

# Chapter 9 FLOOD DAMAGE PREVENTION

## ARTICLE I. IN GENERAL

### *Sec. 9-1. 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:

- (a) Protect human life and health;
- (b) Minimize expenditure of public money for costly flood control projects;
- (c) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (d) Minimize prolonged business interruptions;
- (e) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- (f) Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
- (g) Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- (h) Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. of 6-2-86, § 1.1)

### *Sec. 9-2. Methods of reducing flood losses.*

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

- (a) Restricting or prohibiting 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;
- (b) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (c) Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- (d) Controlling filling, grading, dredging, and other development which may increase flood damage; and
- (e) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.  
(Ord. of 6-2-86, § 1.2)

### *Sec. 9-3. Definitions.*

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

- (a) Appeal means a request for a review of the city engineer's interpretation of any provision of this chapter or a request for a variance.
- (b) Area of shallow flooding means a designated AO or VO zone on the flood insurance rate map (FIRM). The base flood depths range from one (1) to three (3) feet; a clearly

- defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident.
- (c) Area of special flood hazard means the land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year.
  - (d) Base flood means the flood having a one-percent chance of being equalled or exceeded in any given year.
  - (e) Breakaway walls means any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building material which are not part of the structural support of the building and which are so designed as to breakaway, under normally high tides or wave action, without damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by flood waters.
  - (f) Development means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.
  - (g) 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;
    - (2) The unusual and rapid accumulation or runoff of surface waters from any source.
  - (h) Flood insurance rate map (FIRM) means the official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
  - (i) Flood insurance study means the official report provided in which the Federal Emergency Management Agency has provided flood profiles, as well as the flood hazard boundary-floodway map and the water surface elevation of the base flood.
  - (j) 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.
  - (k) Habitable floor means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a habitable floor.
  - (l) New construction means structures for which the "start of construction" commenced on or after June 2, 1986.
  - (m) Start of construction means the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. 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 as part of the main structure. For a structure without a basement or poured footings, the start of construction includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation.
  - (n) Structure means a walled and roofed building that is principally aboveground.

- (o) Substantial improvement means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure either:
  - (1) Before the improvement or repair is started; or
  - (2) If the structure has been damaged and is being restored, before the damage occurred.
  - (3) 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.
  - (4) The term does not, however, include either:
    - a. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or
    - b. Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.
- (p) 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.  
(Ord. of 6-2-86, § 2) Cross reference(s)--Definitions and rules of construction generally, § 1-3.

***Sec. 9-4. Application of provisions.***

The provisions of this chapter shall apply to all areas of special flood hazards within the jurisdiction of the city. (Ord. of 6-2-86, § 3.1)

***Sec. 9-5. Basis for establishing 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 City of Everett, Massachusetts, dated May 30, 1985, with accompanying flood insurance rate maps, is hereby adopted by reference and declared to be a part of this chapter. The flood insurance study is on file in the city engineer's office. (Ord. of 6-2-86, § 3.2)

***Sec. 9-6. Compliance.***

No structure or land shall be constructed, located, extended, converted, or altered after June 2, 1986, without full compliance with the terms of this chapter and other applicable regulations. (Ord. of 6-2-86, § 3.3)

***Sec. 9-7. Enforcement; violations.***

The city engineer shall enforce the provisions of this chapter. Whoever violates the provisions of this chapter shall be subject to a fine in accordance with Section 1-8 of these Revised Ordinances of the City of Everett. (Ord. of 4-8-04)

***Sec. 9-8. 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, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. of 6-2-86, § 3.4)

**Sec. 9-9. Interpretation.**

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

- (a) Considered as minimum requirement;
- (b) Liberally construed in favor of the governing body; and
- (c) Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. of 6-2-86, § 3.5)

**Sec. 9-10. Warning and disclaimer of liability.**

- (a) 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 man-made or natural causes.
- (b) 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.
- (c) This chapter shall not create liability on the part of the city, 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 thereunder. (Ord. of 6-2-86, § 3.6)

**Secs. 9-11--9-25. Reserved.**

## **ARTICLE II. ADMINISTRATION**

**Sec. 9-26. City engineer--Appointment.**

The city engineer is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

(Ord. of 6-2-86, § 4.2) Cross reference(s)--City engineer generally, § 2-81 et seq.

**Sec. 9-27. Same--Duties and responsibilities.**

The duties of the city engineer shall include, but not be limited to:

- (a) Permit review.

The city engineer shall:

- (1) Review all development permits to determine that the permit requirements of this chapter have been satisfied;
- (2) Review all development permits to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required;
- (3) Review all development permits in the area of special flood hazard except in the coastal high hazard area to determine if the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard. For the purposes of this chapter, adversely affects means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one (1) foot at any point;
- (4) Review plans for walls to be used to enclose space below the base flood level in accordance with article III of this chapter.

(b) Use of other base flood data.

When base flood elevation data has not been provided in accordance with section 9-5, the city engineer shall obtain, review, and reasonably utilize any base flood elevation data available from a federal, state or other source, in order to administer sections 9-51 and 9-52.

(c) Required information.

The city engineer shall obtain and maintain the following information:

- (1) The actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures.
- (2) For all new substantially improved flood proofed structures:
  - a. Verify and record the actual elevation (in relation to mean sea level); and
  - b. Maintain the flood proofing certifications required in section 9-26.
  - c. Maintain for public inspection all records pertaining to the provisions of this chapter.

(d) Alteration of watercourses.

The city engineer shall:

- (1) Notify adjacent communities and the Massachusetts Division of Water Resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency;
- (2) Require that maintenance is provided within the altered or relocated portion of the watercourse so that the flood-carrying capacity is not diminished.

(e) Interpretation of FIRM boundaries.

Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards (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 9-29. (Ord. of 6-2-86, § 4.3)

***Sec. 9-28. Development permit.***

- (a) A development permit shall be obtained before construction or development begins within any area of special flood hazard established in section 9-5.
- (b) Application for a development permit shall be made on forms furnished by the city engineer, 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.
- (c) 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 has been flood proofed;
  - (3) Certification by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in section 9-52;

- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and
- (5) Plans for any walls to be used to enclose space below the base flood level. (Ord. of 6-2-86, § 4.1)

**Sec. 9-29. Appeal board.**

- (a) The city council shall hear and decide appeals and requests for variances from the requirements of this chapter.
- (b) The city council shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the city engineer in the enforcement or administration of this chapter.
- (c) Those aggrieved by the decision of the city council or any taxpayer may appeal such decision to the superior court, as provided in M.G.L.A. c. 40A.
- (d) In passing upon such applications, the city council shall consider all technical evaluations, all relevant factors, 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 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 to the facility of a waterfront location, where applicable;
  - (6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
  - (7) The compatibility of the proposed use with existing and anticipated development;
  - (8) The relationship of the proposed use to the comprehensive plan and floodplain management program of that area;
  - (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - (10) 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
  - (11) 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.
- (e) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (1)--(11) in (d) above have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

- (f) Upon consideration of the factors of (d) above and the purposes of this chapter, the city council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (g) The city engineer shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.  
(Ord. of 6-2-86, § 4.4-1)

**Sec. 9-30. Conditions for variances.**

- (a) 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.
- (b) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard to afford relief.
- (d) Variances shall only be issued upon:
  - (1) A showing of good and sufficient cause;
  - (2) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
  - (3) 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 9-26, or conflict with existing local laws or ordinances.
- (e) 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 6-2-86, § 4.4-2)

**Secs. 9-31--9-45. Reserved.**

**ARTICLE III. PROVISIONS FOR FLOOD HAZARD REDUCTION**

**Sec. 9-46. General standards.**

In all areas of special flood hazards the standards and provisions of this article are required.  
(Ord. of 6-2-86, § 5.1)

**Sec. 9-47. Anchoring.**

All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure. (Ord. of 6-2-86, § 5.1-1)

**Sec. 9-48. Construction materials and methods.**

- (a) All new construction and substantial improvements 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.  
(Ord. of 6-2-86, § 5.1-2)

**Sec. 9-49. Utilities.**

- (a) 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 systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.
- (c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.  
(Ord. of 6-2-86, § 5.1-3)  
Cross reference(s)--Sanitary Sewers and Storm Drains, Ch. 15 Water, Ch. 20.

**Sec. 9-50. Subdivision proposals.**

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage.
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (d) Base flood elevation data shall be provided for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five (5) acres (whichever is less). (Ord. of 6-2-86, § 5.1-4)

**Sec. 9-51. 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.  
(Ord. of 6-2-86, § 5.2-1)

**Sec. 9-52. Nonresidential construction.**

- (a) 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; and
  - (3) 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 9-28. (Ord. of 6-2-86, § 5.2-2)