

# CHAPTER SEVEN

## SPECIAL REGULATIONS

### 7.1 FLOOD DAMAGE PREVENTION

#### A. **Purpose.**

Flood damage prevention regulations promote the public health, safety and general welfare and minimize public and private losses due to flooding. The regulations are designed to:

1. Protect human life and health;
2. Minimize expenditure of public money for costly flood control projects;
3. Minimize the need for rescue and relief efforts associated with flooding;
4. Minimize prolonged business interruptions;
5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges;
6. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
7. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
8. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

#### B. **Methods and Provisions for Flood Damage Prevention.**

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

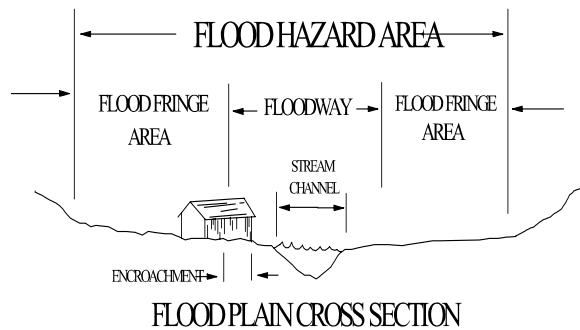
1. Restricting or prohibiting uses which are dangerous to health, safety and property because of water or erosion hazard(s);
2. Restricting or prohibiting uses which result in damaging increases in erosion or in flood heights or velocities;
3. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
4. Controlling the alteration of natural floodplains, stream channels and natural protective barriers which help accommodate or channel flood waters;
5. Controlling filling, grading, dredging and other practices which may increase flood damage; and,
6. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

#### C. **General Provisions.**

1. This Chapter applies to all areas of special flood hazard within the City.
2. Basis for Establishing the Areas of Special Flood Hazard. The Federal Emergency Management Agency has identified areas of special flood hazard in a scientific and engineering report entitled, "The Flood

Insurance Study for Grand Junction," dated July 15, 1992. The study together with the Flood Insurance Rate Map (FIRM) is hereby adopted by reference and declared to be a part of this Code. The FIRM may be superseded by local engineering studies approved by the Director, provided such studies fully describe and analyze, based on the FIRM and generally accepted engineering practice, design floodwater build-out conditions.

3. Compliance. No structure shall be constructed, located, extended, converted or altered without full compliance with the terms of this Section and other applicable regulations. No land shall be developed without full compliance with the terms of this Section and other applicable regulations.
4. This Section does not and it is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. If this Section and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions on use and development shall prevail and be applied.
5. All terms and provisions of this Section shall be:
  - a. Considered as minimum requirements;
  - b. Liberally construed in favor of the City; and,
  - c. Deemed neither to limit nor repeal any other powers granted or reasonably construed or interpreted under law, charter, rule or regulation.
6. Warning and Disclaimer of Liability. The degree of flood protection required by this Section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased because of man-made or natural causes. This Section does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Section shall not create liability on the part of the City, or any officer or employee thereof, or the Federal Emergency Management Agency for any flood damage that results from reliance on this Section or any administrative decision lawfully made hereunder.



**D. Provisions for Flood Hazard Reduction.**

1. **General Standards.** The following standards shall apply to all property located in special flood hazard areas:
  - a. **Anchoring.**

- (1) All new construction and substantial improvement shall be anchored to prevent flotation, collapse or lateral movement of the structure and as anchored be capable of resisting the hydrostatic and hydrodynamic loads.
- (2) All manufactured homes shall be elevated and anchored to resist flotation, collapse or lateral movement and as anchored is capable of resisting the hydrostatic and hydrodynamic loads. Methods of anchoring may include, but are not limited to, over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces. Specific requirements may be:
  - (A) Over-the-top ties provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations, with manufactured homes less than fifty feet (50') long requiring one (1) additional tie per side;
  - (B) Frame ties provided at each corner of the home with five (5) additional ties per side at intermediate points, with manufactured homes less than fifty feet (50') long requiring four (4) additional ties per side;
  - (C) Each component of the anchoring system shall be capable of carrying a force of 4,800 pounds; and
  - (D) Any addition(s) to the manufactured home shall be similarly anchored.

b. **Construction Materials and Methods.**

- (1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- (3) 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 prevent water from entering or accumulating within the components during flooding.

c. **Utilities.**

- (1) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (2) 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



- not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
  - (2) The bottom of all openings shall be no higher than one foot (1') above grade;
  - (3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- d. **Manufactured Homes.**
- (1) All manufactured homes that are placed and/or substantially improved on a site:
    - (A) Outside of a manufactured home subdivision;
    - (B) In a new manufactured home park or manufactured home subdivision;
    - (C) In an expansion to an existing manufactured home park or manufactured home subdivision; or
    - (D) On an existing manufactured home park or manufactured home subdivision on which a manufactured home has incurred substantial damage as a result of a flood.
  - (2) Shall be anchored and elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation.
  - (3) The manufactured home shall be securely anchored to an anchored foundation system in order to resist flotation, collapse and lateral movement; and
  - (4) Manufactured homes that are placed or substantially improved on sites in existing manufactured home parks or manufactured home subdivisions that are not subject to the provisions of this paragraph shall be elevated so that either:
    - (A) The lowest floor of the manufactured home is at least one foot (1') above the base flood elevation; or
    - (B) The manufactured home frame or chassis is supported by reinforced piers or other foundation elements that are no less than thirty-six inches (36") in height above grade and securely anchored to an anchored foundation system in order to resist flotation, collapse and lateral movement.
- e. **Recreational Vehicles.** Recreational vehicles occupied, as a temporary dwelling in a special flood hazard area shall:
- (1) Be on the site for fewer than one hundred and eighty (180) consecutive days; or
  - (2) Be fully licensed and ready for highway use; or
  - (3) Meet the permit requirements, elevation, and anchoring requirements for resisting wind forces.
3. **Floodways.** A floodway is an area within a special flood hazard area.

The floodway is extremely hazardous due to the velocity of floodwaters, debris and erosion potential. To mitigate those hazards the following provisions apply:

- a. Encroachments, including fill, new construction, substantial improvements and other development is prohibited unless a Colorado registered professional engineer or architect certifies in writing that encroachments will not result in any increase in flood levels during the occurrence of the base flood discharge.
- b. All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this Section.