

1 **BY AUTHORITY**

2 ORDINANCE NO. _____
3 SERIES OF 2013

COUNCIL BILL NO. CB13-0708
COMMITTEE OF REFERENCE:
Land Use Transportation & Infrastructure

6 **A BILL**

7 **For an Ordinance to amend Chapter 56 (Utilities) of the Revised Municipal Code**
8 **Article V relating to floodplain management.**

9 **WHEREAS**, the Federal National Flood Insurance Program and the State of
10 Colorado have established minimum standards and requirements for floodplain
11 management; and

12 **WHEREAS**, the City wishes to adhere to or exceed these minimum standards and
13 requirements.

14 **NOW, THEREFORE, BE IT ENACTED BY THE COUNCIL OF THE CITY AND**
15 **COUNTY OF DENVER:**

16 **Section 1.** Section 56-200 (Legislative intent) of the Denver Revised Municipal
17 Code shall be amended by adding the language underlined, and deleting the language
18 stricken, to read as follows:

19 **Sec. 56-200. – Legislative intent.**

20 (a) Statutory Authorization. The Legislature of the State of Colorado has, in Title 29,
21 Article 20 of the Colorado Revised Statutes, delegated the responsibility of local governmental
22 units to adopt regulations designed to minimize flood losses. Therefore, the City and County of
23 Denver does hereby adopt the following floodplain management ordinance:

24 (a) *Findings of fact.* Due to its general terrain and geographical location, the city is
25 particularly subject to damage from stormwaters which, from time to time, overflow from existing
26 watercourses and drainage facilities, and imprudent use of these natural hazard areas called
27 floodplains will pose a continuing and greater danger to life and property in the future unless
28 proper regulations are adopted.

29 (b) *Statement of purpose.* This article is enacted to promote the public health, safety,
30 and general welfare, and to minimize public and private losses due to flood conditions in specific
31 areas, by provisions designed to:

- 32 (1) Protect human life and health;
33 (2) Minimize expenditure of public money for costly flood control projects;

- 1 (3) Minimize the need for rescue and relief efforts associated with flooding and
2 generally undertaken at the expense of the general public;
- 3 (4) Minimize prolonged business interruptions;
- 4 (5) Minimize damage to critical facilities, infrastructure and other public facilities
5 and utilities such as water, sewer and gas mains; ~~electric, telephone and~~
6 communications facilities; and ~~sewer lines~~, streets and bridges located in
7 ~~areas of special flood hazard~~the regulatory floodplain;
- 8 (6) Help maintain a stable tax base by providing for the second sound use and
9 development of ~~areas of special flood hazard~~the regulatory floodplain so as to
10 minimize future flood blight areas;
- 11 (7) Ensure that potential buyers are notified that property is located in an area of
12 ~~special flood hazard~~the regulatory floodplain;
- 13 (8) Ensure that those who occupy the ~~areas of special flood hazards~~regulatory
14 floodplain assume responsibility for their actions;
- 15 (9) Encourage and facilitate urban water resources management techniques for
16 reduction of pollution and the enhancement of the urban environment.

17 (ed) *Methods of reducing flood losses.* In order to accomplish its purposes, this article:

- 18 (1) Requires that all construction of permitted buildings shall be in compliance
19 with the Denver Building Code;
- 20 (2) Restricts or prohibits uses which are dangerous to health, safety, and property
21 due to water or erosion hazards, or which result in damaging increases in
22 erosion ~~or in~~, flood heights or velocities;
- 23 (3) Requires that uses vulnerable to floods, including facilities which serve such
24 uses, be protected against flood damage at the time of initial construction;
- 25 (4) Controls the alteration of natural floodplains, stream channels, and natural
26 protective barriers, which help accommodate or channel floodwaters;
- 27 (5) Controls filling, grading, dredging, and other development which may increase
28 flood damage; and,
- 29 (6) Prevents or regulates the construction of flood barriers which will unnaturally
30 divert floodwaters or which may increase flood hazards in other areas.

31 **Section 2.** Section 56-201 (Definitions) of the Denver Revised Municipal Code shall be
32 amended by adding the language underlined, and deleting the language stricken, to read as
33 follows:

34 **Sec. 56-201. Definitions.**

- 35 (a) Words, phrases and terms defined herein shall be given the defined meaning.
- 36 (b) Words, phrases and terms not defined herein, but defined in the building code or the

1 zoning code of the city, shall be construed as defined in such code.

2 (c) Words, phrases and terms neither defined herein nor in the building code or the
3 zoning code of the city, shall be given usual and customary meanings except where the context
4 clearly indicates a different meaning.

5 (d) The word "shall" is mandatory and not permissive; the word "may" is permissive and
6 not mandatory.

7 Accessory structure: Also known as "appurtenant structure." A structure which is on the
8 same parcel of property as the principal structure and the use of which is incidental to the use of
9 the principal structure.

10 Addition: Any activity that expands an existing structure either horizontally or vertically. See
11 "lateral addition" and "vertical addition."

12 Appeal: A request for a review of the interpretation of any provisions of this article.

13 Appurtenant structure: See "accessory structure."

14 Area of shallow flooding: A designated AO, AH, AR/AO, AR/AH or VO zone on the Flood
15 Insurance Rate Map (FIRM) where the base flood depths range from one (1) to three (3) feet, a
16 clearly defined channel does not exist, the path of flooding is unpredictable and indeterminate, and
17 velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

18 Base flood: Also known as "one-hundred-year flood," "one-percent-annual-chance flood,"
19 and "one-percent-chance flood." A flood having a one-percent chance of being equaled or
20 exceeded in any given year. The term does not imply that the flood will necessarily happen once
21 every one hundred years.

22 Base flood elevation (BFE): The elevation shown on a FEMA Flood Insurance Rate Map
23 (FIRM) for Zones AE, AH, A1-A30, AR, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30, and VE that
24 indicates the water surface elevation resulting from the occurrence of the base flood.

25 Basement: Any area of a building having its floor sub-grade (below ground level) on all
26 sides.

27 Building: See "structure."

28 Channel: The physical confine of stream or waterway consisting of a bed and stream banks,
29 existing in a variety of geometries.

30 Channelization: The artificial creation, enlargement or realignment of a stream channel.

31 Code of Federal Regulation (CFR): The codification of the general and permanent Rules
32 published in the Federal Register by the executive departments and agencies of the Federal
33 Government. It is divided into 50 titles that represent broad areas subject to Federal regulation.

34 Community: Any political subdivision that has the authority to adopt and enforce floodplain
35 management regulations through zoning, including but not limited to: counties, cities, towns,
36 unincorporated areas, Indian tribes, and drainage and flood control districts.

1 Conditional Letter of Map Revision (CLOMR): FEMA's comment on a proposed project,
2 which does not revise an effective floodplain map, that would, upon construction, affect the
3 hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the
4 existing regulatory floodplain.

5 Crawl space: A shallow space beneath the ground floor of a structure with clearances less
6 than human height, generally used for storage or to access plumbing, wiring, etc... A crawlspace
7 cannot be used as living space. A crawlspace may be considered a basement for flood insurance
8 purposes.

9 Critical facility: A structure or related infrastructure, but not the land on which it is situated,
10 that if flooded may result in significant hazards to public health and safety or interrupt essential
11 services and operations for the community at any time before, during and after a flood. The
12 classification and definition of critical facilities shall be as specified in Rule 6 of the Department of
13 Natural Resources, Colorado Water Conservation Board's "Rules and Regulations for Regulatory
14 Floodplains in Colorado," dated November 17, 2010, or as amended.

15 Development: Any manmade change to improved or unimproved real estate, including but
16 not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or
17 drilling operations, or storage of equipment or materials.

18 DFIRM database: Database (usually spreadsheets) containing data and analyses that
19 accompany the DFIRM. The FEMA Mapping Specifications and Guidelines outline requirements
20 for the development and maintenance of DFIRM databases.

21 Digital Flood Insurance Rate Map (DFIRM): FEMA digital floodplain map. These maps serve
22 as regulatory floodplain maps for insurance and floodplain management purposes.

23 Dry floodproofing: Method of floodproofing in which the intent is to keep the interior of the
24 structure or property, including all machinery and equipment, watertight using walls that are
25 substantially impermeable to the passage of water with structural components having the capability
26 of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. This includes using flood
27 damage-resistant materials and backwater prevention for storm and sanitary sewers.

28 Elevated Building: A non-basement building which has the top of the lowest elevated floor
29 raised above ground level by foundation walls, shear walls, posts, piers, piles, or columns. In
30 Zones A1-A30, AE, A, A99, AO, AH, B, C, X, and D, it also includes a building elevated by means
31 of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded
32 movement of flood waters.

33 Existing manufactured home park or subdivision: A manufactured home park or subdivision
34 for which the construction of facilities for servicing the lots on which the manufactured homes are
35 to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and
36 either final site grading or the pouring of concrete pads) is completed before the effective date of
37 the floodplain management regulations adopted by a community.

38 Expansion to an existing manufactured home park or subdivision: The preparation of
39 additional sites by the construction of facilities for servicing the lots on which the manufactured

1 homes are to be affixed (including the installation of utilities, the construction of streets, and either
2 final site grading or the pouring of concrete pads).

3 *Encroachment lines:* Limits of obstruction to flood flows. These lines are generally parallel to
4 the stream. The lines are established by assuming that the area landward (outside) of the
5 encroachment lines may be ultimately developed in such a way that it will not be available to
6 convey flood flows. The stream channel and adjoining floodplains between these lines will be
7 maintained as open space and will be adequate to convey the one hundred year flood without
8 adversely increasing flood heights, such increase under any condition not exceeding one (1) foot.

9 *Equal degree of encroachment:* Established by considering the effect of encroachments on
10 the hydraulic efficiency of the floodplain along a significant reach of the stream, on both sides.

11 *Federal Register:* The official daily publication for Rules, proposed Rules, and notices of
12 Federal agencies and organizations, as well as executive orders and other presidential documents.

13 *FEMA:* Federal Emergency Management Agency, the agency responsible for administering
14 the National Flood Insurance Program (NFIP).

15 *Flood or Flooding:* A general and temporary condition of partial or complete inundation of
16 normally dry land areas from:

- 17 1. The overflow of water from channels and reservoir spillways;
- 18 2. The unusual and rapid accumulation or runoff of surface waters from any source; or
- 19 3. Mudslides or mudflows that occur from excess surface water that is combined with
20 mud or other debris that is sufficiently fluid so as to flow over the surface of normally
21 dry land areas (such as earth carried by a current of water and deposited along the
22 path of the current).

23 *Flood damage-resistant materials:* Any building product [material, component or system]
24 capable of withstanding direct and prolonged contact with floodwaters without sustaining significant
25 damage. Flood damage-resistant materials must comply with FEMA Technical Bulletin 2 "Flood
26 Damage-Resistant Materials Requirements," dated August 2008, or as amended.

27 *Flood fringe:* The portion of land in Zone AE of the regulatory floodplain which is located
28 outside of the designated floodway for a specific waterway.

29 *Flood Hazard Zones:* Areas designated by FEMA on the FIRM and/or LOMRs that
30 correspond to differing types and levels of flood risk. These zones include, but are not limited to: A,
31 A1-A30, AE, AH, AO, AR, AR/A1-A30, AR/AE, AR/AH, AR/AO, A99, B, C, D, E, M, V, V1-V30, VE,
32 VO, X (shaded) and X (unshaded). The definitions of each zone are as indicated on the associated
33 FIRM.

34 *Flood insurance/Insurance rate/Rate map/Map (FIRM):* The official map on which the Federal
35 Emergency Management Agency/FEMA has delineated both the areas of special flood
36 hazards/Special Flood Hazard Areas (SFHA) and the risk premium zones applicable to the
37 community.

38 *Flood insurance/Insurance study/Study (FIS):* The official report provided by FEMA which

1 contains the Flood Insurance Rate Map (FIRM), floodway data tables, and flood profiles for studied
2 flooding sources. This information can be used to determine base flood elevations (BFEs) for some
3 areas.~~The official report in which the Federal Emergency Management Agency has provided flood~~
4 ~~profiles, as well as the flood boundary floodway map and the water surface elevation of the one-~~
5 ~~hundred-year flood.~~

6 Floodplain: Any land area susceptible to being inundated as the result of a flood.~~An area in~~
7 ~~and adjacent to a waterway or storm runoff channel, which is subject to a one hundred year flood,~~
8 ~~and which area is so adverse to past, current or future construction or prudent land use as to~~
9 ~~constitute a significant hazard to public health, safety or welfare.~~

10 Floodplain Administrator: The community official designated to administer and enforce the
11 floodplain management regulations and other appropriate sections of Title 44 of the Code of
12 Federal Regulations pertaining to floodplain management.

13 Flood profile: A graph or longitudinal profile showing the relationship of the water surface
14 elevation of a flood event to a location along a stream or river.~~waterway.~~

15 Floodproofing: Any combination of structural and/or non-structural provisions, additions,
16 changes, or adjustments to properties and structures subject to flooding primarily for the reduction
17 or elimination of flood damages to properties, water and sanitary facilities, structures, machinery
18 and equipment, and contents of buildings in a flood hazard area. The two types of floodproofing
19 are “wet floodproofing” and “dry floodproofing.”

20 Flood protection elevation (FPE): The elevation of freeboard plus the base flood elevation
21 (BFE), or in an AO Zone freeboard plus depth of flooding (2' depth if no number specified) above
22 the highest adjacent grade (HAG).~~An elevation one and one-half (1.5) feet above the elevation or~~
23 ~~flood profile of the hundred year flood under existing channel and floodplain conditions.~~

24 Flood storage area: The flood fringe and areas of shallow flooding portion of the regulatory
25 floodplain in which flows are characteristically of shallow depths and low velocities.

26 Floodway: The channel of a river, creek or other watercourse and the adjacent land areas
27 that must be reserved in order to discharge the hundred year base flood without cumulatively
28 increasing the water surface elevation more than one (1) foot.~~a designated height assuming an~~
29 ~~equal degree of encroachment for a significant reach of channel. The designated height for all~~
30 newly studied reaches shall be one-half (0.5) foot. A Letter of Map Revision (LOMR) to an existing
31 floodway designation may continue to use the floodway criteria at the time of the existing floodway
32 designation, at the discretion of the Floodplain Administrator. Existing one (1) foot floodway
33 designations may be used until revised on the regulatory floodplain map.

34 Freeboard: The vertical distance in feet above a predicted water surface elevation intended
35 to provide a margin of safety to compensate for unknown factors that could contribute to flood
36 heights greater than the height calculated for a selected size flood such as debris blockage and
37 increased runoff due to urbanization of the watershed. For purposes of this ordinance, freeboard
38 is measured above the BFE, or above the depth of flooding in AO Zones, defined for the regulatory
39 floodplain.

1 Highest adjacent grade (HAG): The highest natural elevation of the ground surface prior to
2 construction next to the proposed walls of a structure.

3 Historic structure: Any structure that is:

- 4 1. Listed individually in the National Register of Historic Places (a listing maintained by
5 the Department of Interior) or preliminarily determined by the Secretary of the Interior
6 as meeting the requirements for individual listing on the National Register;
- 7 2. Certified or preliminarily determined by the Secretary of the Interior as contributing to
8 the historical significance of a registered historic district or a district preliminarily
9 determined by the Secretary to qualify as a registered historic district;
- 10 3. Individually listed on a state inventory of historic places in states with historic
11 preservation programs which have been approved by the Secretary of Interior; or
- 12 4. Individually listed on a local inventory of historic places in communities with historic
13 preservation programs that have been certified either:
 - 14 a. By an approved state program as determined by the Secretary of the Interior;
15 or
 - 16 b. Directly by the Secretary of the Interior in states without approved programs.

17 Lateral addition: An addition which is horizontal in nature and increases the footprint of the
18 existing structure.

19 Letter of Map Revision (LOMR): FEMA's official revision of an effective Flood Insurance
20 Rate Map (FIRM). LOMRs are generally based on the implementation of physical measures that
21 affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the
22 modification of the existing regulatory floodway, the effective base flood elevations (BFEs), or the
23 Special Flood Hazard Area (SFHA).

24 Letter of Map Revision Based on Fill (LOMR-F): FEMA's modification of the Special Flood
25 Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM) based on the placement of
26 fill outside the existing regulatory floodway.

27 Levee: A man-made structure, usually earthen embankment, designed and constructed in
28 accordance with sound engineering practices to contain, control, or divert the flow of water so as to
29 provide protection from temporary flooding. For a levee structure to be reflected on the FEMA
30 Flood Insurance Rate Map (FIRM) as providing flood protection, the levee structure must meet the
31 requirements set forth in Section 65.10 of the National Flood Insurance Program (NFIP)
32 regulations.

33 Levee system: A flood protection system which consists of a levee, or levees, and
34 associated structures, such as closure and drainage devices, which are constructed and operated
35 in accordance with sound engineering practices.

36 Lowest adjacent grade (LAG): The lowest elevation of the ground surface touching a
37 structure.

1 Lowest floor: The lowest floor of the lowest enclosed area (including basement). An
2 unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or
3 limited storage in an area other than a basement area is not considered a building's lowest floor;
4 provided that such enclosure is not built so as to render the structure in violation of the applicable
5 non-elevation design requirement of Section 60.3 of the National Flood Insurance Program (NFIP)
6 regulations.

7 Machinery and equipment: Utilities and mechanical items that service the building. These
8 items include, but are not limited to: elevators and their associated equipment, transformers,
9 electrical panels, electric meters, junction boxes, receptacles, switches, gas meters, furnaces, hot
10 water heaters, heat pumps, air conditioners, generators, ductwork, communications equipment,
11 and other service facilities.

12 Manager of public works: Hereinafter called the manager, he shall be the officer in full
13 charge and control of the department of public works (refer to section 56-204(a)).

14 Manufactured home: A structure, transportable in one or more sections, which is built on a
15 permanent chassis and is designed for use with or without a permanent foundation when
16 connected to the required utilities. The term "manufactured home" includes "mobile home" but
17 does not include "recreational vehicle" or "modular home".

18 Manufactured home park or subdivision: A parcel (or contiguous parcels) of land divided into
19 two or more manufactured home lots for rent or sale.

20 Mean Sea Level: For purposes of the National Flood Insurance Program (NFIP), the North
21 American Vertical Datum (NAVD) of 1988 or other datum, to which Base Flood Elevations shown
22 on a community's Flood Insurance Rate Map (FIRM) are referenced.

23 Mobile home: A type of manufactured home built prior to 1976 and constructed to the
24 American National Standards Institute (ANSI) A-119.1 Standard.

25 Modular home: A Colorado labeled factory-built residential structure that meets or exceeds
26 the currently adopted building codes in Colorado. Modular housing is custom designed and can be
27 fabricated for both single-family and multi-family use.

28 National Flood Insurance Program (NFIP): FEMA's program of flood insurance coverage
29 and floodplain management administered in conjunction with the Robert T. Stafford Relief and
30 Emergency Assistance Act. The NFIP has applicable Federal regulations promulgated in Title 44 of
31 the Code of Federal Regulations. The U.S. Congress established the NFIP in 1968 with the
32 passage of the National Flood Insurance Act of 1968.

33 New Construction: For the purposes of determining insurance rates, structures for which the
34 "start of construction" commenced on or after the effective date of an initial FIRM or after
35 December 31, 1974, whichever is later, and includes any subsequent improvements to such
36 structures. For floodplain management purposes, "new construction" means structures for which
37 the "start of construction" commenced on or after the effective date of a floodplain management
38 regulation adopted by a community and includes any subsequent improvements to such

1 structures. In Denver, the effective date of the initial FIRM is April 15, 1986 and the effective date
2 of the first adopted floodplain management regulation is March 17, 1986.

3 *New manufactured home park or subdivision:* A manufactured home park or subdivision for
4 which the construction of facilities for servicing the lots on which the manufactured homes are to
5 be affixed (including at a minimum, the installation of utilities, the construction of streets, and either
6 final site grading or the pouring of concrete pads) is completed on or after the effective date of
7 floodplain management regulations adopted by a community. In Denver, the effective date of the
8 first adopted floodplain management regulation is March 17, 1986.

9 *No-Rise Certification:* A record of the results of an engineering analysis conducted to
10 determine whether a project will increase flood heights in a floodway. A No-Rise Certification must
11 be supported by technical data and signed by a licensed Colorado Professional Engineer. The
12 supporting technical data should be based on the standard step-backwater computer model used
13 to develop the floodway shown on the Flood Insurance Rate Map (FIRM).

14 *Obstruction:* Any material or item that may impact the flow or storage of floodwaters. This
15 includes, but is not limited to: fill, structures, bridges, roadways, equipment, walls, and fences.

16 *Occupancy:* The use or possession of a building by humans for purposes including, but not
17 limited to, residential, office, hospital, or commercial.

18 ~~*One-hundred-year flood:* A flood that has the frequency of occurrence of once every one~~
19 ~~hundred (100) years determined from an analysis of floods on a particular watercourse and other~~
20 ~~watercourse and other watercourses in the same general region. It was approximately a one (1)~~
21 ~~percent chance of occurring in any given year. See "base flood."~~

22 *One-percent-annual-chance flood or one-percent-chance flood:* See "base flood."

23 *Phased improvement:* Any improvement to a structure that occurs within one (1) year of
24 permit closeout of any previous construction on that structure. Phased improvements may be
25 intentional or unintentional. Examples of phased improvement include, but are not limited to:
26 incomplete work, multiple permits, consecutive permits, modification of existing permits, and
27 unauthorized work. Changes in ownership do not preclude previous improvements. This applies to
28 the entire structure as a whole, including multi-tenant and multi-unit structures.

29 *Recreational vehicle (RV):* Means a vehicle which is:

- 30 1. Built on a single chassis;
- 31 2. 400 square feet or less when measured at the largest horizontal projection;
- 32 3. Designed to be self-propelled or permanently towable by a light duty truck; and
- 33 4. Designed primarily not for use as a permanent dwelling but as temporary living
34 quarters for recreational, camping, travel, or seasonal use.

35 ~~*Regulatory floodplain:* That portion of the floodplain subject to inundation by the one-~~
36 ~~hundred-year flood~~The area of land subject to inundation by the base flood as delineated by the
37 Special Flood Hazard Area (SFHA), any other floodplain maps that have been adopted by the
38 manager of public works, and areas that have been removed from the SFHA by a FEMA issued

1 Letter of Map Revision Based on Fill (LOMR-F).

2 Regulatory floodway: See "floodway."

3 ~~Shallow flooding area: A designated AO zone on the flood insurance rate map (FIRM). The~~
4 ~~one hundred year flood depths range from one (1) to three (3) feet; a clearly defined channel does~~
5 ~~not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident.~~

6 Special Flood Hazard Area (SFHA): The land within a community subject to inundation by
7 the base flood as shown on the Flood Insurance Rate Map (FIRM).

8 Start of construction: The date the building permit was issued, including substantial
9 improvement, provided the actual start of construction, repair, reconstruction, rehabilitation,
10 addition, placement, or other improvement was within 180 days of the permit date. The actual start
11 means either the first placement of permanent construction of a structure on a site, such as the
12 pouring of slab or footings, the installation of piles, the construction of columns, or any work
13 beyond the stage of excavation; or the placement of a manufactured home on a foundation.
14 Permanent construction does not include land preparation, such as clearing, grading and filling;
15 nor does it include the installation of streets and/or walkways; nor does it include excavation for
16 basement, footings, piers or foundations or the erection of temporary forms; nor does it include the
17 installation on the property of accessory buildings, such as garages or sheds not occupied as
18 dwelling units or not part of the main structure. For a substantial improvement, the actual start of
19 construction means the first alteration of any wall, ceiling, floor, or other structural part of a
20 building, whether or not that alteration affects the external dimensions of the building.

21 ~~Structure: Anything constructed or erected, the use of which requires a more or less~~
22 ~~permanent location on or in the ground. It includes but is not limited to objects such as buildings,~~
23 ~~factories, sheds, and cabins~~A walled and roofed building, including a gas or liquid storage tank,
24 which is principally above ground, as well as a manufactured home.

25 Substantial damage: Damage of any origin sustained by a structure whereby the cost of
26 restoring the structure to its before-damaged condition would equal or exceed 50 percent of the
27 market value of the structure just prior to when the damage occurred.

28 ~~Substantial improvement: Any repair, reconstruction, or improvement of a structure, the cost~~
29 ~~of which equals or exceeds fifty (50) percent of the market value of the structure either, (a) before~~
30 ~~the improvement or repair is started, or (b) if the structure has been damaged, and is being~~
31 ~~restored, before the damage occurred. For the purposes of this definition "substantial~~
32 ~~improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other~~
33 ~~structural part of the building commences, whether or not that alteration affects the external~~
34 ~~dimensions of the structure. The term does not, however, include either (1) any project for~~
35 ~~improvement of a structure to comply with existing state or local health, sanitary, or safety code~~
36 ~~specifications which are solely necessary to assure safe living conditions or (2) any alteration of a~~
37 ~~structure listed on the National Register of Historic Places or a state inventory of historic~~
38 ~~places.~~Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of
39 which equals or exceeds 50 percent of the market value of the structure before "start of
40 construction" of the improvement. The value of the structure shall be determined by the local

1 jurisdiction having land use authority in the area of interest. This includes structures which have
2 incurred "substantial damage", regardless of the actual repair work performed. "Phased
3 improvements" are calculated cumulatively towards the cost of improvement. The term "substantial
4 improvement" does not, however, include either:

5 1. Any project for improvement of a structure to correct existing violations of state or
6 local health, sanitary, or safety code specifications which have been identified by the
7 local code enforcement official and which are the minimum necessary conditions, or

8 2. Any alteration of a "historic structure" provided that the alteration will not preclude the
9 structure's continued designation as a "historic structure."

10 *Use:* The purpose for which land or structures thereon is designed, arranged or intended to
11 be occupied or used, or for which it is occupied, maintained, rented or leased.

12 *Variance:* A grant of relief from the requirements of this article, when specific enforcement
13 would result in unnecessary hardship (hardship that is solely financial is not grounds for a
14 variance). A variance, therefore, which permits construction or development in a manner in an area
15 that would otherwise be prohibited by this article.

16 *Vertical addition:* An addition which is vertical in nature, but does not increase the horizontal
17 footprint of the existing structure.

18 *Violation:* The failure of a structure or other development to be fully compliant with the
19 community's floodplain management regulations. A structure or other development without the
20 elevation certificate, other certifications, or other evidence of compliance required in National Flood
21 Insurance Program (NFIP) regulations Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or
22 (e)(5) is presumed to be in violation until such time as that documentation is provided.

23 *Water Surface Elevation (WSEL):* The height, in relation to the North American Vertical
24 Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and
25 frequencies.

26 *Wet floodproofing:* A method of floodproofing to reduce flood damage that typically involves
27 three elements: allowing floodwaters to enter and exit to minimize structural damage, using flood
28 damage-resistant materials, and elevating machinery and equipment. Wet floodproofing cannot be
29 used in lieu of elevation or dry floodproofing requirements.

30 *Zones:* See "Flood Hazard Zones."

31 **Section 3.** Section 56-202 (General Provisions) of the Denver Revised Municipal Code shall
32 be amended by adding the language underlined, and deleting the language stricken, to read as
33 follows:

34 **Sec. 56-202. General Provisions.**

35 (a) *Disclaimer of liability.* The degree of flood protection required by this article is
36 considered reasonable for regulatory purposes and is based on scientific and engineering
37 considerations. Larger floods can and will occur on rare occasions. Flood heights may be
38 increased by manmade or natural causes. This article does not imply that land outside the ~~areas of~~

1 ~~special flood hazards~~regulatory floodplain or uses permitted within such areas will be free from
2 flooding or flood damages. This article shall not create liability on the part of the city, any officer or
3 employee thereof, the Colorado Water Conservation Board, or the Federal Emergency
4 Management Agency (FEMA), for any flood damages that result from reliance on this article or any
5 administrative decision lawfully made thereunder.

6 (b) *Jurisdiction of this article.* The provisions of this article and implementing regulations
7 adopted by the manager apply to all lands, uses, activities, and structures in all areas of the city
8 located within a regulatory floodplain as defined in section 56-201, "Definitions," of this article.

9 (c) *Interpretation.* In the interpretation and application of this article, all provisions shall
10 be:

- 11 (1) Considered as minimum requirements;
- 12 (2) Liberally construed in favor of the governing body; and,
- 13 (3) Deemed neither to limit nor repeal any other powers granted under ~~state~~State
14 statutes.

15 (d) Regulatory Floodplains.

16 (1) ~~Regulatory floodplains~~Special Flood Hazard Areas (SFHAs). ~~Regulatory~~
17 ~~floodplains shall be those~~These areas of special flood hazard which, among
18 ~~others,~~ are identified by FEMA in a scientific and engineering reports which
19 ~~are done periodically, which in the past have been~~ entitled "Flood Insurance
20 Study for the City and County of Denver," dated November 20, 2013 and which
21 ~~are with accompanied~~accompanying by ~~Flood Insurance Rate Maps~~
22 (FIRM). Any revisions hereto are hereby adopted by reference and declared to
23 be part of this article and flood boundary floodway maps. ~~The regulatory~~
24 ~~floodplain shall be subdivided into the floodway and the floodway storage area~~
25 ~~as defined in section 56-201, definitions, of this article.~~

26 ~~(2a.)~~ Zone A. When ~~one-hundred-year~~base flood elevation data has not been
27 provided in accordance with the foregoing paragraph, and an area of
28 ~~special flood hazard~~ has been designated zZone A on the FIRM, the
29 ~~deputy manager of public works for wastewater management~~Floodplain
30 Administrator shall obtain, review and reasonably utilize any ~~one-~~
31 ~~hundred-year~~base flood elevation data available from federal, state or
32 other source in order to administer the applicable conditions of section
33 56-203, "Regulatory Floodplain use and limitations," of this article.

34 (2) Any other areas that are subject to inundation by the base flood, which are
35 delineated in floodplain maps that have been adopted for regulatory use by
36 the manager in accordance with section 56-202(e).

37 (3) Areas removed from the SFHA by fill. These areas are identified by FEMA by
38 issuance of a Letter of Map Revision Based on Fill (LOMR-F). For purposes of

1 this article this includes all existing and proposed LOMR-F areas, if the LOMR-
2 F area has not previously been superseded by a standard LOMR.

3 (e) *Adoption of regulatory floodplain map.*

- 4 (1) The maps which define the regulatory floodplains established by this article
5 shall be adopted by the ~~manager of public works~~. Such adoption shall be
6 accomplished by:
- 7 a. Filing one (1) copy thereof with the city clerk;
 - 8 b. Filing one (1) copy thereof with the city attorney;
 - 9 c. Concurrently with the filings required under a. and b., above, the
10 ~~manager of public works~~ shall publish a notice stating that the filings
11 have been made and list the dates of such filings. Such notice shall be
12 published once in the official newspaper.
- 13 (2) The adopted maps collectively shall constitute the official regulatory floodplain
14 map.
- 15 (3) The various individual floodplain maps constituting the official regulatory
16 floodplain map shall be marked and maintained pursuant to a system of
17 identification established by the ~~wastewater management division of the~~
18 department of public works.
- 19 (4) The manager and ~~his designee~~ the Floodplain Administrator shall make all
20 maps available to public inspection at all reasonable times.

21 (f) *Amendments to official regulatory floodplain map.*

- 22 (1) Upon the recommendation of the ~~deputy manager of public works for~~
23 ~~wastewater management~~ Floodplain Administrator, amendments of ~~whatsoever~~
24 ~~nature~~ to the official regulatory floodplain map, except as in section 56-
25 202(f)(2) below, shall be referred to the ~~manager of public works~~ for adoption.
26 Amendments shall be adopted as in paragraph (e) above.
- 27 (2) Those individual maps constituting a part of the official regulatory floodplain
28 map which were originated by FEMA, shall only be amended ~~by the manager~~
29 ~~of public works~~ following FEMA review and approval of ~~data submitted by the~~
30 ~~city~~, and subsequent amendment by FEMA thereof.
- 31 (3) All amendments to the official regulatory floodplain map shall be listed in the
32 order in which they were adopted, in a separate register maintained in and
33 kept current by the ~~wastewater management division of the~~ department of
34 public works.

35 (g) *Effect of other ordinances and regulations.* Wherever higher or more restrictive
36 standards are established by the provisions of any other applicable statute, ordinance or regulation
37 than are established by the provisions of this article, the provisions of such other statute, ordinance

1 or regulation shall govern.

2 (h) *Effect of private covenants.* Nothing herein contained shall be construed to render
3 inoperative any restrictions established by covenants running with the land unless such are
4 prohibited by or are contrary to the provisions of this article.

5 (i) *Floodplain disclaimer.* As a part of the sale of any property within the city, a
6 disclaimer shall be provided to the potential buyer by the seller indicating the relationship of the
7 property to any regulatory floodplain.

8 (j) *Grandfathering.* The floodplain requirements in effect at the time of submittal of
9 development plans for City review, or at the time of application for building permit, or Sewer Use
10 and Drainage Permit, shall be applied to such development or building project.

11 **Section 4.** Section 56-203 (Floodplain use and limitations) of the Denver Revised Municipal
12 Code shall be amended by adding the language underlined, and deleting the language stricken, to
13 read as follows:

14 **Sec. 56-203. Regulatory Ffloodplain use and limitations.**

15 (a) *General.* The following provisions shall apply to all uses within all areas of regulatory
16 floodplains as defined and adopted under section 56-202(d) and (e) of this article.

17 (b) *Existing uses.* An existing use in a regulatory floodplain may be changed to any use
18 which is allowed by the ordinances of the city; provided, however, that such change of an
19 existing use shall be limited by and shall be in accordance with the regulations herein
20 established.

21 (c) *Regulatory floodplain.* In all areas of ~~special flood hazards where one hundred year~~
22 ~~flood elevation data has been provided~~ the regulatory floodplain, the following provisions are
23 required:

- 24 (1) No development, use, fill, excavation, construction or alteration within a
25 regulatory floodplain shall be permitted, which acting alone or in combination
26 with existing or future uses, would cause or result in any of the following:
- 27 a. The storage or processing of materials that are buoyant, flammable,
28 explosive or otherwise potentially injurious to human, animal or plant life
29 in time of flooding;
 - 30 b. The disposal of garbage, sludge, waste materials or other potentially
31 injurious substances ~~in the floodplain~~;
 - 32 c. An obstruction or depositing of any material which would impair the flow
33 capacity of a regulatory floodplain or increase floodwater depths or
34 velocities so as to cause probable damage to others wherever located;
 - 35 d. A substantial increase in sedimentation and/or erosion.
- 36 (2) All new construction, lateral additions, and substantial improvements ~~and/or~~
37 ~~remodeling of existing construction~~ shall be approved by the ~~wastewater~~

1 ~~management division manager~~ for location and shall ~~comply with the~~
2 ~~requirements of Section 1723 of the Denver Building Code be:~~

- 3 a. Designed (or modified) and adequately anchored to prevent flotation,
4 collapse, or lateral movement of the structure resulting from
5 hydrodynamic and hydrostatic loads, including the effects of buoyancy;
6 and
- 7 b. Designed and constructed with flood damage-resistant materials below
8 the FPE; and
- 9 c. Designed and constructed by methods and practices that minimize
10 flood damages; and
- 11 d. Designed and constructed with gas, electrical, heating, ventilation,
12 plumbing, air conditioning, and communications equipment and other
13 service facilities that are designed and/or located so as to prevent water
14 from entering or accumulating within the components, or otherwise
15 damaged, during conditions of flooding.

16 (3) On-site waste disposal systems shall be located to avoid impairment to them
17 or contamination from them during flooding.

18 (4) No ~~mobile~~ new manufactured home, new manufactured home park, or
19 expansion to an existing manufactured home park shall be located in the
20 regulatory floodplain.

21 (5) All new and replacement water supply systems shall be designed to minimize
22 or eliminate infiltration of floodwaters into the system.

23 (6) All new and replacement sanitary sewage systems shall be designed to
24 minimize or eliminate infiltration of floodwaters into the system and discharge
25 from the system into flood waters.

26 (7) For all proposed uses or developments that alter a watercourse within a
27 regulatory floodplain, the following standards apply:

28 a. Channelization and flow diversion projects shall appropriately consider
29 issues of sediment transport, erosion, deposition, and channel
30 migration and properly mitigate potential problems through the project
31 as well as upstream and downstream of any improvement activity. A
32 detailed analysis of sediment transport and overall channel stability
33 should be considered, when appropriate, to assist in determining the
34 most appropriate design.

35 b. Channelization and flow diversion projects shall evaluate the residual
36 floodplains.

37 c. Any channelization or other stream alteration activity proposed by a
38 project proponent must be evaluated for its impact on the regulatory

1 floodplain and be in compliance with all applicable Federal, State and
2 local floodplain rules, regulations and ordinances.

3 d. Any stream alteration activity shall be designed and sealed by a
4 licensed Colorado Professional Engineer or Certified Professional
5 Hydrologist.

6 e. All activities within the regulatory floodplain shall meet all applicable
7 Federal and State requirements and regulations, as well as the
8 provisions of this article and implementing regulations adopted by the
9 manager.

10 f. Within the floodway, stream alteration activities shall not be constructed
11 unless the project proponent demonstrates through a floodway analysis
12 and report, sealed by a licensed Colorado Professional Engineer, that
13 there is not more than a 0.00-foot rise in the proposed conditions
14 compared to existing conditions floodway resulting from the project,
15 otherwise known as a No-Rise Certification, unless a CLOMR for the
16 floodway revision has been approved by FEMA.

17 g. Maintenance shall be required for any altered or relocated portions of
18 watercourses so that the flood-carrying capacity is not diminished.

19 (8) For waterways with base flood elevations for which a regulatory floodway has
20 not been designated, no proposed use or development shall be permitted
21 within Zone AE, unless it is demonstrated that the cumulative effect of the
22 proposed development, when combined with all other existing and anticipated
23 development, will not increase the water surface elevation of the base flood
24 more than one-half (0.5) foot at any point within the community; unless a
25 FEMA approved CLOMR has been issued for that use or development.

26 (59) Permitted uses: The following uses shall be permitted within the regulatory
27 floodplain to the extent that they will comply with all requirements of ~~the zoning~~
28 ~~ordinancethis article and the Denver Zoning Code:~~

29 a. Agricultural uses such as general farming, pasture, grazing, outdoor
30 plant nurseries, horticulture, truck farming, forestry, sod farming and
31 wild crop harvesting;

32 b. Uses such as loading areas, parking areas, airport landing strips and
33 storage yards for equipment or machinery easily removed from the site
34 or not subject to flood damage;

35 c. Private and public recreational uses such as parks, golf courses, driving
36 ranges, archery ranges, picnic grounds, boat launching ramps, and
37 hiking, biking and horseback riding trails;

38 d. Utility facilities that are not considered to be critical facilities including,

1 but not limited to, wastewater facilities, water, gas and electric
2 distribution facilities, roadways and bridges;

3 e. Fill, excavation or deposit of materials:

- 4 1. Any such fill, excavation or deposit of materials shall be
5 permitted only upon a finding that the fill, excavation or deposit of
6 materials will have some beneficial purpose and the amount
7 thereof will not be greater than is necessary to achieve that
8 purpose, as demonstrated by a plan submitted by the owner
9 showing the final dimensions of the proposed fill, excavation or
10 material and the use to which the altered land will be put;
- 11 2. The fill or material does not encroach on the floodway;
- 12 3. Any fill or deposit that reduces the hydraulic capacity shall
13 require appropriate hydraulic studies and a review of the urban
14 impact on such reduction;
- 15 4. The fill or material will be protected against erosion by rip-rap,
16 strong vegetative cover or bulkheading.

17 (d) *The floodway.* The floodway is an extremely hazardous area due to the velocity of
18 floodwaters which carry debris, potential projectiles, and erosion potential. In addition to section
19 56-203(c), the following provisions shall also apply to all uses within the floodway:

- 20 (1) No encroachments, including fill, obstructions, new construction, lateral
21 additions, substantial improvements, or other development shall be permitted
22 within the floodway unless it has been demonstrated through hydrologic and
23 hydraulic analyses performed by a licensed Colorado Professional Engineer
24 and in accordance with standard engineering practice that the proposed
25 encroachment would not result in any increase (requiring a No-Rise
26 Certification) in flood levels during the occurrence of the one-hundred-
27 yearbase flood.
- 28 (2) No building designed for human occupancy shall be placed in the floodway.
- 29 (3) Encroachments may be permitted in the floodway that result in an increase in
30 base flood elevations, provided that a CLOMR for the floodway revision is
31 approved by FEMA.

32 (e) *Flood storage area.* In addition to the provisions of section 56-203(c), the following
33 requirements shall also apply to all uses in the flood storage area:

- 34 (1) Residential construction. ~~New construction, lateral addition, and substantial~~
35 ~~improvement and/or remodeling~~ of any residential structure shall meet the
36 following requirements:
 - 37 a. Have the lowest floor, (including basement) and all associated
38 machinery and equipment, elevated with a minimum of one and one-

1 half (1.5) feet of freeboard~~above the one hundred year flood elevation.~~

2 ~~New construction, substantial improvement and/or remodeling of any~~
3 ~~residential structure within an area designated as an AO zone on the~~
4 ~~FIRM shall have the lowest floor, including basement, elevated above~~
5 ~~the highest adjacent grade at least as high as the depth number~~
6 ~~specified in feet on the community's FIRM (at least two (2) feet if no~~
7 ~~depth number is specified).~~

8 b. Within Zones AH and AO, have adequate drainage paths around
9 structures on slopes, to guide floodwaters around and away from
10 proposed structures.

11 c. Upon completion of construction, and prior to Certificate of Occupancy,
12 a "finished construction" version of the FEMA Elevation Certificate must
13 be submitted to, and approved by, the Floodplain Administrator.

14 (2) *Nonresidential construction.* ~~New construction, lateral addition, and~~
15 ~~substantial improvement and/or remodeling of any commercial, industrial or~~
16 ~~other nonresidential structure, with the exception of critical facilities, shall meet~~
17 ~~the following requirements:~~

18 a. ~~shall e~~Either have the lowest floor, (including basement) and all
19 associated machinery and equipment,;

20 1. ~~e~~Elevated with a minimum of one and one-half (1.5) feet above
21 the level of the one hundred year flood elevationof freeboard; or,

22 2. ~~t~~Together with attendant utility and sanitary facilities, shall
23 comply with Section 1723 of the Denver Building Codebe dry
24 floodproofed with a minimum of one and one-half (1.5) feet of
25 freeboard.

26 ~~New construction, substantial improvement and/or remodeling of any~~
27 ~~commercial, industrial or other nonresidential structure within an area~~
28 ~~designated as an AO zone on the FIRM shall either have the lowest floor,~~
29 ~~including basement, elevated above the highest adjacent grade at least as~~
30 ~~high as the depth number specified in feet on the community's FIRM (at least~~
31 ~~two (2) feet if no depth number is specified); or, together with attendant utility~~
32 ~~and sanitary facilities, shall comply with Section 1723 of the Denver Building~~
33 ~~Code.~~

34 b. Within Zones AH and AO, have adequate drainage paths around
35 structures on slopes, to guide floodwaters around and away from
36 proposed structures.

37 c. Upon completion of construction, and prior to Certificate of Occupancy,
38 a "finished construction" version of the FEMA Elevation Certificate must

1 be submitted to, and approved by, the Floodplain Administrator. If dry
2 floodproofed, a “construction drawings” version of the FEMA
3 Floodproofing Certificate must be submitted to, and approved by, the
4 Floodplain Administrator prior to permit issuance and a “finished
5 construction” version of the FEMA Floodproofing Certificate must be
6 submitted to, and approved by, the Floodplain Administrator prior to
7 validation of Certificate of Occupancy.

8 (3) *Crawlspaces.* New construction, lateral addition, and substantial improvement
9 involving any crawlspace shall meet the following requirements:

10 a. The crawlspace, and all machinery and equipment, must either:

11 1. Have the interior grade elevated with a minimum of one and one-
12 half (1.5) feet of freeboard; or

13 2. Be wet floodproofed with a minimum of one and one-half (1.5)
14 feet of freeboard.

15 b. Wet floodproofing shall only be permitted for crawlspaces meeting the
16 following requirements:

17 1. They shall be used solely for parking of vehicles, building
18 access, or limited storage and not used for human habitation;
19 and

20 2. All associated machinery and equipment shall be elevated or dry
21 floodproofed to a minimum of the FPE; and

22 3. The interior grade elevation that is below the FPE shall not be
23 lower than two (2) feet below the lowest adjacent grade; and

24 4. The height of the crawlspace, measured from the bottom of the
25 floor joist to the top of footing, shall not exceed four (4) feet at
26 any point; and

27 5. An adequate drainage system that allows floodwaters to drain
28 from the interior area of the crawlspace following a flood shall be
29 provided; and

30 6. The enclosed area shall be designed to automatically equalize
31 hydrostatic flood forces on exterior walls by allowing for the entry
32 and exit of floodwaters as required under NFIP regulations Sec.
33 60.3(c)(5).

34 (4) *Accessory structures.* New construction, lateral addition, and substantial
35 improvement of any accessory structure shall meet the following requirements:

36 a. Have the lowest floor (including basement) and all associated
37 machinery and equipment be either:

- 1 1. Elevated with a minimum of one and one-half (1.5) feet of
2 freeboard; or
- 3 2. Wet floodproofed with a minimum of one and one-half (1.5) feet
4 of freeboard.
- 5 b. Within Zones AH and AO, have adequate drainage paths around
6 structures on slopes, to guide floodwaters around and away from
7 proposed structures.
- 8 c. Upon completion of construction, and prior to Certificate of Occupancy,
9 a FEMA Elevation Certificate must be submitted to, and approved by,
10 the Floodplain Administrator.
- 11 d. Wet floodproofing shall only be permitted for accessory structures
12 meeting the following requirements:
 - 13 1. They shall be used solely for parking of vehicles, building access,
14 or limited storage and not used for human habitation; and
 - 15 2. They shall be designed to have low flood damage potential, and
16 be no more than 600 square feet; and
 - 17 3. They shall be constructed and placed on the building site so as to
18 offer the minimum resistance to the flow of floodwaters; and
 - 19 4. They shall be firmly anchored to prevent floatation, collapse and
20 lateral movement; and
 - 21 5. All associated machinery and equipment shall be elevated or dry
22 floodproofed to a minimum of the FPE; and
 - 23 6. The enclosed area shall be designed to automatically equalize
24 hydrostatic flood forces on exterior walls by allowing for the entry
25 and exit of floodwaters as required under NFIP regulations Sec.
26 60.3(c)(5); and
 - 27 7. They shall not be placed in the floodway unless it meets the
28 provisions of section 56-203(d).

29 (5) Critical facilities. New construction, lateral addition, and substantial
30 improvement of critical facilities shall be regulated as in section 56-203(e)(2),
31 except critical facilities shall be protected to a higher standard than structures
32 not determined to be critical facilities. For the purposes of this article,
33 protection shall include:

- 34 a. Location outside of the regulatory floodplain; or
- 35 b. Elevation of the lowest floor (including basement), and all machinery
36 and equipment, with a minimum of two (2) feet of freeboard; or
- 37 c. Dry floodproofing (including attendant utility and sanitary facilities) with

1 a minimum of two (2) feet of freeboard.

2 d. New critical facilities shall, when practicable, have continuous non-
3 inundated access (ingress and egress for evacuation and emergency
4 services) during the base flood.

5 (6) Recreational Vehicles (RV): All RVs placed on sites within Zones A1-30, AH,
6 and AE on the regulatory floodplain map shall either:

7 a. Be on the site for fewer than 180 consecutive days; or

8 b. Be fully licensed and ready for highway use. A RV is ready for highway
9 use if it is on wheels or a jacking system, attached to the site only by
10 quick disconnect type utilities and security devices, and has no
11 permanently attached additions.

12 (f) Areas removed from SFHA by LOMR-F: For purposes of this article, areas that have
13 been removed from the SFHA by a FEMA issued LOMR-F are hereby subject to the same
14 provisions as section 56-203(e)(1), (2), (3), (4) and (5). These areas will not be subject to
15 floodplain regulation if the LOMR-F area has since been superseded by a standard LOMR.

16
17 **Section 5.** Section 56-204 (Administration) of the Denver Revised Municipal Code shall be
18 amended by adding the language underlined, and deleting the language stricken, to read as
19 follows:

20 **Sec. 56-204. Administration.**

21 (a) *Administration of article by manager of public works.* The administration of the
22 provisions of this article is hereby vested in and shall be exercised by the manager ~~of the~~
23 ~~department of public works~~ who may, in accordance with article VI of chapter 2 of the Revised
24 Municipal Code, prescribe forms and rules and regulations in conformity with this article for the
25 proper administration and enforcement hereof. The manager ~~of public works~~ may delegate the
26 administration of this article or any part thereof, subject to the limitations of the Charter and this
27 Code, to duly qualified deputies and agents of the manager of public works. For the purposes of
28 this article, the manager ~~of public works~~ shall delegate the administration thereof to the ~~deputy~~
29 ~~manager of public works for wastewater management~~ designated Floodplain Administrator
30 except section 56-202(e)(1), "Adoption of regulatory floodplain map," section 56-204(e),
31 "Variances," and section 56-204(e)f, "Administrative review."

32 (b) Responsibilities of the Floodplain Administrator.

33 (1) Maintain and hold open for public inspection all records pertaining to the
34 provisions of this article.

35 (2) Review, approve, or deny, all FEMA Elevation Certificates and Floodproofing
36 Certificates required as a condition of the Sewer Use and Drainage Permit.

37 (3) Review, approve, or deny all applications related to construction or

1 development in the regulatory floodplain.

2 (4) Review applications to determine whether a proposed building site, including
3 the placement of manufactured homes, will be reasonably safe from flooding.

4 (5) Review permits for proposed development to assure that all necessary water
5 and/or floodplain permits have been obtained from those Federal, State or
6 local governmental agencies (including Section 404 of the Federal Water
7 Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior
8 approval is required.

9 (6) Inspect all development at appropriate times during the period of construction
10 to ensure compliance with all provisions of this article, including proper
11 elevation of the structure.

12 (7) Where interpretation is needed as to the exact location of the boundaries of
13 the regulatory floodplain (for example, where there appears to be a conflict
14 between a mapped boundary and actual field conditions) the Floodplain
15 Administrator shall make the necessary interpretation.

16 (8) When base flood elevation data has not been provided in accordance with
17 section 56-202(d), the Floodplain Administrator shall obtain, review and
18 reasonably utilize any base flood elevation data and floodway data available
19 from a Federal, State, or other source, in order to administer the provisions of
20 this article.

21 (9) Notify, in riverine situations, adjacent communities and the Colorado Water
22 Conservation Board, prior to any alteration or relocation of a watercourse, and
23 submit evidence of such notification to FEMA.

24 (10) Ensure that the flood carrying capacity within the altered or relocated portion
25 of any watercourse is maintained.

26 (b)c) Responsibilities of land developers.

27 (1) Each developer of land within the city has a duty to provide on his/her property
28 all reasonably necessary drainage and detention facilities to ensure the
29 adequate drainage and control of stormwaters which fall on his/her properties
30 or which contribute runoff to his/her property.

31 (2) All subdivision or other development proposals shall:

32 a. Be reasonably safe from flooding and minimize flood damage; and

33 b. Meet all other requirements of this article; and

34 c. Generate BFE data for subdivisions greater than 50 lots or 5 acres,
35 whichever is lesser, if not otherwise provided; and

36 d. Have adequate drainage provided to reduce exposure to flood hazards;
37 and

1 e. Have public utilities and facilities such as sewer, gas, electrical,
2 communications, and water systems located and constructed to
3 minimize or eliminate flood damage.

4 (23) A storm drainage plan shall be submitted and approved prior to issuing a
5 wastewater permit for new construction, lateral addition, or substantial
6 improvement ~~and/or remodeling~~ of a building located in a regulatory floodplain.
7 Such plan shall be reviewed with regard for generally accepted engineering
8 principles and standards as follows:

9 a. The storm drainage plan shall provide the base flood elevations for
10 those areas where no base flood elevation had previously been
11 provided, and shall define the alignment and boundary of any natural
12 drainage course, drainage facility or subdrainage area on the land in
13 question, and it shall include drawings, profiles, specifications for the
14 construction of channels, conduits, detention ponds, culverts, bridges
15 and all other drainage facilities reasonably necessary to ensure that
16 flood and stormwaters, including drainage from other lands which will
17 contribute runoff to the subject property, will be adequately drained,
18 stored, or otherwise controlled; plans drawn to scale showing the
19 nature, location, dimensions, and elevations of the area in question;
20 size and location of existing and/or proposed structures, fill, storage of
21 materials, drainage facilities; regulatory floodplain area and the location
22 of the foregoing. Specifically, the following information is required:

23 1. Elevation in relation to mean sea level of the lowest floor
24 (including basement) of all structures;

25 2. Elevation in relation to mean sea level to which any
26 nonresidential structure shall be floodproofed;

27 3. A certification from a licensed Colorado Professional Engineer or
28 Architect that the nonresidential floodproofed structure meets the
29 floodproofing criteria of section 56-203(e)(2).

30 24. Description of the extent to which any watercourse will be altered
31 or relocated as a result of proposed development.

32 b. Included in the plan shall be a schedule containing the estimated dates
33 of completion of construction for all storm drainage facilities shown on
34 the ~~plat~~ plan. If and when the plan is approved and the wastewater
35 permit issued, the owner and applicant shall comply with said schedule.

36 (34) Any improvements to an existing drainageway which will result in a change of
37 the regulatory floodplain will be constructed consistent with applicable city
38 criteria and standards. Development within the regulatory floodplain will not be
39 permitted until the approved drainage improvements have been constructed

1 and the amended floodplain maps have been approved by ~~FEMA~~ and adopted
2 by the city manager and/or FEMA.

3 (5) Proposed revisions or amendments to the SFHA shall be requested of FEMA
4 by the applicant by submitting all required supporting information to FEMA
5 following approval by the Floodplain Administrator.

6 (6) Proposed changes or improvement to a watercourse which will result in a
7 request for a physical revision to the SFHA must be preceded by a receipt
8 from FEMA of a CLOMR. Request for this letter shall be made as in Section
9 56-204(c)(5) above. Construction of the proposed improvements may not
10 commence until such letter is received. After construction of the drainageway
11 improvements, "as constructed" information and any additional supporting
12 data shall be submitted to FEMA following approval by the Floodplain
13 Administrator for a LOMR to accomplish revision of the SFHA. Permits for non
14 permitted uses will not be issued until physical map revisions become
15 effective.

16 (7) Any alteration or relocation of a watercourse or drainageway will require that a
17 notification report be made to adjoining communities, the Colorado Water
18 Conservation Board and FEMA that the conveyance capacity of the
19 watercourse or drainageway shall be maintained within the altered portion of
20 the drainageway. This report shall be the owner's responsibility and shall be
21 made prior to construction, but subsequent to approval by FEMA and
22 coordinated through the Floodplain Administrator.

23 (8) For waterways with base flood elevations for which a regulatory floodway has
24 not been designated, the land developer shall demonstrate that the cumulative
25 effect of the proposed development, when combined with all other existing and
26 anticipated development, will not increase the water surface elevation of the
27 base flood more than one-half (0.5) foot at any point within the community.

28 a. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the NFIP
29 regulations, a community may approve certain development in Zones
30 A1-30, AE, AH, on the community's FIRM which increases the water
31 surface elevation of the base flood by more than one-half (0.5) foot,
32 provided that the developer first applies for a FEMA CLOMR, fulfills the
33 requirements for such revisions as established under the provisions of
34 Section 65.12 of the NFIP regulations, and receives FEMA approval.

35 (9) Obtain a CLOMR whenever an activity in the floodway is known or suspected
36 to cause more than a 0.00-foot rise in the proposed conditions compared to
37 existing conditions BFEs. An exception may be made, at the discretion of the
38 Floodplain Administrator, when the activity is strictly drainageway maintenance
39 in which the intent is to restore the natural conditions or hydraulic capacity of
40 the drainageway provided that the activity does not cause more than a 0.00-

1 foot rise in the proposed conditions compared to effective conditions BFEs and
2 that any BFE rise compared to existing conditions is contained entirely within
3 public property which would not otherwise require adverse impact notification.

4 (10) Obtain a LOMR:

- 5 a. Upon completion of an activity approved in a CLOMR; or,
6 b. Whenever an activity in the floodway is known or suspected to increase
7 or decrease the BFE in excess of 0.3 vertical feet.

8
9 (ed) *Boundary mapping disputes.* The boundaries of the regulatory floodplain shall be as
10 they appear on the official regulatory floodplain maps ~~filed with the clerk and recorder~~. Where there
11 appears to be a conflict between the boundary lines illustrated on the map and actual field
12 conditions, the person contesting the location of the boundary shall be given an opportunity to
13 submit his own technical evidence.

14 No deviation from the boundary line as mapped shall be allowed unless the evidence clearly
15 and conclusively establishes that the mapped location of the line is incorrect. However, if the
16 evidence submitted, after review, clearly shows that the recorded boundary does not reflect the
17 true condition, an exception will ~~may~~ be granted. If the location of the boundary line should still be
18 in dispute, that person may appeal as provided in section 56-204(ef).

19 (de) *Variances.*

- 20 (1) ~~The deputy manager of public works for wastewater management (deputy)~~
21 manager or his designee may authorize, upon application in specific cases,
22 such variances from the terms of this article, subject to terms and conditions
23 fixed by the ~~deputy manager or his designee~~, as will not be contrary to the
24 purposes of this article where, owing to exceptional and extraordinary
25 circumstances, literal enforcement of the provisions of this article will result in
26 unnecessary hardship. No variance shall be authorized hereunder unless the
27 ~~deputy manager or his designee~~ shall find:
- 28 a. The variance will not result in an increase in the flood levels in a
29 designated floodway during a ~~one hundred year~~ base flood discharge;
- 30 b. The variance is the minimum necessary to afford relief considering the
31 flood hazard;
- 32 c. The variance will not result in an increased risk to public safety, a
33 substantial increase in public expense or a nuisance;
- 34 d. The lowest floor, including the basement, of any residential structure will
35 be elevated to a minimum of ~~one and one half (1.5) feet above the level~~
36 ~~of the one hundred year flood~~ the FPE;
- 37 e. The proposed change or development will not unreasonably endanger

1 the life, health, safety, welfare or property of any person in time of
2 floods, or result in the damming of floodwaters or the contribution of
3 potentially damaging debris to floodwaters;

4 f. The use requested is a permitted use under the zoning ordinance;

5 g. The applicant is the owner of the subject property;

6 ~~h. The new construction, substantial improvement, and/or remodeling of~~
7 ~~any structure on a lot of one half acre or less in size, is contiguous to~~
8 ~~and surrounded by lots with existing structures constructed below the~~
9 ~~base flood level. As the lot size increases beyond the one half acre,~~
10 ~~increased technical justification is required for issuing the variance.~~

11 (2) The following matters shall be considered by the deputy manager or his
12 designee in determining all applications for variances:

13 a. The danger that materials may be swept onto other lands to the injury
14 of others;

15 b. The danger to life and property due to flooding or erosion damage;

16 c. The susceptibility of the proposed facility and its contents to flood
17 damage and the effect of such damage on the individual owner;

18 d. The importance of the services provided by the proposed facility to the
19 community;

20 e. The necessity to the facility of a waterfront location where applicable;

21 f. The availability of alternative locations, for the proposed use which are
22 not subject to flooding or erosion damage;

23 g. The compatibility of the proposed use with the existing and anticipated
24 development;

25 h. The relationship of the proposed use to the comprehensive plan and
26 floodplain management program for that area;

27 i. The safety of access to the property in times of flood for ordinary and
28 emergency vehicles;

29 j. The expected height, velocity, duration, rate of rise, and sediment
30 transport of the floodwaters and the effects of wave action, if applicable,
31 expected at the site;

32 k. The costs of providing governmental services during and after flood
33 conditions including maintenance and repair of public utilities and
34 facilities such as sewer, gas, electrical, communications, and water
35 systems, and streets and bridges.

36 (3) Each and every application for a variance shall contain adequate technical

1 information certified by a professional engineer ~~registered~~licensed in the
2 ~~State~~ which shall include, unless waived in writing by the ~~deputy manager or~~
3 ~~his designee~~, the following:

- 4 a. A certified topographic survey by a licensed land surveyor of the
5 applicant's property and surrounding areas that may be affected by any
6 proposed change; said survey data shall include plan, profile and cross-
7 sections showing accurate elevations of all points, based upon North
8 American Vertical Datum (NAVD) of 1988 (or other datum, where
9 specified)~~United States Geological Survey datum~~, within the limits of
10 flooding under both existing and proposed conditions;
- 11 b. Drawings and descriptions of any proposed change to ground surface,
12 topography or natural features or any proposed construction or
13 modification of any structure or facility within a regulatory floodplain;
- 14 c. Drawings and descriptions defining the probable behavior of
15 floodwaters across and in the vicinity of the applicant's property and for
16 a reasonable distance upstream and downstream, under both existing
17 and proposed conditions; together with all supporting hydrologic data
18 and hydraulic analysis, computations, backwater curves, flow quantities
19 and approximate velocities;
- 20 d. Any other information either the applicant, Floodplain Administrator, or
21 ~~the deputy manager of public works for waste water management~~the
22 manager or his designee may deem necessary ~~to~~for a thorough and
23 informed evaluation of the proposed activity;

24 (4) Any applicant to whom a variance is granted shall be given written notice that
25 the structure will be permitted to be built, added on to, or substantially
26 improved ~~or remodeled~~ with a lowest floor elevation below the ~~one hundred-~~
27 ~~year flood elevation~~FPE and that the cost of flood insurance will be
28 commensurate with the increased risk resulting from the reduced lowest story
29 elevation.

30 (5) The ~~deputy~~Floodplain Administrator shall maintain the records of all appeal
31 actions and report through a notice the issuance of any variance to FEMA
32 upon request which shall include the following:-

- 33 a. The owner's name, address, phone number and the address of the
34 project
- 35 b. An explanation of the variance including justification for granting a
36 variance, base flood elevations, lowest floor elevations, and any other
37 relevant information.
- 38 c. Any appropriate hydraulic studies

1 (ef) *Administrative review.*

2 (1) Any person who disputes any determination made by or on behalf of the city
3 pursuant to and by authority of the manager, which determination adversely
4 affects such person, may petition the manager for a hearing concerning such
5 determination no later than thirty (30) days after having been notified of any
6 such determination by the procedure described in D.R.M.C. section 56-106.

7 (2) ~~Such petition shall be in writing and the facts and figures submitted shall be~~
8 ~~submitted under oath or affirmation either in writing or orally at a hearing~~
9 ~~scheduled by the manager of public works or his designee. The hearing, if~~
10 ~~any, shall take place in the city, and notice thereof and the proceedings shall~~
11 ~~otherwise be in accordance with rules and regulations issued by the manager~~
12 ~~of public works. The petitioner shall bear the risk of nonpersuasion.~~

13 (3) ~~The deputy management of public works for waste water management shall~~
14 ~~submit a report to the manager or his designee relative to the effect on the~~
15 ~~probable behavior of floodwater flows as a result of implementing the~~
16 ~~applicant's proposal. Such report shall contain recommendations as to~~
17 ~~whether the action should be approved, denied or approved subject to~~
18 ~~conditions and shall cite reasons therefor.~~

19 (4) ~~The manager may hold such hearing himself or, in his sole discretion, may~~
20 ~~designate an officer or employee of the department of public works as a~~
21 ~~hearing officer with authority to hold such hearings and to make~~
22 ~~recommendations to the manager.~~

23 (5) ~~Thereupon, the manager shall make a final determination. Such determination~~
24 ~~shall be considered a final order of the manager and may be reviewed under~~
25 ~~rule 106(a)(4) of the Colorado Rules of Civil Procedure.~~

26 (6) ~~Every decision or determination of the manager shall be in writing and notice~~
27 ~~thereof shall be mailed to or served upon the petitioner within a reasonable~~
28 ~~time from the date of the manager's action, and all such determinations,~~
29 ~~orders and decisions shall become final upon the expiration of thirty (30) days.~~

30 (7) ~~Subject to the limitations enumerated herein, the manager may reverse or~~
31 ~~affirm, wholly or partly, or may modify the order, requirement, decision or~~
32 ~~determination appealed from and may make such order, requirement, decision~~
33 ~~or determination as ought to be made and, to the end, shall have all of the~~
34 ~~powers of the office or department from whom the appeal is taken.~~

35 ~~The manager or hearing officer shall hear appeals, and the manager shall~~
36 ~~decide all appeals where it is alleged there is error in any order, requirement,~~
37 ~~decision or determination made by an administrative official in the enforcement~~
38 ~~of this article.~~

39 (fg) *Compliance.* No structure in a regulatory floodplain shall hereafter be located,

1 constructed, enlarged, converted, altered and/or the profile of the land changed without full
2 compliance with the terms of this article and other applicable regulations. Nothing herein shall
3 prevent the City and County of Denver from taking such lawful action as is necessary to prevent or
4 remedy any violation. These regulations meet the minimum requirements as set forth by the
5 Colorado Water Conservation Board and the NFIP.

6 **Section 6.** Section 56-205 (Enforcement; violations; penalties) of the Denver Revised
7 Municipal Code shall be amended by adding the language underlined, and deleting the language
8 stricken, to read as follows:

9 **Sec. 56-205. Enforcement; violations; penalties.**

10 (a) The violation of the provisions of this article or of the rules and regulations of the
11 ~~manager of public works~~ issued pursuant to this article by any person shall be unlawful.

12 (b) Any person who fails to obey a lawful order to correct any condition which is in
13 violation of this article shall be subject to a civil penalty of not more than nine hundred ninety-nine
14 dollars (\$999.00) per day for each day said person remains in violation.

15 (c) Penalties shall be determined by the manager after a hearing as to propriety and
16 amount thereof. The manager shall consider the history of violations, whether the owner was
17 negligent, the effect of the owner's ability to continue in business, the gravity of the violation and
18 demonstrated good faith of the owner in attempting to achieve rapid compliance after notification of
19 a violation.

20 (d) If not paid, penalties may be collected by the manager by action initiated in the
21 district court for collection of such penalty.

22 (e) If the owner of land, use of land or structure which is in violation of this article fails to
23 begin activity which will bring the land, the use of land, or the structure into compliance with this
24 article, after notice of said violation or violations and within the time specified in said notice, the
25 department may proceed to correct said violations. If a violation of this article is determined to be
26 an immediate hazard to life, health, property or public welfare, the manager may order and/or
27 cause the immediate correction of the condition. The city's costs in correcting any condition which
28 violated this article shall be recovered as follows:

29 (1) In the event the owner or owners fail to pay the costs and expenses for
30 correction of the condition, the department shall serve notice upon the person
31 or persons having a recorded interest therein, of the amount of such costs and
32 expenses, and that it will, at a time and place specified in the notice, hold a
33 hearing when and where such persons shall be required to show cause why
34 the amount should not be paid or a lien should not be placed against the
35 property.

36 (2) In the event said persons fail to show cause as provided herein, the amount
37 shall constitute a lien against the real property upon which the condition
38 existed. The department shall thereafter pay the cost and expense of the
39 correction of the condition violating this article, from any appropriation made

1 available for that purpose, and shall certify a statement thereof to the manager
2 of finance who shall record a notice of such lien with the clerk and recorder.
3 The manager of finance shall assess and charge the same against the
4 property involved, and collect the same due, plus interest thereon, in the
5 manner as are delinquent real property taxes. If the lien remains unsatisfied,
6 the manager of finance shall sell the property involved in the manner
7 prescribed for sales of property for delinquent property taxes. The lien created
8 hereby shall be superior and prior to all other liens, regardless of their dates of
9 recordation, except liens for general taxes and special assessments. In
10 addition to the remedies set forth herein, an action or other process provided
11 by law may be maintained by the city to recover or collect any amounts,
12 including interest, owing under this provision.

13 (3) The lien created thereby shall be superior and prior to other liens, regardless
14 of date, except liens for general and specific taxes.

15 (f) The city may also petition the district court for the issuance of a preliminary or
16 permanent injunction, or both, as may be appropriate, restraining any person from the continued
17 violation of this article.

18 **Section 7** Article V (Floodplain Management) of Chapter 56 (Utilities) of the Denver Revised
19 Municipal Code shall be and is hereby amended by enacting and adding Section 56-206
20 (Documents) to read and be read as follows:

21 **Sec. 56-206. Documents.**

22 (a) The following documents shall be maintained by the manager or his designee in
23 perpetuity:

24 (1) All Sewer Use and Drainage permits issued for floodplain which shall, at a
25 minimum, list the lowest floor elevation of the structure and the base flood
26 elevation at its location.

27 (2) All FEMA Elevation Certificates or Floodproofing Certificates required as a
28 condition of the Sewer Use and Drainage Permit.

29 (3) All regulatory floodplain maps and revisions thereto.

30 (4) All appeals actions.

31 (5) All variance and administrative review actions.

1 COMMITTEE APPROVAL DATE: October 15, 2013
2 MAYOR-COUNCIL DATE: October 22, 2013
3 PASSED BY THE COUNCIL: _____, 2013

4 _____ - PRESIDENT
5 APPROVED: _____ - MAYOR _____, 2013
6 ATTEST: _____ - CLERK AND RECORDER,
7 EX-OFFICIO CLERK OF THE
8 CITY AND COUNTY OF DENVER

9 NOTICE PUBLISHED IN THE DAILY JOURNAL: _____, 2013; _____, 2013

10 PREPARED BY: Adam Hernandez, Assistant City Attorney DATE: October 24, 2013

11 Pursuant to section 13-12, D.R.M.C., this proposed ordinance has been reviewed by the office of
12 the City Attorney. We find no irregularity as to form, and have no legal objection to the proposed
13 ordinance. The proposed ordinance is not submitted to the City Council for approval pursuant to §
14 3.2.6 of the Charter.

15 Douglas J. Friednash, Denver City Attorney

16 BY: _____, Assistant City Attorney DATE: _____, 2013