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ORDINANCE NO. 7926

AN ORDINANCE AMENDING FLOODPLAIN REGULATIONS IN ORDER TO CLARIFY EXISTING REGULATIONS AND TO PROTECT CRITICAL FACILITIES AND LODGING FACILITIES IN THE ONE HUNDRED-YEAR AND FIVE HUNDRED-YEAR FLOODPLAINS, INCLUDING CHAPTER 9-3, "OVERLAY DISTRICTS," SUBSECTION 9-6-1(d), "USE TABLE," AND SECTION 9-16-1, "GENERAL DEFINITIONS," B.R.C. 1981, AND SETTING FORTH RELATED DETAILS.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOULDER, COLORADO:

Section 1. Section 9-3-2, B.R.C. 1981, is amended as follows:

**9-3-2 Floodplains.**

- (a) Legislative Intent: The purpose of this ~~section~~ ~~chapter~~ is to regulate certain areas of the city subject to flooding in order to protect the public health, safety, and welfare by:
- (1) Restricting or prohibiting certain uses that are hazardous to life or property in time of flood;
  - (2) Restricting the location of structures intended for human occupancy and regulating the manner in which such structures may be built in order to minimize danger to human life within and around such structures;
  - (3) Requiring that those structures allowed in the floodplain be expanded or enlarged, and equipment and fixtures be installed or replaced, in a manner designed to prevent their being washed away and to assure their protection from severe damage;
  - (4) Regulating the method of construction and replacement of water supply and sanitation systems in order to prevent disease, contamination, and unsanitary conditions;
  - (5) Maintaining for public inspection available maps delineating areas subject to such provisions in order to protect individuals from purchasing or using lands for purposes that are not suitable;
  - (6) Protecting and preserving the water-carrying and water-retention characteristics and capacities of watercourses used for conveying and retaining floodwaters; and
  - (7) Obtaining and maintaining the benefits to the community of participating in the National Flood Insurance Program.

1 (b) Flooding May Occur: The degree of flood protection provided by the terms of this ~~section~~  
2 chapter has been determined to be reasonable for regulatory purposes. Floods of greater  
3 magnitude will occur, and flood heights may be increased as a result of natural or human-  
4 made causes. The provisions of this ~~section~~ chapter do not imply that areas outside of the  
5 floodplain or land uses permitted within the floodplain are free from flooding, flood hazard,  
6 or flood damages. A grant or approval by the city under the requirements of this ~~section~~  
7 chapter does not constitute a representation, guarantee, or warranty of any kind or nature by  
8 the city or any city official or employee of the practicability or safety of any structure or  
9 proposed use, and it creates no liability to or cause of action against the city or any city  
10 official or employee for any damages from flood or otherwise that may result from such  
11 structure or use.

8 (c) Scope and Application:

9 (1) The requirements of this ~~section~~ chapter supplement those imposed on the same lands  
10 by any underlying zoning provisions of this code or other ordinance of the city. If  
11 there is a conflict between such requirements, the more restrictive controls.

12 (2) If a lot or parcel of land lies partly within the high hazard zone, ~~or~~ the conveyance  
13 zone, ~~the one hundred-year floodplain,~~ or the five hundred-year floodplain ~~flood~~  
14 ~~fringe area,~~ the part(s) of such lot or parcel lying within such area or areas shall meet  
15 all the standards and requirements of such respective area as prescribed by this  
16 ~~section~~ chapter. ~~For the purposes of new construction, i~~ If any portion of a structure  
17 lies partly within the high hazard zone, ~~or~~ the conveyance zone, the one hundred-year  
18 floodplain, or the five hundred-year floodplain ~~flood fringe area,~~ all the standards and  
19 requirements of ~~this section~~ such respective area(s) as prescribed by this chapter shall  
20 apply to the entire structure unless stated otherwise.

21 (3) If lands located outside the city limits are included within the five hundred-year  
22 floodplain, the one hundred-year floodplain ~~flood fringe,~~ the conveyance zone, or the  
23 high hazard zone, the requirements of this ~~section~~ chapter shall apply to such lands  
24 upon annexation.

18 (d) Administration: The city manager shall administer the requirements of this ~~section~~ chapter  
19 and shall:

20 (1) Determine that the requirements of this ~~section~~ chapter have been met before issuing  
21 any permit for development in the floodplain;

22 (2) Obtain and maintain for public inspection any certificates of floodproofing required  
23 by this ~~section~~ chapter, and any information on the elevation (in relation to mean sea  
24 level) of the ~~level of the~~ lowest floor (including basement) of all new or substantially  
25 improved structures, and information specifying whether ~~or not~~ such structures  
26 contain a basement, and, if the structure has been floodproofed, the elevation (in  
27 relation to mean sea level) to which the structure was floodproofed;

28 (3) Notify Boulder County and the Colorado Water Conservation Board before  
29 permitting any change in a watercourse and submit evidence of such notice to FEMA;

- 1 (4) Adopt rules interpreting and implementing the requirements of this ~~section~~chapter, including, without limitation, application procedures for floodplain development  
2 permits, ~~and~~ specifications for the floodproofing of structures, substantial  
3 improvements, and utilities, ~~and specifications for the content of and application~~  
procedures for emergency management plans;
  - 4 (5) Assure that the Boulder Valley Comprehensive Plan is consistent with the floodplain  
5 management objectives of this ~~section~~chapter and the regulations of FEMA;
  - 6 (6) Make necessary interpretations of the exact location of the boundaries of the  
7 floodplain, the five hundred-year floodplain, the one hundred-year floodplain~~flood~~  
8 fringe, the conveyance zone, ~~and~~ and the high hazard zone;
  - 9 (7) Amend the boundaries of the high hazard zone and the conveyance zone pursuant to  
10 subsection (f) of this section;
  - 11 (8) Determine that all necessary permits have been obtained from state, federal, or local  
12 agencies the approval of which is required before issuing any permit for development  
13 in the floodplain;
  - 14 (9) Require that persons changing a watercourse maintain the watercourse so that its  
15 flood carrying capacity is not diminished;
  - 16 (10) Require that new and replacement water supply systems in the floodplain be designed  
17 to minimize or eliminate infiltration of floodwaters into the systems;
  - 18 (11) Require that new and replacement sanitary sewage systems within the floodplain be  
19 designed to minimize or eliminate infiltration of floodwaters into the systems and  
20 discharges from the systems into floodwaters;
  - 21 (12) Require that on-site waste disposal systems be located to avoid impairment to them or  
22 contamination from them during flooding; and
  - 23 (13) Obtain, review, and reasonably utilize any ~~base~~ flood elevation and floodway data  
24 available from federal, state, and other sources, including data developed pursuant to  
25 ~~e~~Chapter 9-12, "Subdivision," B.R.C. 1981, as criteria for requiring that all new  
development meet the requirements of this ~~section~~chapter.
- (e) Appeals: Any person contesting the city manager's interpretation of a boundary location under paragraph (d)(6) of this section, or any person aggrieved by the granting or denial of a floodplain development permit, may appeal such determination to the planning board through the process described in Ssection 9-4-4, "Appeals, Call-Ups and Public Hearings," B.R.C. 1981. The request shall set forth the reason and basis for the appeal and such other information as the manager may prescribe by rule.
- (f) Map Amendments: As watercourse or flood channel improvements or mapping corrections are made, the city manager may amend the flood regulatory area maps to recognize the changed conditions produced by such improvements or corrections, provided that no such amendments or corrections may change a FEMA "area of special flood hazard" or "regulatory floodway" unless the City is in receipt of a letter of map amendment or a letter of map revision issued by FEMA.

1 (g) Flood Regulatory Areas:

- 2 (1) The provisions of this ~~section~~ ~~chapter~~ apply to the area shown as floodplain on the  
3 most recent maps adopted by the city council, as amended from time to time by the  
4 city manager pursuant to subsections (d), (e), and (f) of this section. The regulatory  
5 floodplain encompasses the five hundred-year floodplain, the one hundred-year  
6 floodplain, ~~the flood fringe~~, the conveyance zone, and the high hazard zone. The  
7 following regulations governing each portion of the floodplain are cumulative and not  
8 exclusive.
- 9 (2) In addition to the regulatory areas identified in paragraph (g)(1) of this section, the  
10 City has adopted the areas of special flood hazard identified in the Flood Insurance  
11 Study for Boulder County, effective December 18, 2012, and delineated on the Flood  
12 Insurance Rate Map for Boulder County and the City of Boulder as adopted by the  
13 City in compliance with 44 C.F.R. chapter 1. In no event will the regulations  
14 contained in this ~~section~~ ~~chapter~~ be interpreted to permit any action not permitted  
15 under those regulations promulgated by FEMA for the regulation of areas of special  
16 flood hazard and regulatory floodways.

17 (h) Floodproofing: Whenever this chapter requires floodproofing a building or structure or a  
18 portion thereof, the following standards shall be met:

- 19 (1) Such building or structure or portion thereof shall be floodproofed in accordance  
20 with any rules adopted by the city manager for floodproofing and with current state  
21 and federal laws and regulations governing floodproofing;
- 22 (2) Such building or structure or portion thereof shall be floodproofed to the flood  
23 protection elevation in such a manner that the building or structure is watertight with  
24 walls substantially impermeable to the passage of water and in a manner requiring no  
25 human intervention;
- 26 (3) Such building or structure or portion thereof shall have structural components capable  
27 of resisting projected hydrostatic and hydrodynamic loads and the effects of  
28 buoyancy; and
- 29 (4) Such floodproofing shall be certified by a Colorado registered professional engineer  
30 or registered architect to comply with this paragraph. Such certifications shall be  
31 provided to the city manager as set forth in Paragraph 9-3-2(d)(2), B.R.C. 1981.

32 (i) Standards for Critical Facilities and Lodging Facilities in the Five Hundred-Year  
33 Floodplain:

- 34 (1) Floodplain Development Permit: In the five hundred-year floodplain, no person shall  
35 construct or establish a new critical facility or make any development to a structure  
36 housing an existing critical facility prior to issuance of a floodplain development  
37 permit pursuant to Section 9-3-6, "Floodplain Development Permits," B.R.C. 1981,  
38 unless the activity is exempt under Subsection 9-3-6(a), "Activities Exempt from  
39 Floodplain Development Permit Requirement," B.R.C. 1981.

1 (2) Requirements Apply to Entire Building: If any portion of a structure housing a  
2 critical facility or lodging facility lies partially within the five hundred-year  
3 floodplain, the requirements of this section shall apply to that entire structure.

3 (3) Emergency Management Plans:

4 (A) Emergency Management Plan Required: No owner or operator of a critical  
5 facility or lodging facility in the five hundred-year floodplain shall fail to  
6 develop and have approved an emergency management plan meeting the  
7 requirements of this subsection prior to issuance of any floodplain  
8 development permit for any development requiring a floodplain development  
9 permit but no later than January 1, 2019, or five years after the effective date  
10 of a map change that placed the facility into the five hundred-year floodplain,  
11 if that date is later than January 1, 2019.

9 (B) Floodplain Development Permit: To obtain the required approval of an  
10 emergency management plan, an owner or operator of a critical facility or  
11 lodging facility in the five hundred-year floodplain shall file an application for  
12 floodplain development permit pursuant to Section 9-3-6, Floodplain  
13 Development Permits, B.R.C. 1981.

12 (C) Purpose: The purpose of the emergency management plan requirements set  
13 forth in this section is:

13 (i) To protect the health, safety, and welfare of the public and of  
14 employees, visitors, residents, guests, contractors, and others at risk  
15 from hazards at the facility;

15 (ii) To minimize interruptions or disruptions of operations of critical  
16 facilities;

16 (iii) To protect buildings, physical assets, and electronic information; and

17 (iv) To prevent environmental contamination.

18 (D) Emergency Management Plan Requirements: With the exception of  
19 requirements the city manager finds inapplicable to a particular facility, all  
20 emergency management plans shall contain, without limitation:

20 (i) An assessment by a Colorado registered professional engineer or an  
21 International Facility Management Association Certified Facilities  
22 Manager of the risks to persons at the facility and others at risk from  
23 hazards at the facility, to the facility itself, its physical assets, and its  
24 operation, and to the environment during flood events;

23 (ii) An assessment of the resources needed for responding to the risk of  
24 flood events and for continuing business operations and for  
25 communicating during and after an incident;

1                    (iii) A plan for obtaining and maintaining the resources identified as  
2                    needed in subsection (i)(3)(C)(ii) above;

3                    (iv) A plan to protect employees, visitors, residents, guests, contractors,  
4                    and others at risk from hazards at the facility during flood events.  
5                    Such plan shall include an evacuation plan or a shelter-in-place plan,  
6                    unless both are necessary to protect the health, safety and welfare of  
7                    the persons at risk at the facility.

8                    a. Evacuation plans shall be certified by a Colorado registered  
9                    professional engineer or an International Facility Management  
10                    Association Certified Facilities Manager and shall provide a means  
11                    for safely evacuating occupants to a location outside of the five  
12                    hundred-year floodplain or to an approved shelter-in-place  
13                    location.

14                    b. Shelter-in-place plans shall be certified by a Colorado registered  
15                    professional engineer, shall demonstrate that the structure will be  
16                    safe to occupy during a five hundred-year flood event, and shall  
17                    designate a safe shelter-in-place location within the building and  
18                    safe routes to such location.

19                    (v) A system and strategies to communicate with employees, customers,  
20                    residents, guests, contractors, and others at risk at the facility during a  
21                    flood event;

22                    (vi) Strategies to minimize and quickly overcome any disruption or  
23                    interruption of operations of the facility during a flood event;

24                    (vii) An incident management system that defines responsibilities and  
25                    coordinates activities before, during, and after a flood event;

(viii) A program to train persons with defined roles in the management plan  
                    to do their assigned tasks and to train all employees and other regular  
                    occupants of the facility so they can take appropriate protective actions  
                    during a flood event; and

(ix) Any other strategies, techniques, systems, programs, or plans the city  
                    manager determines are necessary to serve the health, safety, and  
                    welfare of the public and any persons at or near the facility.

(E) —Posting of Evaluation Routes and Routes to Shelter-In-Place Locations: The  
                    approved evacuation routes and routes to shelter-in-place locations shall be  
                    posted on the inside of each doorway leading to a separate unit in a lodging  
                    facility and be displayed in a prominent location or a location designed to  
                    provide information to persons within the critical facility that is approved by  
                    the city manager.

1           (F) Implementation of Emergency Management Plans: No owner or operator of a  
2           critical facility or lodging facility in the five hundred-year floodplain shall fail  
3           to implement and to annually review and update, if necessary, an approved  
4           emergency management plan and to make the plan available to the city  
5           manager for review upon request.

6           (4) Construction Requirements for Critical Facilities in the Five Hundred-Year  
7           Floodplain. The following standards apply to critical facilities located in the five  
8           hundred-year floodplain:

9           (A) No owner or operator of a critical facility shall construct, modify, or establish,  
10           or cause to be constructed, modified, or established a critical facility within  
11           the five hundred-year floodplain except in compliance with the requirements  
12           of this subsection.

13           (B) Any person making an expansion or an enlargement to a structure housing an  
14           existing at-risk population facility or essential service facility shall floodproof  
15           or elevate the lowest floor, including the basement, of the expanded or  
16           enlarged portion to or above the flood protection elevation.

17           (C) Any person making a substantial modification or a substantial improvement to  
18           a structure housing an existing at-risk population facility or essential service  
19           facility shall floodproof or elevate the lowest floor, including the basement, of  
20           the substantially modified or improved portion to or above the flood  
21           protection elevation and shall floodproof or elevate the remainder of the  
22           existing structure to or above the flood protection elevation.

23           (D) Any person constructing or establishing a new at-risk population facility or  
24           essential service facility shall floodproof or elevate the lowest floor, including  
25           the basement, to or above the flood protection elevation.

(E) Any person constructing or establishing a new hazardous material facility  
          shall secure all hazardous materials from flooding and from being released  
          during a five hundred-year flood event or shall floodproof the facility. Any  
          person making a substantial modification or a substantial improvement to a  
          structure housing an existing hazardous material shall secure the hazardous  
          materials from flooding or otherwise being released during a five hundred-  
          year flood event. The owner or operator shall demonstrate compliance with  
          this standard by providing a certification from a Colorado registered  
          professional engineer that documents that hazardous material will not be  
          released at or from the facility during a five hundred-year flood event.

(F) No person owning, operating, or otherwise using a hazardous material facility  
          shall fail to secure all hazardous materials from flooding and from being  
          released during five hundred-year flood events or to floodproof the facility  
          before January 2024 or five years after the effective date of a map change that

1                   placed the facility into the five hundred-year floodplain, whichever date is  
2                   later.

3                   (G) Whenever any construction, modification, improvement or other activity  
4                   related to a critical facility triggers any floodproofing or elevation  
5                   requirements of this subsection (4), the construction standards described in  
6                   Subsections (a)(3), "Construction Materials and Methods," (a)(4), "Utilities,"  
7                   (a)(18), "Enclosures," and (a)(19), "Below Grade Crawl Space Construction,"  
8                   of Section 9-3-3, "Regulations Governing the One Hundred-Year Floodplain,"  
9                   B.R.C. 1981, shall also be complied with.

10                  (H) Existing Uses: The use of any land or structure that was lawful before the  
11                  application of this subsection (i)(4), Construction Requirements for Critical  
12                  Facilities in the Five Hundred-Year Floodplain, or any amendment thereto but  
13                  that does not conform to the requirements of this subsection may be continued  
14                  subject to the requirements of this subsection. If such a use not conforming to  
15                  the requirements of this subsection is discontinued for twelve consecutive  
16                  months, no person shall use the land or structure thereafter unless such use  
17                  conforms to the requirements of this subsection.

18                  (5) Exemption for Critical Facilities Protected by Levee System: Critical facilities  
19                  protected by a levee system within the five hundred-year floodplain are exempt from  
20                  the requirements of subsection (i)(4) of this section 9-3-2, provided that the following  
21                  requirements are satisfied:

22                  (A) The owner or operator of a new or existing critical facility located landward of  
23                  a levee system, outside of the one hundred-year floodplain, but within the five  
24                  hundred-year floodplain, demonstrates that the levee system provides  
25                  protection against a five hundred-year flood event by:

(i) meeting the riverine levee design criteria of 44 C.F.R. § 65.10, as  
                  amended from time to time, except that the minimum riverine levee  
                  freeboard shall be one foot above the water surface elevation of a five  
                  hundred-year flood, rather than three; and

(ii) providing an operating and maintenance manual for the levee that  
                  incorporates all operating and maintenance requirements of 44 C.F.R.  
                  § 65.10 and Rule 10 of the Colorado Rules and Regulations for  
                  Regulatory Floodplains in Colorado (2 C.C.R. 408-1:10, Criteria for  
                  Determining Effects of Levees on Regulatory Floodplains), as  
                  amended from time to time, to ensure continuing proper function of  
                  the structure.

(B) The owner or operator of a new or existing critical facility located landward of  
                  an accredited levee or a provisionally accredited levee within areas mapped  
                  Zone X (shaded) shall demonstrate that the levee system meets the riverine  
                  levee design, operation, and maintenance criteria of 44 C.F.R. § 65.10 and



1 Rule 10 of the Colorado Rules and Regulations for Regulatory Floodplains in  
2 Colorado (2 C.C.R. 408-1:10, Criteria for Determining Effects of Levees on  
3 Regulatory Floodplains).

4 (C) If the levee is owned by a person other than the owner or operator of the  
5 critical facility, the owner or operator, respectively, must demonstrate that a  
6 fully executed agreement exists between the levee owner and the owner or  
7 operator of the critical facility ensuring that the requirements of subsections 9-  
8 3-2(i)(5)(A) or (B) and (F) for continued operation and maintenance of the  
9 levee system will be met.

10 (D) The exemptions under this subsection (i)(5) for critical facilities located  
11 landward of an levee system were approved by the city manager through the  
12 issuance of a floodplain development permit pursuant to Subsection 9-3-6,  
13 "Floodplain Development Permits," B.R.C. 1981, after finding that all  
14 requirements of this subsection (i)(5) have been met.

15 (E) If a levee system protecting an existing critical facility in the five hundred-  
16 year floodplain fails to meet the freeboard requirement of subsection (i)(5)(A)  
17 of this section solely because FEMA revises a FIRM, maintenance and use of  
18 that critical facility may occur for two years after the revision before having to  
19 meet the requirements of subsections (i)(3) and (i)(4) of this section.

20 (F) No person shall fail to construct, operate, or maintain or fail to cause the  
21 construction, operation, or maintenance of a levee system protecting a critical  
22 facility and approved by the city manager in a floodplain development permit  
23 as an exemption to the requirements of subsections (i)(3) and (i)(4) of this  
24 section in accordance with a design and an operating and maintenance manual  
25 meeting the requirements of this subsection (i)(5).

(6) As the one hundred-year floodplain, conveyance zone, and high hazard zone are all  
located within of the five hundred-year floodplain, the requirements of this subsection  
9-3-2(i), "Standards for Critical Facilities and Lodging Facilities in the Five Hundred-  
Year Floodplain," also apply to critical facilities and lodging facilities in the one  
hundred-year floodplain, conveyance zone, and high hazard zone unless stricter  
requirements apply in the one hundred-year floodplain, conveyance zone, or high  
hazard zone, as applicable.

Section 2. Section 9-3-3, B.R.C. 1981, is amended as follows:

**9-3-3 Regulations Governing the One Hundred-Year Floodplain.**

(a) General Provisions: In the ~~entire~~ one hundred-year floodplain, the following standards apply:

1 (1) Floodplain Development Permit: Except as specified in paragraph  
2 ~~(a)(1)(A) Subsection 9-3-6(a), "Activities Exempt from Floodplain Development~~  
3 ~~Permit Requirement," B.R.C. 1981~~, no development in the one hundred-year  
4 floodplain may occur prior to the issuance of a floodplain development permit  
5 pursuant to section 9-3-6, "Floodplain Development Permits," B.R.C. 1981.

6 ~~(A) Activities exempt from a floodplain development permit: The following~~  
7 ~~activities are allowed within the flood regulatory area and do not require a floodplain~~  
8 ~~development permit:~~

9 (i) ~~"Maintenance" as defined in chapter 9-16 "Definitions" that does not~~  
10 ~~constitute a substantial improvement and does not affect the efficiency or~~  
11 ~~capacity of the conveyance zone or high hazard zone.~~

12 (ii) ~~Sidewalks, concrete, asphalt or stone flatwork that does not result in the~~  
13 ~~establishment or expansion of parking area and does not modify existing~~  
14 ~~grade by more than six inches.~~

15 (iii) ~~Underground utilities that do not modify existing grade.~~

16 (iv) ~~Poles, lines, cables, sign posts, landscaping and artwork that do not affect~~  
17 ~~the efficiency or capacity of the conveyance zone or high hazard zone.~~

18 (v) ~~Temporary facilities that are not permanently attached to the ground such~~  
19 ~~as tents, traffic control devices and lawn furniture provided that they will~~  
20 ~~not affect the efficiency or capacity of the conveyance zone or high hazard~~  
21 ~~zone, or they will remain in place for no more than thirty days.~~

22 (2) Anchoring:

23 (A) All new construction and substantial improvements or substantial modifications  
24 shall be anchored to prevent flotation, collapse, or lateral movement of the  
25 structure and be capable of resisting the hydrostatic and hydrodynamic loads.

(B) All manufactured homes must be elevated and anchored to resist flotation,  
collapse, or lateral movement and capable of resisting the hydrostatic and  
hydrodynamic loads. Methods of anchoring may include, but are not limited to,  
use of over-the-top or frame ties connecting to permanent ground anchors, in  
addition to any anchoring requirements for resisting wind forces and any tie-  
down requirements of chapter 10-12, "Mobile Homes," B.R.C. 1981.  
Requirements shall include, without limitation, the following:

(i) Over-the-top ties shall be provided at each of the four corners of the  
manufactured homes. For manufactured homes fifty feet or longer, two  
additional ties per side are required at intermediate locations. For  
manufactured homes less than fifty feet long, one additional tie per side is  
required;

(ii) Frame ties shall be provided at each of the four corners of the  
manufactured homes. For manufactured homes fifty feet or longer, five

1 additional ties per side are required at intermediate points. For  
2 manufactured homes less than fifty feet long, four additional ties per side  
are required;

3 (iii) All components of the anchoring system shall be capable of carrying a  
4 force of four thousand eight hundred pounds; and

(iv) Any additions to manufactured homes shall be similarly anchored.

5 (3) Construction Materials and Methods:

6 (A) All new construction, substantial improvements, and substantial modifications  
7 shall be constructed with materials and utility equipment resistant to flood  
8 damage as outlined in the most current FEMA Technical Document on2-93,  
9 Flood-Resistant Materials Requirements.

10 (B) All new construction, substantial improvements, and substantial modifications  
11 shall be constructed using methods and practices that minimize flood damage.

12 (C) All new construction, substantial improvements and substantial modifications  
13 shall be constructed with electrical, heating, ventilation, plumbing, and air  
14 conditioning equipment and other service facilities that are designed and located  
15 (by elevating or floodproofing the components) so as to prevent water from  
16 entering or accumulating within the components during flooding conditions.

17 (4) Utilities:

18 (A) All new and replacement water supply systems shall be designed to minimize or  
19 eliminate infiltration of floodwaters into the systems.

20 (B) All new and replacement sanitary sewage systems shall be designed to minimize  
21 or eliminate infiltration of floodwaters into the systems and discharge from the  
22 systems into floodwaters.

23 (C) On-site waste disposal systems shall be located to avoid impairment or  
24 contamination during flooding.

25 (5) Subdivision Proposals:

(A) All subdivision proposals shall demonstrate efforts 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 development.

(E) No subdivision proposal shall create a lot which is unbuildable pursuant to this  
section.

- 1 (6) Floodproofing: Whenever this section requires a building or structure to be  
2 floodproofed, the following standards in Subsection 9-3-2(h), "Floodproofing,"  
3 B.R.C. 1981, shall be met:-
- 4 (A) ~~Such building or structure shall be floodproofed in accordance with any rules for  
5 floodproofing promulgated by the city manager pursuant to chapter 1-4,  
6 "Rulemaking," B.R.C. 1981, and with current FEMA National Flood Insurance  
7 Program (NFIP) Technical Bulletins;~~
- 8 (B) ~~Such building or structure shall be floodproofed to the flood protection elevation in  
9 such a manner that the building or structure is watertight with walls substantially  
10 impermeable to the passage of water and in a manner requiring no human  
11 intervention;~~
- 12 (C) ~~Such building or structure shall have structural components capable of resisting  
13 projected hydrostatic and hydrodynamic loads and the effects of buoyancy; and~~
- 14 (D) ~~Such floodproofing shall be certified by a Colorado registered professional engineer  
15 or registered architect to comply with this paragraph. Such certifications shall be  
16 provided to the city manager as set forth in paragraph 9-3-2(d)(2), B.R.C. 1981.~~
- 17 (7) Hazardous MaterialsSubstances: No person shall store a hazardous substance at or  
18 below the flood protection elevation for the area of the floodplain in which it is  
19 located, except for the storage of gasoline-fuel in existing and replacement  
20 underground tanks in existing gasoline-fueling service stations and service garages,  
21 which tanks are designed to prevent infiltration and discharge into floodwaters and  
22 which are adequately anchored and shielded against rupture. For purposes of this  
23 paragraph, "existing" means in place and in use on January 1, 1989.
- 24 (8) Automobile Parking: Notwithstanding other provisions of this title, no person shall  
25 establish an area for automobile parking in any portion of the floodplain where flood  
depths exceed eighteen inches.
- (9) Flood Warning System: No owner of a hotel, a motel, a dormitory, a rooming house,  
a hostel, a school, a bed and breakfast, a daycare center, a group home, or a  
residential or congregate care facility located in the Boulder Creek one hundred-year  
floodplain shall fail to provide a flood warning system approved by the city manager  
that is connected to a point of central communication in the building with twenty-  
four-hour monitoring. No such person shall fail to maintain such a flood warning  
system.
- (10) Rental Property: No owner of property that is located in a one hundred-year floodplain  
and subject to a city rental license under chapter 10-3, "Rental Licenses," B.R.C.  
1981, shall fail to post on the exterior of the premises at the entrance a sign approved  
by the city manager stating that the property is subject to flood hazard and containing  
such further information and posted at such other locations inside the building as the  
city manager may require.
- (11) Manufactured Housing: All manufactured homes placed in the City after July 1, 1989,  
and all manufactured homes which are substantially improved or substantially  
modified shall be elevated on a permanent foundation so that the lowest floor of the  
manufactured home is at or above the flood protection elevation and is securely

1 anchored to an adequately anchored foundation system, and shall meet the anchorage  
2 and tie-down requirements of paragraph (a)(2) of this section.

3 (12) Recreational Vehicles: In order to reduce debris and hazard potential, recreational  
4 vehicles shall either: a) be in the one hundred-year floodplain for fewer than one  
5 hundred eighty consecutive days, b) be fully licensed and ready for highway use, or c)  
6 meet the permit requirements and elevation and anchoring requirements for  
7 manufactured homes.

8 (13) Structure Orientation: In order to minimize the obstruction to flow caused by  
9 buildings, to the extent consistent with other city policies regarding solar access, new  
10 structures shall be placed with their longitudinal axes parallel to the predicted  
11 direction of flow of floodwaters or be placed so that their longitudinal axes are on  
12 lines parallel to those of adjoining structures.

13 (14) Existing Uses: The use of any land or structure that was lawful before the application  
14 of this section or any amendment thereto but that does not conform to the  
15 requirements of this section may be continued subject to the requirements of this  
16 section. If such a use not conforming to the requirements of this section is  
17 discontinued for twelve consecutive months, no person shall use the land or structure  
18 thereafter unless such use conforms to the requirements of this section.

19 (15) New Uses: All uses allowed by the underlying zoning district may be established,  
20 subject to the requirements of this section, except for the outdoor or uncontained  
21 storage of moveable objects below the flood protection elevation.

22 (16) Existing Structures: Any structure in existence before the enactment of this section or  
23 any amendment thereto that does not conform to the requirements of this section may  
24 remain or may undergo rehabilitation subject to the requirements of this section.  
25 Further, any such structure may be otherwise improved as follows:

(A) Any person making an expansion or an enlargement to an existing residential  
structure shall elevate the lowest floor, including the basement, of the expanded  
or enlarged portion to or above the flood protection elevation.

(B) Any person making an expansion or an enlargement to an existing  
nonresidential structure shall floodproof or elevate the lowest floor, including  
the basement, of the expanded or enlarged portion to or above the flood  
protection elevation except that any lodging units within the expanded or  
enlarged portion of such structure shall be elevated to or above the flood  
protection elevation.

(C) Any person making an expansion or an enlargement to an existing mixed-use  
structure shall floodproof or elevate the lowest floor, including the basement, of  
the expanded or enlarged portion to or above the flood protection elevation and  
shall elevate the residential lodging units within the expanded or enlarged  
portion to or above the flood protection elevation.

(D) Any person making a substantial modification or a substantial improvement to  
any existing nonresidential structure shall floodproof or elevate the lowest floor,  
including the basement, of the ~~substantially modified or improved portion~~ entire

1 structure to or above the flood protection elevation and shall floodproof the  
2 remainder of the existing structure except that any lodging units within the  
3 expanded or enlarged portion of such structure shall be elevated to or above the  
4 flood protection elevation.

5 (DE) Any person making a substantial modification or a substantial improvement to  
6 any existing residential structure shall elevate the lowest floor, including the  
7 basement, of the entire residential structure to or above the flood protection  
8 elevation.

9 (F) Any person making a substantial modification or a substantial improvement to  
10 an existing mixed-use structure shall floodproof or elevate the lowest floor,  
11 including the basement, of the entire structure and shall elevate all residential  
12 and lodging units within the structure to or above the flood protection elevation.

13 (17) New Structures: Construction of new structures shall meet the following  
14 requirements:

15 (A) Any person constructing a new residential structure shall elevate the lowest  
16 floor, including the basement, to or above the flood protection elevation;

17 (B) Any person constructing a new mixed-use structure shall floodproof or elevate  
18 the lowest floor, including the basement, of the entire structure and shall elevate  
19 all residential and lodging units within the structure to or above the flood  
20 protection elevation;

21 (C) Any person constructing a new nonresidential structure shall elevate all lodging  
22 units within the structure to or above the flood protection elevation and shall  
23 floodproof in a manner requiring no human intervention or elevate the lowest  
24 floor, including the basement, to or above the flood protection elevation with  
25 the following exceptions:

(i) Open air carwashes;

(ii) Unheated pavilions;

(iii) Unfinished or flood resistant building entryways or access areas;

(iv) Garden storage sheds;

(v) Sidewalks, paving, or asphalt, concrete, or stone flatwork;

(vi) Fences; and

(vii) Poles, lines, cables, or other transmission or distribution facilities of public  
utilities.

(CD) Any person constructing a new structure on a property removed from the one  
hundred-year floodplain through a FEMA Letter of Map Revision Based on Fill  
(LOMR-F) shall protect the lowest floor, including the basement, to or above  
the flood protection elevation that existed before placement of fill, as follows:

(i) Residential structures: by elevating the structure; or

1 (ii) Nonresidential structures: by elevating or floodproofing the structure.

2 Solely for the purposes of this subparagraph (a)(17)(C), previously designated  
3 floodplain areas that have been removed from the one hundred-year floodplain  
4 through a LOMR-F shall be considered to be within the floodplain. No person shall  
5 construct a new structure subject to this subparagraph (a)(17)(C) prior to the issuance  
6 of a floodplain development permit pursuant to Section 9-3-6, "Floodplain  
7 Development Permits," B.R.C. 1981.

8 (18) Enclosures: Enclosures below the lowest floor that are unfinished or flood resistant,  
9 usable solely for parking of vehicles, crawl spaces, building access or storage, in an  
10 area that is not a basement, and that are not floodproofed as set forth in this section  
11 shall meet the following requirements:

12 (A) Compliance with the provisions of paragraphs (a)(2), (a)(3), and (a)(4) of this  
13 section; and

14 (B) Design and construction that automatically equalizes hydrostatic flood forces on  
15 exterior walls by allowing for the entry and exit of floodwaters.

16 (i) Designs for meeting this requirement shall meet or exceed the following  
17 minimum criteria: a minimum of two openings having a total net area of  
18 not less than one square inch for every square foot of enclosed area subject  
19 to flooding shall be provided. The bottom of all openings shall be no  
20 higher than one foot above grade. Openings may be equipped with  
21 screens, louvers, valves, or other coverings or devices provided that they  
22 permit the automatic entry and exit of floodwaters.

23 (ii) Any designs not in conformance with subparagraph (a)(18)(B)(i) above,  
24 shall be certified by a registered professional engineer or licensed architect  
25 and shall conform with the most current FEMA Technical Bulletin on 4-  
93, Openings in Foundation Walls.

(C) Fully enclosed areas below the lowest floor subject to this provision include the  
following:

(i) Residential garages placed at or above grade;

(ii) Enclosures or vestibules that are attached to structures and that are utilized  
for storage or entryways;

(iii) Crawl spaces; and

(iv) Outdoor pavilions and patio enclosures with removable walls not located  
in the high hazard zone.

(19) Below Grade Crawl Space Construction: New construction, expansion or  
enlargement, substantial improvement and substantial modification of any below  
grade crawl space shall meet the following requirements:

(A) Interior grade elevation that is below the base flood elevation shall be no lower  
than two feet below the lowest adjacent grade;

- 1 (B) The height of the below grade crawl space measured from the interior grade of  
2 the crawl space to the top of the foundation wall shall not exceed four feet at  
3 any point;
- 4 (C) Adequate drainage systems shall allow floodwaters to drain from the interior  
5 area of the crawl space following a flood; and
- 6 (D) The provisions of paragraphs (a)(2), (a)(3), (a)(4) and (a)(18) of this section  
7 shall be complied with.

8 (20) Critical Facilities and Lodging Facilities: The requirements of Subsection 9-3-2(i),  
9 “Standards for Critical Facilities and Lodging Facilities in the Five Hundred-Year  
10 Floodplain,” B.R.C. 1981, apply to critical facilities and lodging facilities in the one  
11 hundred-year floodplain. Where a conflict exist between the requirements of this  
12 section and the provision of Subsection 9-3-2(i), B.R.C. 1981, the most restrictive  
13 requirements apply.

14 Section 3. Section 9-3-4, B.R.C. 1981, is amended as follows:

15 **9-3-4 Regulations Governing the Conveyance Zone.**

16 In the conveyance zone, the following standards apply:

- 17 (a) The provisions of section 9-3-3, "Regulations Governing the One Hundred-Year  
18 Floodplain," B.R.C. 1981.
- 19 (b) The provisions of section 9-3-5, "Regulations Governing the High Hazard Zone," B.R.C.  
20 1981, if the land is also located in the high hazard zone.
- 21 (c) All uses allowed under the provisions of section 9-3-3, "Regulations Governing the  
22 Floodplain," B.R.C. 1981, if they are not prohibited by the underlying zoning district or  
23 any ordinance of this City, may be established except that no person shall establish or  
24 change any use that results in any rise in the elevation of the one hundred-year flood.
- 25 (d) All structures allowed under section 9-3-3, "Regulations Governing the One Hundred-Year  
Floodplain," B.R.C. 1981, may be established except that no person shall:
- (1) Place any structure in the conveyance zone that will result in any rise in the elevation  
of the one hundred-year flood; or
- (2) Place any obstruction in the conveyance zone, except a device reasonably necessary  
for flood management if the device is designed and constructed to minimize the  
potential hazards to life and property.
- (e) No person shall carry out any other development that results in any rise in the elevation of  
the one hundred-year flood.



- 1 (f) Localized rises within flood channels or on a specific parcel that is being developed are  
2 permissible if there is no adverse impact on nearby properties and there is no increase in  
the average water surface elevations along the cross sections of the floodplain.
- 3 (g) Localized rises on land owned or controlled by a government or government subdivision or  
4 agency, or within public drainage or flood control easements, are permissible if the  
following requirements have been satisfied:
- 5 (1) The applicant has necessary property interests or permission to use land to allow the  
6 increase in any water sur-face elevation or there is no adverse impact to such land;  
7 (2) There are no insurable structures under the FEMA National Flood Insurance Program  
8 affected by the localized rise;  
9 (3) The applicant minimizes the amount of the localized rise in a flood elevation; and  
10 (4) The applicant complies with all necessary FEMA requirements, including, without  
limitation, obtaining a Condi-tional Letter of Map Revision (CLOMR) prior to  
development and a Letter of Map Revision (LOMR) upon completion of a project  
causing a localized rise in flood elevation.

11 Section 4. Section 9-3-5, B.R.C. 1981, is amended as follows:

12 **9-3-5 Regulations Governing the High Hazard Zone.**

13 In the high hazard zone of the floodplain, the following standards apply:

- 14 (a) The provisions of section 9-3-3, "Regulations Governing the One Hundred-Year  
15 Floodplain," B.R.C. 1981.
- 16 (b) The provisions of section 9-3-4, "Regulations Governing the Conveyance Zone," B.R.C.  
17 1981, if the land is also located in the conveyance zone.
- 18 (c) All uses allowed under the provisions of section 9-3-3, "Regulations Governing the One  
19 Hundred-Year Floodplain," B.R.C. 1981, if they are not prohibited by the underlying  
zoning district or any other ordinance of the City, may be established, except that no person  
20 shall:
- 21 (1) Change the use of an existing structure intended for human occupancy from a  
nonresidential use to a residential use or use as a school, daycare center, group home,  
22 residential care facility, or congregate care facility.  
23 (2) Establish any new parking lot for motor vehicles.  
24 (3) Establish any campground.
- 25 (d) All structures allowed under the provisions of Section 9-3-3, "Regulations Governing the  
One Hundred-Year Floodplain," B.R.C. 1981, may be established, except that no person  
shall:

- 1 (1) Construct or place any new structure intended for human occupancy.
- 2 (2) Expand, enlarge, or make a substantial modification or substantial improvement to
- 3 any existing structure intended for human occupancy. Notwithstanding this provision,
- 4 a person may reconstruct a non-flood-damaged structure or portion thereof, which
- 5 otherwise does constitute a substantial improvement, under the provisions of
- 6 Subparagraphs 9-3-3(a)(16)(C) and (a)(16)(D), B.R.C. 1981.
- 7 (e) Unconditioned, unenclosed building elements such as balconies, awnings and roof
- 8 overhangs may extend up to four feet into the high hazard zone if completely located above
- 9 the flood protection elevation and the remainder of the structure complies with this chapter.

10 Section 5. Section 9-3-6, B.R.C. 1981, is amended as follows:

11 **9-3-6 Floodplain Development Permits.**

- 12 (a) Activities Exempt from Floodplain Development Permit Requirement: The following
- 13 activities are allowed within the one hundred-year floodplain and in the five hundred-year
- 14 floodplain and do not require a floodplain development permit:
- 15 (i) "Maintenance" as defined in Section 9-16-1, "General Definitions," B.R.C.
- 16 1981, that does not affect the efficiency or capacity of the conveyance
- 17 zone or high hazard zone.
- 18 (ii) Sidewalks, concrete, asphalt or stone flatwork that does not result in the
- 19 establishment or expansion of parking area and does not modify existing
- 20 grade by more than six inches.
- 21 (iii) Underground utilities that do not modify existing grade.
- 22 (iv) Poles, lines, cables, sign posts, landscaping and artwork that do not affect
- 23 the efficiency or capacity of the conveyance zone or high hazard zone.
- 24 (v) Temporary facilities that are not permanently attached to the ground such
- 25 as tents, traffic control devices and lawn furniture provided that they will
- not affect the efficiency or capacity of the conveyance zone or high hazard
- zone, or they will remain in place for no more than thirty days.
- (b) An applicant for a floodplain development permit shall pay the fee prescribed by Section
- 4-20-44, "Floodplain Development Permits and Flood Control Variance Fees," B.R.C.
- 1981, and shall complete an application form provided by the city manager that shall
- include, without limitation, the following:
- (1) The written consent of the owners of all property subject to the development request;
- (2) A written statement addressing the criteria for approval;
- (3) Information on the location of hazardous material and how it will be secured to
- prevent its release during a five hundred-year flood event, if the floodplain
- development permit application is for a critical facility which will contain hazardous

1 material ~~A surface view plan showing elevations and contours of the ground; pertinent~~  
2 ~~structures, fill, and storage elevations; sizes, locations, and spatial arrangements of all~~  
3 ~~proposed, anticipated, and existing structures on the site; location and elevations of~~  
4 ~~streets, water supplies and sanitary facilities; and soil types; and~~

5 (4) A copy of the emergency management plan, if the floodplain development permit  
6 application is for a critical facility or lodging facility; and ~~Specifications for building~~  
7 ~~construction and materials, filling, dredging, grading, channel improvements and~~  
8 ~~changes, storage of materials, water supply, and sanitary facilities.~~

9 (5) A written statement by a Colorado registered professional engineer certifying that the  
10 proposed levee design and operating and maintenance manual meet the requirements  
11 of Subsection 9-3-2(i)(5), "Exemption for Critical Facilities Protected by Levee  
12 System," B.R.C. 1981, if the flood development permit application is for a critical  
13 facility or lodging facility for which an exemption is sought under Subsection 9-3-  
14 2(i)(5).

15 (bc) The manager may require the applicant to furnish additional information and details  
16 deemed necessary to evaluate the effects of the proposed construction upon the floodplain  
17 or to determine whether the requirements of this chapter have been met, including, without  
18 limitation:

19 (1) A surface view plan showing elevations and contours of the ground; pertinent  
20 structures, fill, and storage elevations; sizes, locations, and spatial arrangements of all  
21 proposed, anticipated, and existing structures on the site; location and elevations of  
22 streets, water supplies, and sanitary facilities; and soil types;

23 (2) Specifications for building construction and materials, filling, dredging, grading,  
24 channel improvements and changes, storage of materials, water supply, and sanitary  
25 facilities;

(3) Valley cross sections showing the floodplain surrounding the watercourse, cross  
sections of the area to be occupied by the proposed development, and one hundred-  
year flood maximum water surface elevation information, and, for critical facilities  
and lodging facilities, five hundred-year flood maximum water surface elevation  
information;

(24) A profile showing the slope of the bottom of the channel or thalweg of the  
watercourse;

(35) A floodplain analysis by a Colorado registered professional engineer of the flood  
profile, elevation, and velocity, using methodology acceptable to FEMA, including  
existing and anticipated uses and making a determination that the proposed  
construction or development will not cause a rise in the elevation of the water surface  
of a one hundred-year flood; and

(46) A structural analysis by a Colorado registered professional engineer showing that any  
proposed structures will be adequately designed and constructed to prevent flotation,  
collapse, or lateral movement of the structure resulting from hydrodynamic and  
hydrostatic loads, including the effects of buoyancy and scouring.

1 (ed) When reviewing an application for a permit, the city manager shall determine which  
2 portion or portions of the floodplain are affected by the particular development request and  
3 shall then apply the provisions of Sections 9-3-2, "Floodplains," 9-3-3, "Regulations  
4 Governing the One Hundred-Year Floodplain," 9-3-4, "Regulations Governing the  
5 Conveyance Zone," and 9-3-5, "Regulations Governing the High Hazard Zone," B.R.C.  
1981, as applicable. The manager also shall determine whether the application meets the  
intent of this chapter prescribed by Subsection 9-3-2(a), B.R.C. 1981, after considering the  
following factors:

- 6 (1) The effects upon the efficiency or capacity of the conveyance zone and high hazard  
7 zone;
- 8 (2) The effects upon lands upstream, downstream, and in the immediate vicinity;
- 9 (3) The effects upon the one hundred-year flood profile;
- 10 (4) The effects upon any tributaries to the main stream, drainage ditches, and any other  
11 drainage facilities or systems;
- 12 (5) Whether additional public expenditures for flood protection or prevention will be  
13 required;
- 14 (6) Whether the proposed use is for human occupancy;
- 15 (7) The potential danger to persons upstream, downstream, and in the immediate vicinity;
- 16 (8) Whether any proposed changes in a watercourse will have an adverse environmental  
17 effect on the watercourse, including, without limitation, stream banks and streamside  
18 trees and vegetation;
- 19 (9) Whether any proposed water supply and sanitation systems and other utility systems  
20 can prevent disease, contamination, and unsanitary or hazardous conditions during a  
21 flood;
- 22 (10) Whether any proposed facility and its contents will be susceptible to flood damage  
23 and the effect of such damage;
- 24 (11) The relationship of the proposed development to the Boulder Valley Comprehensive  
25 Plan and any applicable floodplain management programs;
- (12) Whether safe access is available to the property in times of flood for ordinary and  
emergency vehicles;
- (13) Whether the applicant will provide flood warning systems to notify floodplain  
occupants of impending floods;
- (14) Whether the cumulative effect of the proposed development with other existing and  
anticipated uses will increase flood heights; and
- (15) Whether the expected heights, velocities, duration, rate of rise, and sediment transport  
of the floodwaters expected at the site will adversely affect the development or  
surrounding property.

1 (de) If the city manager determines that the applicant meets the purposes and requirements of  
2 this chapter, the manager shall issue the permit and may attach such conditions as deemed  
necessary to further the purposes of this chapter.

3 (ef) ~~A Every permit issued on or after April 7, 1985, shall become invalid expires three years~~  
4 ~~after its date of issuance, if the permittee has not commenced construction under the~~  
5 ~~permit, if the work authorized by such permit is not completed and approved by the city~~  
6 ~~manager within three years from the date such permit was issued. Upon receipt of a~~  
7 ~~request in writing that demonstrates justifiable cause and is received prior to expiration of~~  
8 ~~the permit, the city manager may grant in writing one or more extensions of time for~~  
9 ~~periods not more than 180 days each. As part of an approval of extension of a permit, the~~  
10 ~~city manager may impose additional conditions on the applicant in order to ensure~~  
11 ~~compliance with any amendments to this chapter or the floodplain mapping effective after~~  
the first placement of permanent construction of a structure on a site, such as the pouring of  
slabs or footings, the installation of piles, the construction of columns, or any work beyond  
the stage of excavation; or the placement of a manufactured home on a foundation; but  
does not include land preparation, grading and filling, or installation of streets or sidewalks.

12 (fg) No person who has obtained a permit shall fail to construct in accordance with their  
approved application and design.

13 (gh) Floodplain development permits that allow for development in the conveyance zone or the  
14 high hazard zone, or which will involve a change of watercourse, shall be decided by the  
city manager. The decision of the city manager shall be subject to call-up by the planning  
15 board, or appeal by any aggrieved party to the planning board, subject to the call-up and  
16 appeal procedure of Ssection 9-4-4, "Appeals, Call-Ups and Public Hearings," B.R.C.  
1981.

17 (ih) A floodplain development permit for any of the following items is effective upon the date  
18 of its issuance:

- 19 (1) Sidewalks, parking lots, or other concrete, asphalt, or stone flatwork that do not  
modify existing grade;
- 20 (2) Uninhabited overhead structural projections, no portion of which extends below the  
flood protection elevation; or
- 21 (3) Rehabilitation of an existing structure in accordance with the definitions in eChapter  
22 9-16, "Definitions," B.R.C. 1981. In addition, for properties in the high hazard zone,  
the rehabilitation shall not result in a prohibited change in use as set forth in  
23 Ssubsection 9-3-5(c), B.R.C. 1981.

24 (ij) No person shall initiate any use after obtaining a permit under this section without first  
25 submitting to the city manager a certification by a Colorado registered professional  
engineer that the development has been completed in compliance with the approved permit  
application and that all conditions have been fulfilled.

1 (k) At least once every three years, the owner or operator of a critical facility protected by a  
2 levee for which the city manager approved an exemption under Paragraph 9-3-2(i)(5),  
3 “Exemption for Critical Facilities Protected by Levee System,” B.R.C. 1981, in a  
4 floodplain development permit, shall file with the city manager a written certification from  
5 a Colorado registered professional engineer that the levee meets the minimum freeboard  
6 requirements set forth in Subsection 9-3-2(i)(5) and that the levee appears, on visual  
7 inspection, to be structurally sound and adequately maintained. The city manager may  
8 require the owner or operator to submit such certification more frequently than once every  
9 three years if warranted by recent flood conditions or circumstances that may lead to  
10 changes in the levee system at the critical facility. The permit expires if the certification  
11 required pursuant to this subsection is not filed with the city manager. Once a floodplain  
12 development permit has been issued granting an exemption under Paragraph 9-3-2(i)(5),  
13 “Exemption for Critical Facilities Protected by Levee System,” B.R.C. 1981, for a critical  
14 facility protected by a levee system, future development on the land protected by the levee  
15 system that does not in any way affect the levee system or its operation and maintenance  
16 shall not require a floodplain development permit so long as the requirements of this  
17 subsection (k) and Paragraph 9-3-2(i)(5), B.R.C. 1981, are met.

18 Section 6. Section 9-3-7, B.R.C. 1981, is amended as follows:

19 **9-3-7 Variances.**

- 20 (a) ~~A person wishing to expand or enlarge an existing structure that does not conform to the~~  
21 ~~requirements of this chapter and cannot be made to conform without unreasonable expense~~  
22 ~~or unreasonable impact on the existing structure may apply to the city manager for a~~  
23 ~~variance from the requirements of subparagraphs 9-3-3(a)(16)(C) and (a)(16)(D). The city~~  
24 ~~manager may grant a variance from the requirements of Subsection 9-3-2(i) and Sections,~~  
25 ~~9-3-3, 9-3-4, and 9-3-5, B.R.C. 1981, except that no variance shall be granted for expansion~~  
or enlargement of any structure constructed after July 12, 1978, unless such expansion or  
enlargement conforms to the flood protection elevation requirement in effect at the time of  
the original construction.
- (b) The city manager shall not grant a variance under this section unless the manager  
determines that:
- (1) Considering the flood hazard, the variance is the minimum necessary to afford relief;
  - (2) To do so would not result in additional threats to public safety, extraordinary public  
expense, nuisance, fraud, victimization of the public, or for variances in the  
conveyance zone a rise in the elevation of the water surface of a one hundred-year  
flood, or be in conflict with existing provisions of this code, ~~or~~ any ordinance of the  
City, or any other applicable laws; and

1 (3) Failure to grant the variance would result in exceptional hardship to the applicant,  
2 except that a hardship need not be shown for a variance sought to the requirements of  
3 Paragraph (i)(4) of 9-3-2, B.R.C. 1981, for an public essential services facility in the  
4 five hundred-year floodplain if the applicant demonstrates to the satisfaction of the  
5 city manager that the facility is an element of a redundant system for which services  
6 will not be interrupted during a flood. At a minimum, the applicant shall  
7 demonstrate that one or more redundant facilities are available, either owned by the  
8 same public entity or available through an intergovernmental agreement or other  
9 contract, and are connected; that the alternative facilities are either located outside of  
10 the five hundred-year floodplain or are compliant with the requirements of this  
11 chapter; and that an operations plan is in effect that states how redundant systems  
12 will provide service to the affected area in the event of a flood. Evidence of ongoing  
13 redundancy shall be provided to the city manager by the owner or operator of the  
14 facility upon request by the city manager.

9 (c) The manager shall examine the following factors in determining whether or not to grant a  
10 variance under this section:

- 10 (1) The danger to life and property due to flooding or erosion damage;
- 11 (2) The likelihood that the proposed development, in conjunction with existing and  
12 anticipated development, may increase flood hazards;
- 12 (3) The relationship of the proposed development to the Boulder Valley Comprehensive  
13 Plan and any applicable floodplain management programs; and
- 14 (4) The cost and ability of providing essential services such as maintaining and protecting  
15 public utility systems, roads, and bridges and of restoring normal operations for the  
16 community during and after floods.

15 (d) The city manager shall not grant a cumulative total of variances that increases a structure's  
16 floor area by more than ten percent of the structure throughout the life of the structure.

17 (e) An applicant for a variance shall apply on forms provided by the city manager and pay the  
18 fee prescribed by Section 4-20-44, "Floodplain Development Permits and Flood Control  
19 Variance Fees," B.R.C. 1981, unless a floodplain development permit is required as well,  
20 in which case no fee is required for the variance.

20 (f) Any decision by the city manager to approve a variance is subject to call-up by the  
21 planning board or appeal by any aggrieved party to the planning board as described by  
22 Section 9-4-4, "Appeals, Call-Ups and Public Hearings," B.R.C. 1981.

22 (g) When granting any variance that allows for construction below FEMA's one hundred-year  
23 flood protection elevation, the city manager shall provide to the recipient of the variance  
24 written notice that the proposed construction does not conform with FEMA guidelines and  
25 that the proposed construction and the original structure may be subject to increased flood  
insurance premiums.

1 Section 7. Table 6-1: USE TABLE of Subsection 9-6-1(d), B.R.C. is amended as  
 2 follows:

3 **9-6-1 Schedule of Permitted Land Uses**

4 The schedule shows the uses which are permitted, conditionally permitted, prohibited, or which  
 5 may be permitted through use review pursuant to Section 9-2-15, "Use Review," B.R.C. 1981.

6 (a) Explanation of Table Abbreviations: The abbreviations used in table 6-1 of this section have  
 7 the following meanings:

8 ...

9 (8) Additional Regulations: There may be additional regulations that are applicable to a  
 10 specific use type. The existence of these specific use regulations is noted through a reference in  
 11 the last column of the use table entitled "Specific Use." References refer to subsections of  
 12 Sections 9-6-2 through 9-6-9, B.R.C. 1981, for "Specific Use Standards," or other sections of  
 13 this title. Such standards apply to all districts unless otherwise specified.

14 ...

15 (d) Use Table:

16 **TABLE 6-1: USE TABLE**

Use Modules	R1	R2	R3	R4	R5	R6	R7	R8	MH	M1	M2	M3	M4	B1	B2	B3	B4	B5	D1	D2	D3	I1	I2	I3	I4	P	A	Specific Use Standard
<b>Residential Uses</b>																												
Detached dwelling units	A	A	A	A	C	A	A	*	*	A	U	U	A	A	A	A	*	A	A	A	A	*	U	U	*	U	U	9-8-4
Detached dwelling unit with two kitchens	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C	C	9-6-3(c)
Duplexes	*	A	A	A	C	A	A	*	*	A	A	A	A	A	A	A	*	A	A	A	A	G	U	U	N	U	*	9-8-4
Attached dwellings	*	A	A	A	C	A	A	C	*	A	A	A	A	A	A	A	*	A	A	A	A	G	U	U	N	U	*	9-8-4
Mobile home parks	*	U	U	*	U	U	*	*	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Townhouses	*	A	A	A	C	A	A	A	*	A	A	A	A	A	A	A	*	A	A	A	A	G	U	U	N	U	*	9-8-4
Live-work	*	*	*	*	*	*	*	*	*	*	*	*	A	*	*	*	*	*	*	*	*	U	U	U	A	*	*	
Cooperative housing units	C	C	C	C	C	C	C	*	*	C	C	C	*	*	*	*	*	*	*	*	*	*	U	U	*	*	*	9-6-3(b)
Efficiency living units:																												



1	A. If <20% of total units	*	*	*	*	U	A	A	*	*	M	A	A	A	A	G	A	*	A	A	A	A	G	U	U	N	U	*		
2	B. If ≥20% of total units	*	*	*	*	*	U	A	*	*	U	A	A	U	U	U	U	*	U	U	U	U	U	U	U	U	U	*		
3	Accessory units:																													
4	A. Accessory dwelling unit	C	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C	C	9-6-3(a)	
5	B. Owner's accessory unit	C	*	*	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9-6-3(a)	
6	C. Limited accessory unit	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9-6-3(a)	
7	Caretaker dwelling unit	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	A	A	A	A	A	
8	Group quarters:																													
9	A. Congregate care facilities	*	*	A	A	A	A	A	A	*	A	A	A	C	A	C	A	*	A	C	C	C	*	U	U	*	U	*	9-6-3(f) 9-3-2(i)	
10	B. Custodial care	*	*	U	U	U	U	U	U	*	U	U	U	*	U	*	U	*	U	*	U	U	*	U	U	*	*	*		
11	C. Group homes	C	C	C	C	C	C	C	C	*	C	C	C	C	C	C	C	*	C	C	C	C	*	*	*	*	*	*	9-6-3(d) 9-3-2(i)	
12	D. Residential care facilities	*	*	C	C	C	C	C	C	*	C	C	C	C	C	C	C	*	C	C	C	C	*	U	U	*	*	*	9-6-3(f) 9-3-2(i)	
13	E. Fraternities, sororities, and dormitories	*	*	*	*	*	A	A	*	*	U	*	*	*	A	G	A	*	A	*	*	A	*	U	U	*	*	*	9-3-2(i)	
14	F. Boarding houses	*	*	U	U	A	A	A	*	*	U	A	A	G	A	G	A	*	A	*	*	A	*	U	U	*	*	*		
15	Home occupation	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	*	C	C	C	C	C	C	C	C	C	C	9-6-3(e)	
15	Transitional housing	C	C	C	C	C	C	C	C	*	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	*	9-6-3(h)	
16	<b>Dining and Entertainment</b>																													
16	Art or craft studio space ≤2,000 square feet	*	U	U	U	U	U	U	U	*	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	*		
17	Art or craft studio space >2,001 square feet	*	U	U	U	U	U	U	*	*	M	U	U	A	A	A	A	A	A	A	A	A	A	A	A	A	A	*		
19	Breweries, distilleries or wineries <15,000 square feet and with a restaurant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C	C	C	C	*	9-6-5(b)(3.5)	
21	Breweries, distilleries or wineries <15,000 square feet and without a restaurant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	A	A	A	A	*	9-6-5(b)(3.5)	
23	Breweries, distilleries or wineries with or without a restaurant >15,000 square feet	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	U	C	C	*	*	9-6-5(b)(3.5)	

1	Commercial kitchens and catering	*	*	*	*	*	*	*	*	*	*	*	*	A	*	*	*	U	U	U	U	U	U	A	A	A	A	*	*	
2	Indoor amusement establishment	*	*	*	*	*	*	*	*	*	*	*	*	U	*	U	U	U	A	U	U	U	*	*	*	*	*	*		
3	Mobile Food Vehicle on Private Property	*	*	*	*	*	*	*	*	*	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	*	9-6-5(d)
4	Mobile Food Vehicle on Public Right of Way	C	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C	C	C	C	C	*	9-6-5(d)	
5	Museums	*	*	*	*	*	*	*	*	*	*	*	A	U	A	A	A	A	A	A	A	U	U	U	U	*	*			
6	Restaurants (general)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	C	C	C	C	n/a	n/a	9-6-5(b)	
7	Restaurants, brewpubs and taverns no larger than 1,000 square feet in floor area, which may have meal service on an outside patio not more than 1/2 the floor area, and which close no later than 11:00 p.m.	*	*	*	*	*	U	A	*	*	A	A	A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
8	Restaurants, brewpubs and taverns no larger than 1,500 square feet in floor area, which may have meal service on an outside patio not more than 1/2 the floor area, and which close no later than 11:00 p.m.	*	*	*	*	*	n/a	*	*	*	*	A	*	A	U	A	A	A	A	A	A	C	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9-6-5(b)
9	Restaurants, brewpubs and taverns over 1,000 square feet in floor area, or which close after 11:00 p.m., or with an outdoor seating area of 300 square feet or more	*	*	*	*	*	U	*	*	*	U	A	U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
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1	Medical or dental clinics or offices or addition recovery facilities	*	U	U	U	*	U	U	*	*	M	U	U	C	A	A	A	C	A	G	A	A	*	*	*	*	U	*	9-6-7 9-3-2(i)	
2	Medical and dental laboratories	*	*	*	*	*	M	*	*	M	M	M	C	A	A	A	A	A	*	*	*	U	A	*	U	*	*			
3	Offices, administrative	*	*	*	*	*	*	*	*	*	*	*	C	A	A	A	C	A	G	A	A	*	A	A	*	*	*	9-6-7		
4	Offices, professional	*	U	U	U	U	U	M	*	*	M	M	M	C	A	A	A	C	A	G	A	A	*	*	*	*	*	9-6-7		
5	Offices, technical; with <5,000 square feet of floor area	*	U	U	U	U	U	M	*	*	M	M	M	A	A	A	A	C	A	G	A	A	A	A	A	A	*	*	9-6-7	
6	Offices, technical; with >5,000 square feet of floor area	*	U	U	U	U	U	M	*	*	M	M	M	U	A	U	A	C	A	G	A	A	*	A	A	A	*	*	9-6-7	
7	Offices - other	*	U	U	U	U	U	M	*	*	M	M	M	C	A	A	A	C	A	G	A	A	*	*	*	*	*	*	9-6-7	
8	<b>Parks and Recreation Uses</b>																													
9	Campgrounds	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	U	U	U	*	*	U		
10	Outdoor entertainment	*	*	*	*	*	*	*	*	*	*	*	*	U	*	U	U	U	U	U	U	*	*	*	*	U	*			
11	Park and recreation uses	A	A	A	A	A	A	A	*	A	A	A	A	*	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
12	Indoor recreational or athletic facilities	*	*	*	*	*	U	U	*	*	U	U	A	A	A	A	A	A	A	A	A	A	A	A	U	U	A	*	*	
13	<b>Commercial, Retail and Industrial Uses</b>																													
14	Service Uses:																													
15	Animal hospital or veterinary clinic	*	*	*	*	*	*	*	*	*	*	*	U	U	U	A	U	A	*	*	U	A	A	A	U	*	*			
16	Animal kennel	*	*	*	*	*	*	*	*	*	*	*	C	*	U	U	A	U	*	*	*	A	A	U	A	*	*			
17	Antennas for wireless telecommunications services	*	*	*	C	C	C	C	*	*	C	C	C	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	9-6-9(a)	
18	Broadcasting and recording facilities	*	U	U	U	U	U	*	*	M	M	M	A	A	G	A	A	A	A	A	A	A	A	A	A	A	*	*	9-3-2(i)	
19	Business support services <10,000 square feet	*	*	*	*	*	*	*	*	*	*	*	A	*	A	A	A	A	A	A	A	A	A	U	U	A	*	*		
20	Business support services ≥10,000 square feet	*	*	*	*	*	*	*	*	*	*	*	U	*	U	A	A	A	A	A	A	A	U	U	U	U	*	*		
21	Industrial service center	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C	C	*	*	*	*	*	*	*	*	*	*		
22	Non-vehicular repair and rental services without outdoor storage	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	U	A	U	U	U	U	A	U	*	A	*	*		
23	Neighborhood business center	*	U	U	*	*	U	U	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9-6-9(f)

1	Personal service uses	*	U	U	U	*	U	A	U	U	A	A	A	A	A	A	A	A	A	A	A	*	*	*	*	*	*	
2	Retail Sales Uses:																											
3	Accessory sales	*	*	*	*	*	A	A	*	*	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	9-16
4	Convenience retail sales ≤2,000 square feet	*	U	U	U	*	U	A	*	*	A	*	A	A	U	A	A	U	U	*	A	A	C	C	*	C	*	*
5	Convenience retail sales >2,000 square feet	*	*	*	*	*	U	U	*	*	M	M	*	A	U	A	A	A	U	A	A	A	*	C	*	C	*	*
6	Retail fuel sales (not including service stations)	*	U	U	U	*	U	U	*	*	U	U	U	C	U	C	C	U	C	*	U	U	C	C	*	U	*	9-6-9(d)
7	Retail sales ≤5,000 square feet	*	*	*	*	*	*	*	*	*	U	*	U	A	*	A	A	A	A	A	A	A	*	*	*	*	*	*
8	Retail sales >5,000 square feet but ≤20,000 square feet	*	*	*	*	*	*	*	*	*	*	*	*	A	*	A	A	A	A	A	A	A	*	*	*	*	*	*
9	Retail sales >20,000 square feet	*	*	*	*	*	*	*	*	*	*	*	U	*	U	U	A	A	A	A	U	*	*	*	*	*	*	*
10	Building material sales ≤15,000 square feet of floor area	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	U	*	*	*	A	A	A	A	*	*
11	Building material sales >15,000 square feet of floor area	*	*	*	*	*	*	*	*	*	*	*	*	*	*	U	*	U	*	*	*	U	U	U	U	*	*	*
12	Temporary sales	*	*	*	*	*	*	*	*	*	*	*	C	C	C	C	C	C	C	C	C	C	C	C	C	C	9-6-5(c)	
13	Vehicle-Related Uses:																											
14	Automobile parking lots, garages, or car pool lots as a principal use	U	U	U	U	U	U	U	U	U	U	U	U	U	U	A	U	U	*	U	U	A	A	A	U	U	*	9-6-9(b)
15	Car washes	*	*	*	*	*	*	*	*	*	*	*	*	*	U	A	U	U	U	U	*	*	*	*	*	*	*	*
16	Drive-thru uses	*	*	*	*	*	*	*	*	*	*	*	*	*	U	U	U	*	U	U	*	*	*	*	*	*	*	9-6-9(c)
17	Fuel service stations or retail fuel sales	*	*	*	*	*	*	*	*	*	*	*	U	U	U	C	C	C	*	U	C	C	C	*	U	*	9-6-9(d)	
18	Sales and rental of vehicles	*	*	*	*	*	*	*	*	*	*	*	*	*	U	A	U	*	*	*	A	A	*	*	*	*	*	
19	Sales and rental of vehicles within 500 feet of a residential use module	*	*	*	*	*	*	*	*	*	*	*	*	*	U	C	C	*	*	*	C	C	*	*	*	*	9-6-9(i)	
20	Service of vehicles with no outdoor storage	*	*	*	*	*	*	*	*	*	*	*	U	*	U	U	A	U	*	*	*	A	A	A	A	*	*	
21	Service of vehicles with limited outdoor storage	*	*	*	*	*	*	*	*	*	*	*	*	*	U	U	U	*	*	*	A	A	*	A	*	*	*	







1 "Area of special flood hazard" means the land in the floodplain subject to a one percent or  
2 greater chance of flooding in any given year. Such areas may be designated as Zones A, AO,  
3 AH, AE and A1-30 on the FIRM for the City of Boulder. (Floodplain)

4 ...

5 "At-risk population facility" means a pre-school, public or private primary or secondary school,  
6 before and after school care center with twelve or more students, daycare center with twelve or  
7 more children the parents or guardians of which do not remain in the same building of the  
8 facility, group home, or residential or congregate care facility with twelve or more residents.  
9 (Floodplain)

10 ...

11 "Base flood elevation" means the computed elevation to which floodwater is anticipated to rise  
12 during the one hundred-year flood. (Floodplain)

13 "Basement" means any enclosed area of a building having its lowest floor a minimum of two feet  
14 below grade level on all sides. (Floodplain)

15 ...

16 "Change in a watercourse" means any change in an existing thalweg, bed, or bank of a  
17 watercourse. (Floodplain)

18 ...

19 "Conveyance zone" means those portions of the floodplain required for the passage or  
20 conveyance of the one-hundred-year flood. The conveyance zone is delineated based on an equal  
21 encroachment methodology (measured in volume of water), which is applied to the floodplain  
22 from the edges of the flood channel to a point where the one-hundred-year flood profile will be  
23 raised no more than six inches, after considering a reasonable expectation of blockage at bridges  
24 and other obstructions by flood-borne debris. The City may, in its discretion, delineate the  
25 conveyance zone on city owned land or right of way based on unequal encroachment to  
minimize delineation on other properties. The conveyance zone is equivalent to a floodway  
delineation based on a six-inch rise. (Floodplain)

...

"Crawl space" means the enclosed area contained inside the foundation walls and below the  
habitable floor of a structure. Crawl spaces having the lowest floor a minimum of two feet below  
grade level on all sides shall be considered a basement, and not a crawl space. (Floodplain)

"Critical facility" means any structure or related infrastructure, the loss of which may result in  
severe hazards to public health and safety or may interrupt essential services and operations for  
the community at any time before, during, and after a flood. Critical facilities are classified as

1 follows: (1) essential services facility, (2) hazardous material facility, and (3) at-risk population  
2 facility. (Floodplain)

3 ...

4 "Daycare center" means a facility:

- 5 (1) Licensed by the state, if applicable;
- 6 (2) Providing care for children or adults who do not reside in the facility, are present  
7 primarily during daytime hours, and do not regularly stay overnight; and
- 8 (3) Which may include some instruction.
- 9 (4) Which is not located within a dwelling unit.

10 "Daycare home" means a facility:

- 11 (1) Licensed by the state, if applicable;
- 12 (2) Which is located within a dwelling unit;
- 13 (3) Providing care for twelve or fewer children or adults who (except for family  
14 members) do not reside in the facility, are present primarily during daytime hours,  
15 and do not regularly stay overnight. Family members who receive care in the facility  
16 are included in the total.

17 ...

18 "Development" means any change to improved or unimproved real estate, including, without  
19 limitation, constructing, relocating, rehabilitating, reconstructing or expanding or enlarging (but  
20 not maintaining) a building or other structure or portion thereof, or establishing or changing a  
21 use, or mining, dredging, filling, grading, paving, or excavation. (Floodplain)

22 "Essential service facility" means any facility providing an essential service that, if flooded, may  
23 result in severe hazards to public health and safety or interrupt essential services and operations  
24 for the community at any time before, during, or after a flood. Examples of essential service  
25 facilities include without limitation the following:

- 26 (1) Public safety facilities such as police stations, fire and rescue stations, and  
27 emergency operation centers;
- 28 (2) Emergency response facilities, such as emergency vehicle and equipment storage,  
29 and essential governmental work centers for continuity of government operations;
- 30 (3) Emergency medical facilities, such as hospitals, emergency care, urgent care, and  
31 ambulance services, but excluding clinics, doctors offices, and non-urgent care  
32 medical facilities;
- 33 (4) Shelters designated by the city manager that will be used during or after a flood  
34 for displaced persons;

- 1       (5) Communication facilities, such as main hubs for telephone systems, main  
2       broadcasting equipment for television systems, radio and other emergency  
3       warning systems, but excluding towers, poles, lines, cables, and conduits;
- 4       (6) Public utility plant facilities and essential equipment for treatment, generation,  
5       storage, pumping, and distribution, such as hubs for water, wastewater, power,  
6       and gas, but excluding hydro electric facilities, towers, poles, power lines, buried  
7       pipelines, transmission lines, distribution lines, and service lines;
- 8       (7) Essential governmental facilities, including, without limitation, facilities where  
9       permanent records, as defined by an agency's data retention policy, are stored;  
10       courts and jails; building permitting and inspection services; departments that  
11       manage utilities and transportation systems; information technology departments,  
12       finance departments, and health departments; the county commissioner's office,  
13       the city manager's office, and maintenance and equipment centers; and
- 14       (8) Air transportation lifelines, such as an airport or heliport, and structures serving  
15       emergency functions, and associated infrastructure, such as aviation control  
16       towers, air traffic control centers, and emergency equipment aircraft hangars.

17       (Floodplain)

18       ...

19       "Exceptional hardship" means a substantially disproportionate burden in relationship to the  
20       benefit to be derived from conformance with the requirements of this title. (Floodplain)

21       ...

22       "Expansion or enlargement of a structure" means any addition of an exterior wall to the structure  
23       or any addition to the floor area of the structure, whether under, at, or above grade, and whether  
24       or not the external dimensions of the structure are changed, or the reconstruction of a flood-  
25       damaged portion of a structure, so long as such expansion, enlargement or reconstruction does  
26       not constitute a "substantial modification" or a "substantial improvement." (Floodplain)

27       ...

28       "FEMA" means the Federal Emergency Management Agency. (Floodplain)

29       ...

30       "Five hundred-year flood" means a flood having a 0.2 percent chance of occurring in any year.  
31       (Floodplain)

1 "Flood" or "flooding" means a general or temporary condition of partial or complete inundation  
2 of normally dry land areas from a watercourse that temporarily overflows the boundaries within  
3 which it is ordinarily confined or from the rapid accumulation of runoff of surface water caused  
by rain, snow melt, flow blockage, or any other source. (Floodplain)

4 "Flood channel" means a natural or artificial watercourse with a definite bed and banks which  
5 periodically or continuously conducts flowing water and is shown on the Flood Channel  
Inventory Map prepared by the City's Utility Division of the Public Works Department.  
(Floodplain)

6 ~~"Flood fringe" means those portions of the floodplain that are not in the conveyance zone or in  
7 the high hazard zone. (Floodplain)~~

8 "Flood Insurance Rate Map (FIRM)" means the official map on which FEMA has delineated  
9 both the areas of special flood hazard and the risk premium zones applicable to the community.  
(Floodplain)

10 "Flood insurance study (FIS)" means the official report provided by the Federal Emergency  
11 Management Agency that included flood profiles, the Flood Boundary-Floodway Map, and the  
water surface elevations of the base flood. (Floodplain)

12 "Flood profile" means a graph showing the elevations of the floodwater surface and the  
13 elevations of the underlying land as a function of distance along a path of flow. (Floodplain)

14 "Flood protection elevation" means ~~an elevation of:~~

15 (1) In the one hundred-year floodplain, an elevation of:

16 (A) ~~Two~~ Two feet above the elevation of the water surface of a one-hundred-year  
17 flood as determined pursuant to ~~s~~Sections 9-3-2 through 9-3-8, B.R.C. 1981, or, if  
18 no such elevation is determined, two feet above the highest grade adjacent to a  
structure; or

19 (B) ~~Two~~ Two feet above the base flood elevation in AE zones or two feet above the  
20 flood depth number indicated for AO zones on the FIRM for the City of Boulder;  
whichever is higher.

21 (2) In the five hundred-year floodplain, the lower of the following elevations:

22 (A) One foot above the water surface of a five hundred-year flood under the  
23 standards in Sections 9-3-2 through 9-3-8, B.R.C. 1981; or

24 (B) The one hundred-year flood protection elevation.

(Floodplain)

25 "Floodplain" means the area that is susceptible to being inundated by a flood. (Floodplain)

1 "Floodplain development permit" means any permit granted under the terms and conditions of  
2 Sections 9-3-2 through 9-3-8, B.R.C. 1981, for development on land in a floodplain.  
(Floodplain)

3 "Floodplain, five hundred-year" means the area of the floodplain inundated by a flood having a  
4 0.2 percent or greater chance of ~~occurring~~ flooding in any given year. (Floodplain)

5 "Floodplain, one hundred-year" means the area of the floodplain inundated by a flood having a  
one percent or greater chance of ~~occurring~~ flooding in any given year. (Floodplain)

6 "Floodproofing" means any combination of structural and nonstructural changes, modifications,  
7 or adjustments to structures or real property which reduce or eliminate flood damage to improved  
or unimproved real property, water and sanitary facilities, structures and their contents.  
8 (Floodplain)

9 "Floodway, FEMA regulatory" means the channels of watercourses and the adjacent land areas  
10 that must be reserved in order to discharge the base flood without cumulatively increasing the  
water surface elevation more than one foot. (Floodplain)

11 ...

12 "Hazardous material" means any material used, generated, or stored at a facility of a type and in  
13 a quantity that would classify the facility as a hazardous materials facility. (Floodplain)

14 "Hazardous material facility" means a structure (or group of structures) that is:

15 (1) Subject to Section 303 of the Emergency Planning and Community Right-to-  
16 Know Act, 42 U.S.C. §11003, as amended from time to time, because it has an  
17 "Extremely Hazardous Substance" on site in quantities that meet or exceed the  
"Threshold Planning Quantities" established by the United States Environmental  
Protection Agency and listed at 40 C.F.R. Part 355, Appendix A and Appendix B,  
as may be amended from time to time;

18 (2) Unless covered by subpart (1) above, storing hazardous material as defined by  
19 Department of Transportation regulations at 49 C.F.R. Parts 171-180, as may be  
20 amended from time to time, but only to the extent that the facility is storing the  
hazardous material in the "Bulk Packaging" container in which it was delivered as  
that term is defined at 49 C.F.R. 171.8, as may be amended from time to time;

21 (3) Storing a hazardous substance of the type and quantity listed by §29-22-107,  
C.R.S., as may be amended from time to time; or

22 (4) Regulated as a transfer facility under Colorado hazardous waste regulations at 6  
23 C.C.R. 1007-3, Part 263, as may be amended from time to time.

24 (Floodplain)

25 "Hazardous substance" means any substance, as determined from time to time by the city  
manager pursuant to the rule making authority granted by Subsection 9-3-2(c), B.R.C. 1981,

1 that is flammable, radioactive, toxic, or explosive, and that in times of flooding could be released  
2 in sufficient quantities to be harmful to humans, animals, or plant life. (Floodplain)

3 ...

4 "High hazard zone" means those portions of the floodplain where an unacceptably high hazard to  
5 human safety exists defined as those areas where the product number of flow velocity (measured  
6 in ft./sec.) times flow depth (measured in feet) equals or exceeds four, or where flow depths  
7 equal or exceed four feet. (Floodplain)

8 ...

9 "Hostel" means a facility for residence of under one month that provides simple dormitory or  
10 sleeping rooms and common rooms for cooking, meeting, recreational, and educational use; that  
11 is chartered or approved by the International Hostel Federation or its national or regional  
12 affiliates, or similar organizations; and that is supervised by resident house-parents or managers  
13 who direct the guests' participation in the domestic duties and activities of the hostel.

14 "Hotel/motel" means an establishment that offers temporary lodging in rooms, for less than one  
15 month, and may include a restaurant, meeting rooms, and accessory uses and services, including,  
16 without limitation, newsstands, gift shops, and similar incidental uses conducted entirely within  
17 the principal building but excludes a "bed and breakfast," as defined in this section.

18 ...

19 "Intended for human occupancy" means, as applied to structures, capable of and likely to be used  
20 for residential habitation, or for commercial, industrial or governmental occupation by persons  
21 on a regular basis. Examples of structures normally not intended for human occupancy include,  
22 without limitation, garages useable solely for the parking of vehicles or storage, open air  
23 carwashes, unheated pavilions, porches or patio covers, crawl spaces, flood resistant enclosures  
24 useable solely for building access, barns and other agricultural buildings, garden storage sheds,  
25 ATMs, and mausoleums. (Floodplain)

...

"Lodging facility" means a hotel, motel, dormitory, bed and breakfast, hostel, emergency shelter,  
and overnight shelter as defined in the Boulder Revised Code. (Floodplain)

...

"Lowest floor" means the lowest floor of the lowest enclosed area (including basement or crawl  
space). 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 design requirements of Ssections 9-3-2 through 9-3-8, B.R.C. 1981. (Floodplain)

1 ...

2 "Maintenance" means any activity undertaken to repair or prevent the deterioration, impairment  
3 or failure of any stream, previously constructed improvement or structure, including, without  
4 limitation the removal of sediment and debris, installation of erosion and sediment control  
5 devices and the replacement of structural components. Maintenance does not include expansion  
or enlargement of a structure, substantial modifications, substantial improvements, total  
replacement of existing facilities or total reconstruction of a facility. (Floodplain)

6 ...

7 "Manufactured home" means a structure, transportable in one or more sections, which is built on  
8 a permanent chassis and is designed for use with or without a permanent foundation when  
9 connected to the required utilities. The term "manufactured home" does not include a  
"recreational vehicle." (Floodplain)

10 "Manufactured home park or manufactured home subdivision" means any lot or tract of land  
11 designed, used, or intended to provide a location or accommodation for one or more  
12 manufactured homes and upon which any manufactured home or homes are parked or located,  
whether or not the lot or tract or any part thereof is held or operated for profit, on which  
construction was completed on or after July 12, 1978. (Floodplain)

13 ...

14 "Mixed-use structure" means any structure with both residential uses and nonresidential uses  
15 where no less than twenty-five percent of the finished floor area contains nonresidential uses.  
(Floodplain)

16 ...

17 "Moveable object" means an item or material not anchored to the ground that is subject to being  
18 transported by water, including, without limitation, a manufactured home not anchored to a  
19 permanent foundation, a tank, a trash dumpster, lumber, and other materials, but not a motor  
vehicle. (Floodplain)

20 ...

21 "New construction" means structures for which the "start of construction" commenced on or after  
July 12, 1978, and includes any subsequent improvements to such structures. (Floodplain)

22 "New manufactured home park or subdivision" means a manufactured home park or subdivision  
23 for which the construction of facilities for servicing the lots on which the manufactured homes  
24 are to be affixed (including, at a minimum, the installation of utilities, the construction of streets,  
final site grading, or pouring of concrete pads) is completed on or after July 12, 1978.  
25 (Floodplain)

1 ...

2 "Nonresidential structure" means any structure ~~or any portion of a structure~~ used exclusively for,  
3 or designed as and capable of being used for, office, commercial, industrial, or governmental  
4 occupation, or the temporary lodging of persons for periods of less than six months including  
5 hotels, motels, emergency shelters, and overnight shelters but excluding dormitories, fraternities,  
6 and bed and breakfasts. (Floodplain)

5 ...

6 "Obstruction" means any item or material not constituting a moveable object in, along, across, or  
7 projecting into the floodplain that might impede, retard, or change the direction of a flow of  
8 water, either by itself or by catching or collecting debris carried by such water, in a way that the  
9 city manager determines would increase the flood hazard to adjacent properties. (Floodplain)

9 ...

10 "One hundred-year flood" means a flood having a one percent chance of occurring in any year.  
11 (Floodplain)

11 ...

12 "Residential structure" means any structure ~~or any portion of a structure~~ that is used for, or  
13 designed as and capable of being used for, the temporary or permanent domicile of persons for  
14 periods of six months or more, including, without limitation, a dwelling, a boarding house, a  
15 dormitory, a fraternity, a bed and breakfast hotel, a motel, and similarly used structures.  
16 (Floodplain)

15 ...

16 "Reconstruction" means exact replacement of an existing structure or portion thereof or exact  
17 structural repair of a damaged structure. (Floodplain)

18 "Recreational vehicle" means a vehicle which is: 1) built on a single chassis; 2) four hundred  
19 square feet or less when measured at the largest horizontal projections; 3) designed to be self-  
20 propelled or permanently towable by a light duty truck; and 4) designed primarily not for use as  
21 a permanent dwelling but as temporary living quarters for recreational, camping, travel, or  
22 seasonal use. (Floodplain)

21 ...

22 ...

23 "Start of construction" means the date the building permit was issued, provided the actual start of  
24 construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement  
25 was within one hundred eighty days of the permit date. The actual start means either the first  
placement of permanent construction of a structure on a site such as the pouring of slab or



1 footings, the installation of piles, the construction of columns, or any work beyond the stage of  
2 excavation; or the placement of a manufactured home on a foundation. (Floodplain)

3 ...

4 "Structure" means a building or other roofed construction, a basement, a wall, a fence, a  
5 manufactured home, or a storage tank. (Floodplain)

6 ...

7 "Substantial damage" means damage of any origin sustained by a structure whereby the cost of  
8 restoring the structure to its before-damaged condition would equal or exceed fifty percent of the  
9 market value of the structure before the damage occurred. (Floodplain)

10 "Substantial improvement" means any repair, reconstruction, rehabilitation, addition, or  
11 improvement of a structure, the cost of which equals or exceeds fifty percent of the market value  
12 of the structure before the "start of construction" of the improvement. This term includes  
13 structures which have incurred "substantial damage," regardless of the actual repair work  
14 performed. For the purposes of this definition, "substantial improvement" is considered to occur  
15 when the first alteration of any wall, ceiling, floor, or other structural part of the building  
16 commences, whether or not that alteration affects the external dimensions of the structure. The  
17 term does not, however, include either: 1) any project for improvement of a structure to comply  
18 with existing state or local health, sanitary, or safety code specifications which are solely  
19 necessary to assure safe living conditions or 2) any alteration of a structure listed on the National  
20 Register of Historic Places or the Colorado Inventory of Historic Places or designated as an  
21 individual landmark under Section 9-11-2, "City Council May Designate Or Amend Landmarks  
22 And Historic Districts," B.R.C. 1981. (Floodplain)

23 "Substantial modification" means any expansion or enlargement of a structure which equals or  
24 exceeds fifty percent of the floor area of the structure intended for human occupancy, considered  
25 cumulatively, commencing July 12, 1978. (Floodplain)

...

20 Section 9. This ordinance shall become effective on the later of March 1, 2014, or 30  
21 days after its final passage by the City Council. This ordinance shall apply to all permits and  
22 development applications submitted to the city after the effective date of its passage.

24 Section. 10. This ordinance is necessary to protect the public health, safety, and welfare  
25 of the residents of the city, and covers matters of local concern.



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READ ON THIRD READING, PASSED, ADOPTED, AND ORDERED PUBLISHED

BY TITLE ONLY this 1st day of October, 2013.

*Matthew Appelbaum*

\_\_\_\_\_  
Mayor

Attest:

*Susan B. Dawson*  
\_\_\_\_\_  
Deputy City Clerk