels 09009C0492J, 09009C0494J, 09009C0512J, 09009C0513J, 09009C0514J, 09009C0516J, 09001C0518J, 09009C0631J) and December 17, 2010 (Panels 09009C0334H, 09009C0335H, 09009C0342H, 09009C0344H, 09009C0345H, 09009C0363H, 09009C0481H, 09009C0482H, 09009C0483H, 09009C0484H, 09009C0493H, 09009C0501H, 09009C0503H, 09009C0504H, 09009C0511H), and other supporting data applicable to the Town of Madison, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this chapter.

(b) Since mapping is legally adopted by reference into this chapter it must take precedence until such time as a map amendment or map revision is obtained from FEMA. The area of special flood hazard includes any area shown on the FIRM as zones A, AE, and VE, including areas designated as a floodway on the FIRM. Zone VE is also identified as a coastal high hazard area. Areas of special flood hazard are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the flood insurance study

(FIS) for Madison. BFEs provided on a flood insurance rate map (FIRM) are approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-8. Flood hazard area permit.

A flood hazard area permit shall be required in accordance with the provisions of this chapter prior to the commencement of any development activities located within special flood hazard areas.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-9. Compliance.

No structure or land shall hereafter be located, extended, converted, modified or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-10. Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. Where this chapter and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-11 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the governing body; and
- (3) Deemed neither to limit nor repeal any other powers granted under the Connecticut General Statutes.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-12. Severability.

If any section, subsection, paragraph, sentence, clause or phrase of this chapter should be declared invalid for any reason whatsoever, such

decision shall not affect the remaining portions of this chapter, which shall remain in full force and effect, and to this end the provisions of this chapter are hereby declared to be severable.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-13. Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered the minimum 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 manmade or natural causes. This chapter does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the Town of Madison or any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

(Ord. of 12-17-10; Amend. of 6-24-13)

Secs. 9-14—9-20. Reserved.

ARTICLE II. ADMINISTRATION

Sec. 9-21. Designation of administrator.

The town engineer is hereby designated to administer and implement the provisions of this chapter. The town engineer shall have the responsibility and authority to grant or deny flood hazard area permit applications for development in special flood hazard areas in accordance with the provisions of this chapter. The board of selectmen may appoint deputies to assist and act for the town engineer.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-22. Flood hazard area permit.

Development, including new construction and substantial improvements may be made within a special flood hazard area only after a flood hazard area permit has been issued by the town engineer.

The following information shall be provided in connection with all applications:

- (1) Elevation in relation to mean sea level of the proposed lowest floor, including basement, crawl space and garage of all structures.
- (2) Elevation in relation to mean sea level to which any structure will be floodproofed.
- (3) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- (4) A statement as to whether or not the proposed alterations to an existing structure meet the substantial improvement definition in section 9-5.
- (5) Architectural and structural drawings for any proposed building, including floor plans, elevations and typical sections, if requested.
- (6) Plans and details for any proposed break-away walls, including a certification that the requirements of subsections 9-34(2) through 9-34(6) have been met.
- (7) Certification as to use of floodproofing for non-residential structures as required by subsection 9-33(2).
- (8) Certification as to the provisions of section 9-33 governing fully-enclosed areas below the base flood elevation, if the minimum design criteria in subsection 9-33(3) are not used.
- (9) Certification of compliance with the floodway standards contained in subsection 9-33(4).
- (10) Certification of compliance with the coastal high hazard area standards contained in section 9-34.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-23. Duties and responsibilities of the town engineer.

Duties and responsibilities of the town engineer in the administration of this chapter shall include but not be limited to the following:

- (1) Review all development permit applications to determine that the requirements

of this chapter have been satisfied and that proposed building sites will be reasonably safe from flooding;

- (2) Advise permittees that additional approvals and/or permits may be required from town, state and/or federal governmental agencies;
- (3) Notify adjacent communities and the State of Connecticut Department of Environmental Protection prior to any alteration or relocation of a watercourse and submit evidence of such notification to FEMA;
- (4) Require that the flood carrying capacity within an altered or relocated portion of any watercourse is maintained;
- (5) Make interpretations, where needed, as to the location of boundaries of special flood hazard areas, such as where there appears to be a conflict between a mapped boundary and actual field conditions. Any person contesting the interpretation of the location of a boundary shall be given a reasonable opportunity to appeal the interpretation as provided in section 9-36;
- (6) Require the applicant to provide base flood elevation data for all proposed development, including manufactured home parks and subdivisions which are five (5) acres or fifty (50) lots, whichever occurs first, and are located in zone A;
- (7) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a town, state, federal or other source, including data developed pursuant to subsection 9-23(6) of this chapter, in order to administer the provisions of section 9-33, when base flood elevation data or floodway data have not been provided in accordance with section 9-7;
- (8) Obtain and record the record (as-built) elevation in relation to mean sea level of the lowest floor, including basement, of all new construction or substantially improved structures;

- (9) Obtain and record the elevation in relation to mean sea level to which new construction or substantially improved structures have been flood-proofed;
 - (10) In coastal high hazard areas, obtain certification from a licensed professional engineer or architect that the standards of section 9-34 have been met;
 - (11) Maintain all records pertaining to provisions of this chapter; and
 - (12) Submit reports to the Federal Insurance Administration as may be required.
- (Ord. of 12-17-10; Amend. of 6-24-13)

Secs. 9-24—9-30. Reserved.

ARTICLE III. FLOOD HAZARD REDUCTION

Sec. 9-31. General standards.

In all special flood hazard areas, the following provisions shall apply:

- (1) New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- (2) New construction and substantial improvements shall be constructed with materials resistant to flood damage.
- (3) New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (5) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- (6) 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.
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (8) All manufactured homes (including "mobile" homes and recreational vehicles placed on a site for one hundred eighty (180) consecutive days or longer) to be placed or substantially improved shall be elevated so that the lowest floor is above the base flood elevation. This includes, but is not limited to, manufactured homes located outside a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an existing manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or on a site in an existing manufactured home park in which a manufactured home has incurred substantial damage as a result of a flood. They shall be 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 be limited to, the use of over-the-top or frame ties to ground anchors. Recreational vehicles located within all areas of special flood hazard must be either on site for fewer than one hundred eighty (180) consecutive days and be fully licensed and ready for highway use, or meet the elevation and anchoring requirements of a manufactured home. 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.
- (9) In any portion of a watercourse which is altered or relocated, the flood carrying capacity shall be maintained.

(10) A structure already in compliance with the provisions of this chapter shall not be made non-compliant by any alteration, repair, reconstruction or improvement to the structure.

(11) 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.

(12) 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.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-32. Standards for areas without established base flood elevations.

(a) The town engineer shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a town, state or federal source, including data developed pursuant to subsection 9-23(6) of this chapter as criteria for requiring that new construction, substantial improvements, or other development in zone A on the FIRM meet the standards in section 9-33 and section 9-35.

(b) In A and AE zones where base flood elevations have been determined, but where a floodway has not been 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.

(c) The town engineer 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 town engineers request or not, the town 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) foot at any point along the watercourse.

(d) The town engineer shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a town, state or federal source, as criteria for requiring that new construction, substantial improvements or other development in any area of potential, demonstrable or historical flooding within the community meet the standards in section 9-33 and section 9-35.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-33. Specific standards.

In all special flood hazard areas where base flood elevation data has been provided, the following provisions shall apply in addition to the general standards of section 9-31:

- (1) *Residential construction.* New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least to the base flood elevation.
- (2) *Non-residential construction.* New construction or substantial improvement of any commercial, industrial or non-residential structure shall have the lowest floor, including basement, elevated at least to the base flood elevation; or

Non-residential buildings located in all A and AE zones may be flood-proofed in lieu of being elevated provided that together with all attendant utilities and sanitary facilities the areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.

A licensed professional engineer or architect shall develop structural design plans and specifications 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 this section.

- (3) *Fully enclosed areas below the base flood elevation.* New construction or substantial improvements of buildings or structures in A and AE zones that include fully enclosed areas below the base flood elevation, excluding basements, shall be designed to preclude finished living space

and to allow for the automatic entry and exit of flood waters to equalize hydrostatic flood forces on exterior walls.

Designs for complying with this requirement must either be certified by a licensed professional engineer or architect or meet the following minimum criteria:

- a. Provide a minimum of two (2) openings having a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding.
 - b. The bottom of all openings shall be no higher than one (1) foot above the slab elevation and set at or above the exterior ground elevation so as to permit free drainage away from the structure.
 - c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of flood waters in both directions.
 - d. Electrical, plumbing, heating, ventilation, cooling and other utilities are prohibited below the base flood elevation.
 - e. Use of the enclosed area shall be the minimum necessary to allow for parking of vehicles or limited storage of maintenance equipment used in connection with the premises or entry to the living area via a stairway or elevator.
- (4) *Floodways.* Located within special flood hazard areas established in section 9-7 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles and have erosion potential, the following provisions shall apply:

Within designated floodways, no encroachments including fill, new construction, substantial improvements or other development shall be permitted unless certification and supporting technical data by a

licensed professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that the encroachments shall not result in any (0.00 feet) increase in flood levels during occurrence of the base flood discharge.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-34. Coastal high hazard areas.

The following additional standards are applicable to development, including new construction and substantial improvement in all coastal high hazard areas designated as special flood hazard area zones VE:

- (1) All new construction or substantial improvements shall be located landward of the reach of the Connecticut Coastal Jurisdiction Line as defined in CGS 22a-359 as amended by Public Act 12-101.
- (2) All new construction or substantial improvements shall be elevated so that the lowest supporting horizontal member is located no lower than the base flood elevation and with all space below the lowest supporting horizontal member open so as to not impede the flow of water, excluding pilings or columns and except for breakaway walls as defined in section 9-5 and provided for in subsections 9-34(4) through 9-34(6).
- (3) All new construction or substantial improvements shall be securely anchored on pilings or columns. Pilings and columns and the attached building or structure shall be anchored to resist flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building or structure components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed the one hundred (100) year mean recurrence interval (one (1) percent annual chance floods and winds). Fill shall not be used for structural support.
- (4) Breakaway walls shall be allowed to enclose space below the base flood elevation provided they are not a part of the structural support of the building or structure and are designed so as to breakaway under abnormally high tides or wave action without damage to the structural integrity of the building or structure on which they are to be used.
- (5) The design safe loading resistance of breakaway walls shall be not less than ten (10) pounds per square foot and not greater than twenty (20) pounds per square foot; or
If a design safe loading resistance greater than twenty (20) pounds per square foot, a licensed professional engineer or architect shall certify that the breakaway walls will collapse as a result of a water load less than that which would occur during the base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the base flood event. The maximum wind and water loading values to be used in this determination shall equal the one hundred (100) year mean recurrence interval (one (1) percent annual chance floods and winds).
- (6) If breakaway walls are utilized to enclose the area below the base flood elevation, the area shall not be used for human habitation, but shall be designed to be used only for parking of vehicles, building access or limited storage of maintenance equipment used in connection with the premises.
- (7) Placement of manufactured homes within a VE zone shall be prohibited. Recreational vehicles placed on sites within VE zones shall either be on the site for fewer than one hundred eighty (180) consecutive days and be fully licensed and ready for highway use, or meet all the standards of section 9-31 and the VE zone construction requirements of section 9-34. 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.

(8) Compliance with the provisions of section 9-34 shall be certified by a licensed professional engineer or architect and shall be submitted to the town engineer.

(9) There shall be no alteration of sand dunes which would increase potential flood damage.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-35. Standards for subdivision proposals.

In all special flood hazard areas the following requirements shall apply:

(1) All subdivision proposals shall be consistent with the need to minimize flood damage;

(2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;

(3) All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards; and

(4) Base flood elevation data shall be provided for all subdivision proposals and other proposed development including manufactured home parks and subdivisions which are five (5) acres or fifty (50) lots, whichever ever occurs first, and are located in zone A.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-36. Variance procedures.

(a) The Town of Madison Flood and Erosion and Control Board shall hear and decide appeals and requests for variances from the requirements of this chapter.

(b) The flood and erosion control board shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the town engineer in the administration or enforcement of this chapter.

(c) Any person aggrieved by the decision of the flood and erosion control board or any person owning land that abuts or is within one hundred (100) feet of the land in question may appeal within fifteen (15) days after such decision to the State Superior Court of New Haven County, as provided in G.S. § 8-8.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-37. Specific situation variances.

(a) *Buildings on an historic register.* Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places without regard to the procedures set forth in the remainder of this section, except for subsections 9-38(1) through (4) and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.

(b) *Pre-existing small lot location.* Variances may be issued for new construction and substantial improvements to be erected on a lot one-half acre or less in size which is contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with section 9-38.

(c) *Functionally dependent uses.* Variances may be issued for new construction and substantial improvements and other development necessary for the conduct of a functionally dependent use provided the structure or other development is protected by methods that minimize flood damage, creates no additional threat to public safety and meets the requirements of section 9-38.

(d) *Floodway prohibition.* Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-38. Considerations for granting of variances.

In passing upon applications for variances, the flood and erosion control board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter and:

- (1) The danger that materials may be swept onto other lands to the injury of others.
- (2) The danger to life and property due to flooding or other erosion damage.
- (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
- (4) The importance of the services provided by the proposed facility to the community.
- (5) The necessity of the facility to waterfront location, in the case of a functionally dependent facility.
- (6) The availability of alternative locations which are not subject to flooding or erosion damage for the proposed use.
- (7) The compatibility of the proposed use with the existing and anticipated development.
- (8) The relationship of the proposed use with the existing and anticipated development.
- (9) The relationship of the proposed use to the comprehensive plan of development and the floodplain management program for that area.
- (10) The safety of access to the property in times of flood for ordinary and emergency vehicles.
- (11) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.
- (12) The costs of providing governmental services during and after flood conditions including maintenance and repair of pub-

lic utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

- (13) Upon consideration of the factors listed above, and the purposes of this chapter, the flood and erosion control board may attach such conditions to the granting of variances as it deems necessary for the purposes of this chapter.
 - (14) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief, and in the instance of a historical building, a determination that the variance is the minimum necessary as not to destroy the historic character and result in the loss of historic designation of the building.
 - (15) Variances shall only be issued upon a showing of good and sufficient cause, a determination that failure to grant the variance would result in exceptional hardship and a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (16) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation up to amounts as high as twenty-five dollars (\$25.00) for each one hundred dollars (\$100.00) of insurance coverage.
 - (17) The town engineer shall maintain the records of all appeal actions and report any variances to FEMA upon request.
- (Ord. of 12-17-10; Amend. of 6-24-13)

Sec. 9-39. Penalties for violation.

Violation of the provisions of this chapter or failure to comply with any of its requirements,

including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof, be fined not more than two hundred fifty dollars (\$250.00) per day if proven to be done willfully and one hundred dollars (\$100.00) per day if not, or imprisoned for not more than ten (10) days for each day of violation, or both, and in addition, shall pay all costs and reasonable legal fees involved in the case. Nothing herein shall prevent the Town of Madison from taking such other lawful action as is necessary to prevent or remedy any violation. (Ord. of 12-17-10; Amend. of 6-24-13)