

16.04 - Flood Damage Prevention

Chapter 16.04 - FLOOD DAMAGE PREVENTION

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16.04.010 Statutory Authorization. The Legislature of the State of Colorado has in C.R.S. Title 29, Article 20, Section 101, et seq., Title 31, Article 23, Section 201, et seq., and Title 24, Article 65.1, Section 101 et seq., delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. (Ord. 729 89 , 1989; Ord. 410 79, 1979: prior code 15.80.021)

16.04.020 Findings of fact.

- A. The flood hazard areas of the city 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 areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood-proofed, elevated or otherwise protected from flood damage also contribute to the flood loss. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.022)

16.04.030 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 to specific areas by provisions designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To 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. To help maintain a stable tax base by providing for the sound use and development of areas of special flood

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hazard so as to minimize future flood blight areas;

G. To insure that potential buyers are notified that property is in an area of special flood hazard; and

H. To ensure that those who occupy the areas of special flood hazards assume responsibility for their actions. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.023)

16.04.040 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 floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling of 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. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.024)

16.04.050 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 title its most reasonable application.

A. "Appeal" means a request for a review of the building inspector's interpretation of any provision of this chapter, or a request for a variance.

B. "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.

C. "Base flood" means the flood having a one percent chance of being equally or exceeded in any given year.

D. "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.

E. "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.

F. "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.

G. "Flood insurance study" means the official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Boundary Floodway Map, and the water surface elevation of the base flood.

H. "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 foot.

I. "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, provided that such enclosure is not built so as to render the structure in violation of the applicable non elevation design requirements of this chapter.

J. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. This term also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days.

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

L. "New construction" means structures for which the start of construction commenced on or after the effective date of the chapter.

M. "Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the state of excavation of the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets, and/or walkways; 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

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buildings, such as garages or sheds not occupied as dwelling units or not as a part of the main structure.

N. "Structure" means a walled and roofed building or manufactured home that is principally above ground.

O. "Substantial improvement" means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

1. Before the improvement is started, or
2. If the structure has been damaged and is being restored, before the damage occurred. For the purpose 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 either:

1. 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
2. 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. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.030)

16.04.060 Lands to which this chapter applies. This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city of Evans. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.041)

16.04.070 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 City of Evans," dated October, 1978, with an accompanying Flood Insurance Rate Map (FIRM), is hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study and FIRM are on file at the City Hall City of Evans, 3700 Golden Street, Evans, Colorado. (Ord. 729 89, 1979; Ord. 410 79, 1979: prior code 15.80.042)

16.04.080 Compliance. No structure or land shall here after constructed, located, extended, converted or altered without full compliance with the terms of said chapter and other applicable regulations. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.043)

16.04.090 Abrogation and greater restrictions. The chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another chapter, easement, covenant or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 729 89, 1979; Ord. 410 79, 1979: prior code 15.80.044)

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

- A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body;
- C. Deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.045)

16.04.110 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 man made or natural causes. The 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. The chapter shall not create liability on the part of the city of Evans, 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. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.046)

16.04.120 Establishment of development permit.

- A. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 16.04.070. Application for a development permit shall be made on forms furnished by the building inspector and may include, but not be limited to:
- B. 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;

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2. Elevation in relation to mean sea level to which any structure has been floodproofed;
3. Certification by a registered professional engineer or architect that the floodproofing methods for any non residential structure meet the floodproofing criteria in Section 16.04.210B; and
4. Description of the extent to which any water-course will be altered or relocated as a result of proposed development. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.051)

16.04.130 Designation of local administrator. The building inspector is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.052)

16.04.140 Duties and responsibilities. Duties of the building inspector shall include, but not be limited to:

A. Review all development permits:

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 federal, state or local governmental agencies from which prior approval is required.
3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 16.04.260A.

B. Use of other base flood data.

1. When base flood elevation data has not been provided in accordance with Section 16.04.070, the building inspector shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or local source as criteria for requiring that new construction, substantial improvements, or other development in Zone A are administered in accordance with Section 16.04.210.

C. Information to be obtained and maintained.

1. Obtain and record the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new substantially improved structures, and whether or not the structure contains a basement.

2. For all new or substantially improved flood proofed structures:

- a. Verify and record the actual elevation (in relation to mean sea level) to which the structure has been floodproofed.

- b. Maintain the floodproofing certifications required in Section 16.04.120C.

3. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of watercourses.

1. Notify adjacent communities and the Colorado Water Conservation Board 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 such watercourse so that the flood carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries.

1. 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 16.04.150. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.053)

16.04.150 Variance procedure.

A. The building and fire code board of appeals, as established by the city, shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The building and fire code board of appeals shall hear and decide appeals when it is alleged that there is an error in any requirement, decision or determination made by the building inspector in the enforcement or administration of this chapter.

C. Those aggrieved by the decision of the building and fire code board of appeals or any taxpayer, may appeal such decisions to the district court, as provided in state law.

D. In passing upon such applications, the building and fire code board of appeals 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 owners;
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;

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8. The relationship of the proposed use to the comprehensive plan and floodplain management program for 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, streets, and bridges.
- E. Upon consideration of the factors of Section 16.04.200D and the purposes of this chapter, the building and fire code board of appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- F. The building inspector shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Emergency Management Agency. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.054 1)

16.04.160 Conditions for variances.

- A. 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 level, provided items 1 11 in Section 16.04.150D have been fully considered. As the lot size increases beyond the one half acre, the technical justifications required for issuing the variance increases.
- B. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Places without regard to the procedures set forth in the remainder of this section.
- C. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- D. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- E. 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 16.04.150D or conflict with existing local laws or ordinances.
- F. 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 from the reduced lowest floor elevation. (Ord. 829 89, 1989; Ord. 410 79, 1979: prior code 15.80.054)

16.04.170 General standards. In all areas of special flood hazards, the following standards are required:

- A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure and capable of resisting the hydro static and hydrodynamic loads.
- B. All manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement and capable of resisting the hydrodynamic loads. Methods of anchoring may include, but are not limited to use of over-the-top and frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirement for resisting wind forces. Specific requirements may be:
1. Over the top ties provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations, with manufactured homes less than fifty feet long requiring one additional tie per side;
 2. Frame ties provided at each corner of the home with five additional ties per side at intermediate points, with manufactured homes less than fifty feet long requiring four additional ties per side;
 3. All components of the anchoring system be capable of carrying a force of four thousand eight hundred (4,800) pounds; and
 4. Any additions to the manufactured home be similarly anchored. (Ord. 729 89 , 1989; Ord. 410 79, 1979: prior code 15.80.061)

16.04.180 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.
- C. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to

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prevent water from entering or accumulating within the components during conditions of flooding. (Ord. 729 89, 1989; Ord. 410 79 , 1979: prior code 15.80.061(part)

16.04.190 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 flood waters into the systems and discharge from the systems into flood waters; and
- C. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.061)

16.04.200 Subdivision proposals.

- A. All subdivisions 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; and
- D. Base flood elevation data shall be provided for subdivision proposals and other proposed developments which contain at least fifty lots or five acres (whichever is less). (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.061-4)

16.04.210 Specific standards. In all areas of special flood hazard where base flood elevation data has been provided as set forth in Section 16.04.070 or Section 16.04.140B, the following provisions set are required.

A. Residential construction.

- 1. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to or above base flood elevation.

B. Nonresidential construction.

- 1. 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:
 - a. Be floodproofed so that below the base flood elevation 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
 - c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this paragraph. Such certifications shall be provided to the official as set forth in Section 16.04.140C(2).

C. Manufactured homes.

- 1. Manufactured homes shall be anchored in accordance with Section 16.04.170B.
- 2. All manufactured homes or those to be substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at or above the base flood elevation and is securely anchored to an adequately anchored foundation system. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.062)

16.04.220 Floodways. Located within areas of special flood hazard established in Section 16.04.070 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:

- A. 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.
- B. If Section 16.04.220A is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Sections 16.04.170 16.04.220. (Ord. 729 89, 1989; Ord. 410 79, 1979: prior code 15.80.063)

16.04.230 Violation- Penalty. Any person who violates any of the provisions of this chapter is guilty of a violation of this chapter and shall be punished as provided in Section 1.16.010. (Ord. 842-92: Ord. 729 89, 1989; Ord. 410 79, 1979)

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