Chapter 7

FLOOD DAMAGE PREVENTION AND CONTROL¹²

Art. I. In General

Art. II. Administration

Art. III. Provisions for Flood Hazard Reduction

ARTICLE I. IN GENERAL

Section 7-1 Statutory Authorization

The Legislature of the State of Connecticut has in section 7-148(c)(7) of the general statutes delegated the responsibility to local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the town council of Killingly, Connecticut does ordain the provisions set forth in this Chapter 7 of the Code of Ordinances. (Ord. of 12-11-84; Ord. of 4-14-87, § 2)

Section 7-2 Finding of fact

- (A) The flood hazard areas of Killingly are subject to periodic inundation which results 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 12-11-84; Ord. of 4-14-87, § 3)

Section 7-3 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:

- (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, 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; and,
- (7) To ensure that potential home buyers are notified that the property is in a flood area. (Ord. of 12-11-84; Ord. of 4-14-87, §§ 4-7)

Section 7-4 Methods of reducing flood losses

In order to accomplish its purpose, this chapter includes methods and provisions 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:

¹ Editor's note—An ordinance adopted Dec. 11, 1984, provided that former Ch. 7, Flood damage prevention and control, being § 7-1 as derived from an ordinance adopted May 10, 1977, be eliminated, and new provisions relative to the same subject matter be included in lieu thereof. Such provisions have been codified herein as §§ 7-1–7-11, 7-20–7-23, 7-30–7-32, to conform to the numbering system established for the Code.

² Cross references-Building regulations, Ch. 4; inland wetlands, App. A; subdivisions, App. B; zoning, App. C

- (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 12-11-84; Ord. of 4-14-87, §§ 8, 9)

Section 7-5 Definitions

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter it's most reasonable application.

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 or separate structure.

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

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

Basement means that portion of a building having its floor sub grade 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.

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, excavating, drilling operations or permanent storage of 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 post 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 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 before the effective date of the floodplain management regulations adopted by the community.

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 manufactured 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).

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 waters; and/or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Hazard Boundary Map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A

Flood Insurance Rate Map (FIRM) means the official map of a community on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the applicable risk premium zones. FIRMS published after January 1990 may also show the boundaries of the floodway.

Flood Insurance Study is the official report by the Federal Emergency Management Agency. The report contains flood profiles, the water surface elevation of the base flood, and other flood data.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reversed 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 used 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 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.

Lowest floor means the lowest floor of the lowest enclosed area (including basement).

Manufactured home means a structure, transportable in one (1) or more sections, which is build on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. Recreational vehicles and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer shall be considered manufactured homes for the purpose of this chapter.

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

Mean sea level means for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means structures for which the "start of construction" commenced on or after the effective date of this chapter and includes any subsequent improvements to such structures.

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 projections;
- (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 temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area is the area within a community subject to a one (1) per cent or greater chance of flooding in any given year, as identified on the community's FIRM.

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 means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, 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.

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) per cent 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) per cent of the market value of the structure. The market value of the structure should be (1) the appraised value of the structure prior to the start of the initial repair or improvement or (2) in the case of damage, the value of the structure prior to the damage occurring. 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 required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions.

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

Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas. (Ord. of 12-11-84; Ord. of 4-14-87, §§ 10–12; Ord. of 4-28-94; Ord. of 4-20-95)

Section 7-6 Lands to which this chapter applies

This chapter shall apply to all areas of special flood hazard within the jurisdiction of Killingly, Connecticut. (Ord. of 12-11-84)

Section 7-7 Basis for establishing the areas of special flood hazard

The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for the Town of Killingly" dated December 15, 1983, with an accompanying flood insurance rate map and other supporting data, and any revision thereto, is hereby adopted by reference and declared to be a part of this chapter. The flood insurance study is on file at Town Hall, 172 Main Street, Danielson, Connecticut. (Ord. of 12-11-84; Ord. of 4-14-87, §§ 1, 13)

Section 7-8 Compliance

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. (Ord. of 12-11-84)

Section 7-9 Abrogation and greater restrictions

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance or other federal, state, or local law, conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. of 12-11-84)

Section 7-10 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 public safety; and
- (3) Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. of 12-11-84)

Section 7-11 Warning and disclaimer of liability

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. 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 areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Killingly, any officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made there under.

(Ord. of 12-11-84; Ord. of 4-14-87, § 1)

Sections 7-12 - 7-19 Reserved

ARTICLE II. ADMINISTRATION

Section 7-20 Building Permit Requirements

A building permit shall be obtained before construction or development begins within any area of special flood hazard established in section 7-7. Application for a building permit shall be made on forms furnished by the building official and may include, but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- (1) Elevation in relation to mean sea level of the lowest floor (including basement) of all structures;
- (2) Elevation in relation to mean sea level to which any structure will be flood proofed;
- (3) Certification by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet the criteria in section 7-31 (2); and

(4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development. (Ord. of 12-11-84: Ord. of 4-14-87, § 14)

Section 7-21 Designation of the Building Official

The building official is hereby appointed to administer and implement this chapter by granting or denying building permits in accordance with its provisions. (Ord. of 12-11-84)

Section 7-22 Duties and responsibilities of the Building Official

Duties and responsibilities of the building official shall include, but not be limited to:

- (1) Permit review:
 - a. Review all building permit applications to determine that the permit requirements of this chapter have been satisfied.
 - b. Review all building permit applications to determine that all necessary permits have been obtained from those federal, state or local governmental agencies (i.e., Killingly Planning and Zoning Commission, Killingly Inland Wetlands and Water Courses Commission) from which prior approval is required.
 - c. Review all building permit applications to determine if the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard. For purposes of this chapter, "adversely affects" means that the cumulative effects of proposed development when combined with all other existing and anticipated development increases the water surface elevation of the base flood more than one (1) foot at any point.
- (2) Use of other base flood data. When base flood elevation data has not been provided in accordance with section 7-7, Basis for establishing the areas of special flood hazard, the building official shall obtain, review, and reasonably utilize any base flood elevation data and floodway data available from federal, state, or other source in order to administer sections 7-31 (1), Specific standards, residential construction, and 7-31 (2), Specific standards, nonresidential construction.
- (3) Information to be obtained and maintained.
 - a. Obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.
 - b. For all new or substantially improved flood proofed structures:
 - 1. verify and record the actual elevation (in relation to mean sea level), and
 - 2. maintain the flood proofing certifications required in section 7-20 (3).
 - c. Maintain for public inspection all records pertaining to the provisions of this chapter.
- (4) Alteration of watercourses:
 - Notify adjacent communities and the department of environmental protection prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
 - b. Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (5) Interpretation FIRM boundaries. Make interpretations, where needed, as to the exact location of the 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). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in section 7-23. (Ord. of 12-11-84; Ord. of 4-14-87, §§ 1, 15, 16)

Section 7-23 Variance procedure

- (a) Appeal board:
 - (1) The building board of appeals as established by Chapter 4 of the Code of Ordinances of the Town of Killingly shall hear and decide appeals and requests for variances from the requirements of this chapter.
 - (2) The building board of appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the building official in the enforcement or administration of this chapter.
 - (3) Those aggrieved by the decision of the building board of appeals, or any taxpayer, may appeal such decision to the superior court, as provided in the Connecticut General Statutes.
 - (4) In passing upon such applications, the building board of appeals shall consider all technical evaluations; all relevant factors; standards specified in other sections of this chapter; and:

- a. The danger that materials may be swept into other lands to the injury of others;
- b. The danger of life and property due to flooding or erosion damage;
- c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- d. The importance of the services provided by the proposed facility to the community;
- e. The necessity to the facility of a waterfront location, where applicable;
- f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- g. The compatibility of the proposed use with existing and anticipated development;
- h. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area:
- i. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- j. 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; and
- k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- (5) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one and one-half (1½) acres or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided items a through k in subsection (4) above have been fully considered. As the lot size increases beyond one and one-half (1½) acres, the technical justification required for issuing the variance increases.
- (6) Upon consideration of the factors of section 7-23 (a) (4) and the purposes of this chapter, the building board of appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (7) The building official shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- (b) Conditions for Variances:
 - (1) 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.
 - (2) Variances shall not be issued within any designated floodway in any increase in flood levels during the base flood discharge would result.
 - (3) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (4) Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in section 7-23 (a) (4), local laws or ordinances.
 - (5) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. (Ord. of 12-11-84; Ord. of 4-14-87, § 1)

Section 7-24 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 exception, 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 in accordance with section 1-9 of this Code of Ordinances, and, in addition, shall pay all costs and reasonable legal fees involved in the case. Nothing herein contained shall prevent the Town of Killingly from taking such other lawful action as is necessary to prevent or remedy any violation. (Ord. of 4-14-87, § 17)

Section 7-25-7-29 Reserved

ARTICLE III. PROVISIONS FOR FLOOD HAZARD REDUCTION

Section 7-30 General Standards

In all areas of special flood hazard the following standards are required:

- (1) Anchoring. All new construction and substantial improvements shall be anchored to prevent floatation, collapse or lateral movement of the structure.
- (2) Construction materials and methods:
 - a. All new construction and substantial improvement shall be constructed with materials and utility equipment resistant to flood damage.
 - b. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
 - c. 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.
- (3) Utilities:
 - All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
 - b. New and replacement sanitary sewage or septic systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and
 - c. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (4) Subdivision proposals (Refer to section 361 of Appendix B, Subdivision Regulations, located in the Planning & Development Office).
- (5) Manufactured homes:
 - a. All manufactured homes (including "recreational vehicles") placed on a site for one hundred eighty (180) days or longer to be placed or substantially improved shall be elevated so that the lowest floor is above the base flood elevation.
 - b. It 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. (Ord. of 12-11-84; Ord. of 4-14-87, §§ 18–20; Ord. of 4-28-94)

Section 7-31 Specific standards

In all areas of special flood hazard where base flood elevation data has been provided as set forth in section 7-7, Basis for establishing the areas of special flood hazard or section 7-22 (b), use of other base flood data, the following provisions are required:

- (1) Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.
- (2) Nonresidential construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to or above the level of the base flood elevation; or together with attendant utility and sanitary facilities, shall:
 - a. Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the official as set forth in section 7-22 (3)b. (Ord. of 12-11-84)
- (3) [Elevated buildings.] New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - 1. Provide a minimum of two (2) openings) having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding:
 - 2. The bottom of all openings shall be no higher than one (1) foot above grade; and
 - 3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions:
- b. Electrical, plumbing, and other utility connections are prohibited below the base flood elevation; and
- c. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator). (Ord. of 12-11-84; Ord. of 4-20-95)

Section 7-32 Floodways

Located within areas of special flood hazard established in section 7-7 are areas designated as floodways. 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) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) If subsection (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article III, Provisions for flood hazard reduction.

 (Ord. of 12-11-84; Ord. of 4-14-87, § 21)