

ORDINANCE NO. 2013-52

A BILL

FOR AN ORDINANCE REPEALING AND REENACTING CHAPTER 70 OF THE CITY CODE OF THE CITY OF AURORA, COLORADO, REGARDING FLOODPLAIN DAMAGE PREVENTION

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

Section 1. That Chapter 70 of the City Code of the City of Aurora, Colorado is hereby repealed and reenacted to read as follows:

CHAPTER 70

FLOODS

ARTICLE I –FLOODPLAIN DAMAGE PREVENTION

Division 1. Title and Purpose

Sec. 70-1. Legislative findings.

The city council finds and determines that the flood hazard areas of the city are subject to periodic inundation, which can result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the health, safety and general welfare of the public. The city council further finds and determines that these flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood proofed or otherwise protected from flood damage.

Sec. 70-2. Statement of purpose.

The city council declares that the purpose of this article to promote public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (a) Protect human life and health;
- (b) Minimize expenditure of public money for costly flood control projects;

- (c) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (d) Minimize prolonged business interruptions;
- (e) Minimize damage to critical facilities, infrastructure and other public facilities such as water, sewer and gas mains; electric and communications stations; and streets and bridges located in floodplains;
- (f) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas;
- (g) Ensure potential buyers are notified that property is located in a flood hazard area; and
- (h) Ensure all property owners can remain under the national flood insurance program.

Sec. 70-3. Methods of reducing flood losses.

In order to accomplish its purposes, the city uses the following methods:

- (a) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
- (b) Require uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (c) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;
- (d) Control filling, grading, dredging and other development which may increase flood damage;
- (e) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

Division 2. Definitions.

Sec. 70-4. Definitions.

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

*100-year flood* means a flood having a recurrence interval of one-percent chance of being equaled or exceeded during any given year (one-percent-annual-chance flood). The terms "one-

hundred-year flood" and "one percent chance flood" are synonymous with the term "100-year flood." The term does not imply the flood will necessarily happen once every one hundred years.

*100-year floodplain* means the area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.

*500-year flood* means a flood having a recurrence interval of 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-chance-annual-flood). The term does not imply the flood will necessarily happen once every five hundred years.

*500-year floodplain* means the area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.

*Addition* means any activity that expands the enclosed footprint or increases the square footage of an existing structure.

*Alluvial fan flooding* means a fan-shaped sediment deposit formed by a stream that flows from a steep mountain valley or gorge onto a plain or the junction of a tributary stream with the main stream. Alluvial fans contain active stream channels and boulder bars, and recently abandoned channels. Alluvial fans are predominantly formed by alluvial deposits and are modified by infrequent sheet flood, channel avulsions and other stream processes.

*Area of shallow flooding* means a designated zone AO or AH as designated on the city's FIRM with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

*Base flood elevation (BFE)* means the elevation shown on a FEMA FIRM for zones AE, AH, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, that indicates the water surface elevation resulting from a flood that has a one percent chance of equaling or exceeding that level in any given year.

*Basement* means any area of a building having its floor sub-grade (below ground level) on all sides.

*Channel* means the physical confine of stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.

*Channelization* means the artificial creation, enlargement or realignment of a stream channel.

*Code of Federal Regulations (C.F.R.)* means the codification of the general and permanent Rules published in the Federal Register by the executive departments and agencies of the federal government.

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

*Critical facility* means a structure or related infrastructure, but not the land on which it is situated, as specified Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado (2 C.C.R. 408-6) that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the city at any time before, during and after a flood.

*Development* means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

*DFIRM database* means the database (usually spreadsheets) containing data and analyses that accompany DFIRMs. The FEMA Mapping Specifications and Guidelines outline requirements for the development and maintenance of DFIRM databases.

*Digital Flood Insurance Rate Map (DFIRM)* means the FEMA digital floodplain map. These digital maps serve as “regulatory floodplain maps” for insurance and floodplain management purposes.

*Elevated building* means a non-basement building; (i) built, in the case of a building in zones AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water and; (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of zones AE, A, A99, AO, AH, B, C, X, and D, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

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

*Expansion to an existing manufactured home park or subdivision* means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

*Federal Register* means the official daily publication for rules, proposed rules, and notices of federal agencies and organizations, as well as executive orders and other presidential documents.

*Federal Emergency Management Agency (FEMA)* means the, the agency responsible for administering the NFIP.

*Flood or flooding* means general and temporary condition of partial or complete inundation of normally dry land areas from:

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

*Flood Insurance Rate Map (FIRM)* means an official map of the city, on which FEMA has delineated both the SFHA and the risk premium zones applicable to the city.

*Flood Insurance Study (FIS)* means the official report provided by FEMA. The report contains the FIRM as well as flood profiles for studied flooding sources that can be used to determine BFEs for some areas.

*Floodplain or flood-prone area* means any land area susceptible to being inundated as the result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.

*Floodplain Administrator* is the city official designated by title to administer and enforce the floodplain management regulations.

*Floodplain Development Permit* means a permit required before construction or development begins within any SFHA. If FEMA has not defined the SFHA within the city, the city shall require permits for all proposed construction or other development in the city, including the placement of manufactured homes, so it may determine whether such construction or other development is proposed within flood-prone areas. Permits are required to ensure the proposed development projects meet the requirements of the NFIP and this floodplain management ordinance.

*Flood fringe* means that part of the floodplain located between the boundary of the floodway and the boundary of the 100-year floodplain.

*Floodplain management* means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

*Floodplain management regulations* means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

*Flood control structure* means a physical structure designed and built expressly or partially for the purpose of reducing, redirecting, or guiding flood flows along a particular waterway. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

*Floodproofing* means any combination of structural and/or non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

*Floodway (Regulatory Floodway)* means the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. The Colorado statewide standard for the designated height to be used for all newly studied reaches is one-half foot (six inches). LOMRs to existing floodway delineations may continue to use the floodway criteria in place at the time of the existing floodway delineation.

*Freeboard* means the vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the watershed.

*Functionally dependent use* means a use which cannot perform its intended purpose, unless it is located or carried out in close proximity to water. The term includes only docking facilities and port facilities necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

*Highest adjacent grade* means the highest natural elevation of the ground surface prior to construction next to proposed or existing walls of a structure.

*Historic structure* means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (1) By an approved state program as determined by the Secretary of the Interior or;
  - (2) Directly by the Secretary of the Interior in states without approved programs.

*Letter of Map Revision (LOMR)* means FEMA's official revision of an effective FIRM, or FBFM, or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, or the SFHA.

*Letter of Map Revision based on Fill (LOMR-F)* means FEMA's modification of the SFHA shown on the FIRM based on the placement of fill outside the existing regulatory floodway.

*Levee* means a man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding. For a levee structure to be reflected on the FEMA FIRMs as providing flood protection, the levee structure must meet the requirements set forth in 44 C.F.R. 65.10.

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

*Lowest floor* means the lowest floor of the lowest enclosed area (including basement or crawl space). Any floor used for living purposes which includes working, storage, sleeping, cooking and eating, or recreation or any combination thereof. This includes any floor that could be converted to such a use such as a basement or crawl space. The lowest floor is a determinate for the flood insurance premium for a building, home or business. An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Sec. 60.3 of the NFIP.

*Manufactured home* means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation

when connected to the required utilities. The term manufactured home does not include a recreational vehicle or travel trailers.

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

*Mean sea level* means the North American Vertical Datum (NAVD) of 1988 to which BFE shown on the city's FIRM are referenced.

*Material Safety Data Sheet (MSDS)* – A form with data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.

*National Flood Insurance Program (NFIP)* means FEMA's program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and Emergency Assistance Act, 42 U.S.C. 5121-5207. The NFIP has applicable Federal regulations promulgated in Title 44 C.F.R, Sections 59-79.

*New manufactured home park or subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the floodplain management regulations adopted by the city. Subdividing of an existing manufactured home park which does not require the construction of servicing facilities shall not be construed to be a new manufactured home subdivision or subdivision proposal.

*No-Rise Certification* means a record of the results of an engineering analysis conducted to determine whether a project will increase flood heights in a floodway. A no-rise certification must be supported by technical data and signed by a licensed Colorado Professional Engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the FIRM or Flood Boundary and Floodway Map.

*Physical Map Revision (PMR)* means FEMA's action whereby one or more map panels are physically revised and republished. A PMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations, and/or planimetric features.

*Reach* means a hydraulic engineering term describing longitudinal segments of a stream or river. Reach will generally include the segment of the flood hazard area where flood heights are primarily controlled by manmade or natural obstructions or constrictions. In an urban area, an example of a reach would be the segment of a stream or river between two consecutive bridge crossings.



*Recreational vehicle* means a vehicle which is:

- (a) Built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projections;
- (c) Designed to be self-propelled or permanently towable by a light duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Regulatory flood protection elevation* means the elevation to which uses regulated by this chapter are required to be elevated or flood proofed.

*Special Flood Hazard Area (SFHA)* means the land in the floodplain within the city subject to a one percent or greater chance of flooding in any given year, i.e., the 100-year floodplain or regulatory floodplain.

*Start of construction* means the date the building permit was issued, including substantial improvements, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 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 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. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For manufactured homes not within a manufactured home park or manufactured home subdivision, start of construction means the date of the manufactured homes is affixed to its permanent site. For manufactured homes within the manufactured home parks or manufactured home subdivisions, start of construction is the date on which the construction of facilities for servicing the site on which the manufactured homes is to be affixed, including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads, and installation of utilities, is completed, and start of construction shall not refer to the date on which any repair or reconstruction of existing facilities for servicing such site is undertaken or completed. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

*Structure* means a walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.

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

*Substantial improvement* means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before start of construction of the improvement. The value of the structure shall be determined by the local jurisdiction having land use authority in the area of interest. This includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

- (a) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary conditions; or
- (b) Any alteration of an historic structure provided the alteration will not preclude the structure's continued designation as a historic structure.

*Threshold Planning Quantity (TPQ)* means a quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.

*Variance* means a grant of relief to a person from the requirement of this ordinance when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this ordinance. (For full requirements see 44 C.F.R. 60.6).

*Violation* means the failure of a structure or other development to be fully compliant with the city's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 C.F.R. Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

*Watercourse* means a channel, natural depression, slough, artificial channel, gulch, arroyo, stream, creek, pond, reservoir, or lake which storm runoff and flood water flows either regularly or infrequently. This includes major drainage ways for carrying storm runoff.

*Water surface elevation* means the height, in relation to the North American Vertical Datum of 1988, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

### Division 3. Generally.

Sec. 70-5. Lands to which this article applies.

This article shall apply to all SFHAs and areas removed from the floodplain by the issuance of a FEMA LOMR-F within the city.

Sec. 70-6. Basis for establishing the Special Flood Hazard Area.

The SFHA identified by FEMA in a scientific and engineering report entitled, " Flood Insurance Study for Arapahoe County, Colorado, and Incorporated Areas," dated December 17, 2010, with accompanying FIRM and/or FBFM, and any revisions thereto are hereby adopted by reference and declared to be a part of this article. These SFHAs identified by the FIS and attendant mapping are the minimum area of applicability of this article and may be supplemented by studies designated and approved by the city. Copies of the FIS, DFIRMs, FIRMs and/or FBFMs are on file in the office of the floodplain administrator and are available for inspection during regular office hours.

Sec. 70-7. Adoption of Floodplain Map Revisions.

All revisions to the FIRMs and / or Flood Boundary – Floodway Maps applicable to land within the city and issued by FEMA through a LOMR or PMR, are hereby deemed adopted by the city as of the effective date of the LOMR or PMR.

Sec. 70-8. Floodplain Development Permit required.

All development in a SFHA is prohibited unless a floodplain development permit for such development has been issued by the floodplain administrator pursuant to the requirements of this article. The floodplain development permit shall be required in addition to all other permits and requirements of this code.

Sec. 70-9. Compliance.

No structure or land shall hereafter be constructed, located, extended, altered, or have its use changed within the SFHA without full compliance with the terms of this article and other applicable regulations. Nothing herein shall prevent the city from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the NFIP.

Sec. 70-10. Violations.

Any person found guilty of the violation of any of the provisions of this article, including any violations of conditions and safeguards established in connection with the granting of variances or floodplain permit, shall be subject to the penalties of Section 1-13 of the City Code. Nothing contained in this section shall prevent the city from pursuing any other lawful remedy to prevent a violation of this article or to require compliance with this article.

Sec. 70-11. Abrogation and greater restrictions.

This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Sec. 70-12. Interpretation.

In the interpretation and application of this article, all provisions shall be considered as minimum requirements; liberally construed in favor of the city; and deemed neither to limit nor repeal any other powers granted under state statutes.

Sec. 70-13. Uses.

(a) *Permitted uses.* Within the SFHA the following open space uses require a floodplain permit and shall be allowed to the extent they are not prohibited elsewhere in the code and provided they do not require structures or storage of material and equipment:

- (1) Agricultural uses, such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry except in the floodway, sod farming and wild crop harvesting.
- (2) Industrial-commercial uses such as airport landing strips except in the floodway, loading areas and parking areas.
- (3) Private and public recreational uses, such as golf courses, driving ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, hiking and horseback riding trails.
- (4) Marinas, boat rentals, docks, piers, wharves.
- (5) Railroads, streets, bridges, utility transmission lines and pipelines.
- (6) Extraction of sand, gravel and other material.
- (7) Storage of material not subject to flood damage when firmly anchored to prevent flotation.

(b) *Special Uses.* Special uses may be allowed upon the application of and the issuance of a floodplain development permit by the floodplain administrator as provided in this article pertaining to the floodplain development permit. Special uses include, but are not limited to:

- (1) All new or proposed uses in the SFHA which are permitted in the underlying zoning classification in chapter 146 of this code.

- (2) Any structure or use within the SFHA, but outside of the floodway, to the extent it is not prohibited by any other ordinance, provided it complies with the following provisions:
  - (A) Any nonstructural use, if it is elevated above the regulatory flood protection elevation and a determination is made by the floodplain administrator the use will not unduly restrict the capacity of the channels or floodway to tributaries to the main stream, drainage ditches or any other drainage facilities or systems.
  - (B) Uses listed in subsection (a) of this section and other similar uses may be permitted by the floodplain administrator at an elevation below the regulatory flood elevation, provided:
    - i. They are not subject to substantial flood damage and will not cause flood losses on other lands or to the public; or
    - ii. They can be readily removed from flood hazard areas during times of flooding.
- (3) The storage or processing of materials that are buoyant, flammable, explosive, or could be injurious to human, animal or plant life in the time of flooding, is prohibited.

#### Division 4. Administration

##### Sec. 70-20. Designation of the Floodplain Administrator.

The City Engineer is hereby designated as floodplain administrator to administer, implement and enforce the provisions of this article and other appropriate sections of the NFIP Regulations pertaining to floodplain management.

##### Sec. 70-21. Duties and responsibilities of the Floodplain Administrator.

Duties and responsibilities of the floodplain administrator shall include, but not be limited to, the following:

- (a) Maintain and hold open for public inspection all records pertaining to the provisions of this article, including the actual elevation (in relation to mean sea level) of the lowest floor (including basement or crawl space) of all new or substantially improved structures and any flood proofing certificate required by this article.
- (b) Review, approve, or deny all applications for floodplain development permits required by this article.

- (c) Review floodplain development permit applications to determine whether a proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.
- (d) Require all necessary permits have been obtained from those Federal, State or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, *33 U.S.C. 1334*, and those referenced in Chapter 138; Article 8 of this code.
- (e) Inspect all development at appropriate times during the period of construction to ensure compliance with all provisions of this article, including proper elevation of the structure.
- (f) Where interpretation is needed as to the exact location of the boundaries of the SFHA, as shown on the FIRM, and, for example, where there appears to be a conflict between a mapped boundary and actual field conditions, the floodplain administrator shall make the necessary determination of the boundary. A floodplain development permit applicant contesting the location and boundaries of the SFHA may ask for reconsideration from the floodplain administrator and may submit his or her own technical or other evidence if he or she so desires. Such determination by the floodplain administrator may be appealed by the applicant to the city manager. Such appeal must be submitted in writing within 30 days of the contested determination.
- (g) When BFE data has not been provided in accordance with Sec. 70-6 of this code, the floodplain administrator shall obtain, review and reasonably utilize any BFE data and floodway data available from a Federal, State, or other source, in order to administer the provisions of this article.
- (h) For waterways with BFEs for which a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within zone AE as designated on the city's FIRM, unless it is demonstrated the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half foot at any point within the city.
- (i) Under the provisions of Sec. 65.12, of the NFIP regulations, the city may approve certain development in zones designated on the city's FIRM as A, AE, AH, which increases the water surface elevation of the base flood by more than one-half foot (6 inches), provided the city first applies for a conditional FIRM revision through FEMA (CLOMR), fulfills the requirements for such revisions as established under the provisions of Section 65.12 and receives FEMA approval. Otherwise, there must be 0.00 (zero) feet rise to the water surface elevation.
- (j) Notify, in riverine situations, adjacent communities and the the Colorado Water Conservation Board (State Coordinating Agency), prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

- (k) Ensure the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- (l) Obtain and maintain records of elevation certificates for those structures within and immediately adjacent to SFHAs prior to the issuance of a certificate of occupancy.
- (m) Obtain and maintain records of flood proofing certificates for all new and substantially improved flood proofed structures within the SFHAs.
  - (1) Verify the certification of the actual elevation, in relation to mean sea level, prior to the issuance of a certificate of occupancy and the elevation to which it has been flood proofed.
  - (2) Maintain the flood proofing certifications required in Section 70-31 of this code.
- (n) Require maintenance is provided within the altered or relocated portion of the water course so the flood carrying capacity is not diminished.
- (o) Adopt rules and regulations consistent with the purposes of this article.

Sec. 70-22. Permit procedures.

(a) *Application.* Application for any use listed in this article and requiring a floodplain development permit may be allowed only upon application to the floodplain administrator on forms furnished by him or her and issuance of a floodplain development permit by the floodplain administrator.

(b) *Procedure in reviewing applications.* Upon receiving an application for a floodplain development permit involving the use of fill, construction of structures including the placement of manufactured homes, or storage of materials, the floodplain administrator shall, prior to rendering a decision thereon:

- (1) Require the applicant to furnish the following information as is deemed necessary by the floodplain administrator for determining the regulatory flood protection elevation and whether the proposed use is located in the floodway or floodway fringe area and other factors necessary to render a decision on the suitability of the particular site for the proposed use:
  - (A) Plans, submitted electronically, drawn to scale, showing the nature, location, dimensions and elevation of the project area, elevation of proposed landscape alterations, existing or proposed structures, including the placement of manufactured homes, fill, storage of materials, flood proofing measures and the relationship of such to the location of the channel.

- (B) A typical valley cross section, showing the channel of the stream, elevation of land areas adjoining each side of the channel, cross sectional areas to be occupied by the proposed development and high water information.
  - (C) Plan (surface view), showing elevations or contours of the ground; pertinent structure, fill, or storage elevations; size, location and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets; water supply; sanitary facilities; photographs, showing existing land uses and vegetation upstream and downstream; soil types; and other pertinent information.
  - (D) Profile, showing the slope of the bottom of the channel or flow line of the stream and the 100-year water surface profile.
  - (E) Specifications for building construction and materials, flood proofing, filling, dredging, grading, channel improvement, storage of materials; water supply and sanitary facilities.
  - (F) Elevation in relation to mean sea level of the lowest floor, including basement or crawl space, of all new or substantially improved structures.
  - (G) Elevation in relation to mean sea level to which any nonresidential structures shall be flood proofed.
  - (H) A certificate from a licensed Colorado Professional engineer or architect that the nonresidential flood proofed structure shall meet the flood proofing criteria of of this code.
- (2) Transmit, electronically, the information described in subsection (a) of this section to any agency from which expert technical assistance may be requested in determining whether the proposed use is located in the floodway or flood fringe; in determining the regulatory flood protection elevation; and in evaluating the proposed project in relation to flood heights and velocities; the seriousness of flood damage to the use, the adequacy of the plans for protection and other technical matters.
  - (3) Based upon this technical evaluation, the floodplain administrator shall determine whether the proposed use is located within the floodway or floodway fringe, determine the specific flood hazard at the site and evaluate the suitability of the proposed use in relation to the flood hazard.

(c) *Factors upon which decision is based.* When reviewing such applications, the floodplain administrator shall consider:

- (1) The danger to life and property due to increased flood heights or velocities caused by encroachments or erosion damage.



- (2) The danger that materials may be swept on to other lands or downstream to the injury of others.
- (3) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.
- (4) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner, public health, welfare and safety.
- (5) The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
- (6) The safety of access to the property in times of flood for ordinary and emergency vehicles.
- (7) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters expected at the site.
- (8) The estimated discharge of the regulatory flood which is representative of large floods known to have occurred in this region and which are reasonably characteristic of what can be expected to occur on the particular streams subject to this article; it is in the general order of a flood which could be expected to occur on the average once every 100 years.
- (9) The suitability of the particular site's proposed use as determined by:
  - (A) Calculation of water surface elevations based on a hydraulic analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.
  - (B) Consumption of the floodway required to convey this flood without increasing flood heights to an extent which would cause upstream or downstream damage to existing or reasonably anticipated future development; computation of increase in flood heights caused by any encroachment is based upon the reasonable assumption there will be an equal degree of encroachment on both sides of the stream within that reach; generally, any increase in flood stages attributable to encroachments on the floodway or any river or stream shall not exceed one-half foot.
- (10) The effects of the proposed use upon the public health, welfare and safety, in light of the purposes of this article and the standards established in this article.
- (11) Variances shall not be permitted in the regulatory floodway if any increase to the base (100-year) flood elevation shall result.

(d) *Conditions attached.* Upon consideration of the factors listed in this section and the purpose of this article, the floodplain administrator may require any of the following conditions to the granting of a floodplain development permit:

- (1) Modification of waste disposal and water supply facilities.
- (2) Limitation on periods of use and operation.
- (3) Imposition of operational controls.
- (4) Requirements for construction of channel modifications, dikes, levees and other protective measures.
- (5) Flood proofing measures, such as the following, shall be designated consistent with the flood protection elevation for the particular area, flood velocities, durations, rate of rise, hydrostatic and hydrodynamic forces, and other factors associated with the regulatory flood; the floodplain administrator may require the applicant submit a plan or document certified by a licensed professional engineer in the State of Colorado who is competent in hydrology and open channel hydraulics that the flood proofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area; the following flood proofing measures may be required:
  - (A) Anchorage to resist flotation and lateral movement.
  - (B) Installation of watertight doors, bulkheads and shutters.
  - (C) Reinforcement of walls to resist water pressures.
  - (D) Use of paints, membranes or mortars to reduce seepage of water through walls.
  - (E) Addition of mass or weight to structures to resist flotation.
  - (F) Installation of pumps to lower water levels in structures.
  - (G) Construction of water supply and waste treatment systems so as to prevent the entrance of floodwaters.
  - (H) Pumping facilities for subsurface external foundation wall and basement floor pressures.
  - (I) Construction to resist rupture or collapse caused by water pressure or floating debris.
  - (J) Cutoff valves on sewer lines or the elimination of gravity flow basement drains.

(K) Elevation of structures and uses to the regulatory flood protection elevation.

(e) Denial, review. If the application for a floodplain development permit is denied by the floodplain administrator, the applicant may request review of the permit denial to the city manager. Such appeal must be submitted in writing within 30 days of the denial. The decision of the city manager shall be within 60 days from the date of the request for review is received.

#### Division 5. Provisions for Flood Hazard Reduction

##### Sec. 70-30. General Standards.

In all SFHAs the following provisions are required for all new construction and substantial improvements:

(a) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(b) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

(c) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;

(d) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

(e) All new and replacement water supply systems shall be designed by a licensed Colorado Professional Engineer to minimize or eliminate infiltration of flood waters into the system;

(f) All new and replacement sanitary sewage systems shall be designed by a licensed Colorado Professional Engineer to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters.

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

##### Sec. 70-31. Specific Standards.

In all SFHAs where base flood elevation data has been provided as set forth in Sections. 70-6, 70-21(f), or 70-36 of this code, the following provisions are required:

(a) *Residential construction.*

New construction and Substantial Improvement of any residential structure shall have the lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated to two feet above the base flood elevation. Upon completion of the structure, the elevation of the lowest floor, including basement or crawl space, shall be certified by a licensed Colorado Professional Engineer, architect, or land surveyor. Such certification shall be submitted to the floodplain administrator, prior to issuance of a certificate of occupancy.

- (1) All new subdivisions shall be constructed so the lowest point on any lot shall be located one foot above base flood elevation.
- (2) Manufactured home standards are governed by subsection 4 of this section and not by the standards in subsection 1 of this section.

(b) *Nonresidential construction.*

With the exception of critical facilities, outlined in Section 70-37 of this code, new construction and substantial improvements of any commercial, industrial, or other nonresidential structure shall either have the lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated to one foot above the base flood elevation or, together with attendant utility and sanitary facilities, be designed so at one foot above the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

A licensed Colorado Professional Engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. Such certification shall be provided to the floodplain administrator prior to issuance of a certificate of occupancy.

(c) *Enclosures.*

New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

Designs for meeting this requirement must either be certified by a licensed Colorado Professional Engineer or architect or meet or exceed the following minimum criteria:

- (1) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

- (2) The bottom of all openings shall be no higher than one foot above grade.
- (3) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic entry and exit of floodwaters.

(d) *Manufactured homes.*

All manufactured homes placed or substantially improved within zones A, AO, AH, and AE as designated on the city's FIRM on sites outside of a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood or other causes, be elevated on a permanent foundation so the lowest floor of the manufactured home, electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), are elevated to two feet above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- (1) All manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision within zones A, AO, AH, and AE as designated on the city's FIRM that are not subject to the provisions of the above paragraph, shall be elevated so either:
  - (A) The lowest floor of the manufactured home, electrical, heating, ventilation, plumbing, and air conditioning equipment and other services (including ductwork) are two feet above the base flood elevation; or
  - (B) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- (2) Methods of anchoring may include, but are not limited to, use of over-the-top and frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces. Specific requirements shall be:
  - (A) Over-the-top ties be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations, with manufactured homes greater than 50 feet long require one additional tie per side;
  - (B) Frame ties be provided at each corner of the home with five additional ties per side at intermediate points, with manufactured homes greater than 50 feet long require four additional ties per side;

(C) All components of the anchoring system be capable of carrying a force of 4,800 pounds; and

(D) Any additions to the manufactured home shall be appropriately anchored.

(e) *Recreational vehicles.*

(1) All recreational vehicles placed on sites within Zones A, AH, and AE as designated on the city's FIRM either:

(A) Be on the site for fewer than 180 consecutive days,

(B) Be fully licensed and ready for highway use, or

(C) Meet the permit requirements of Division 5 of this article and the elevation and anchoring requirements for manufactured homes of this section.

(2) A recreational vehicle is ready for highway use if it is on its wheels or jacking devices, and has no permanently attached additions.

Sec. 70-32. Standards for areas of shallow flooding.

Located within the SFHA established in Section 70-6 of this code, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

(a) *Residential construction.*

All new construction and Substantial Improvements of residential structures must have the lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least two feet above the depth number specified in feet on the city's FIRM (at least three feet above existing grade if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement or crawl space, shall be certified by a licensed Colorado Professional Engineer, architect, or land surveyor. Such certification shall be submitted to the Floodplain Administrator, prior to issuance of a certificate of occupancy.

Within zones AO and AH as designated on the city's FIRM, adequate drainage paths around structures on slopes to guide floodwater around and away from new and substantially improved structures shall be required.

(b) *Nonresidential construction.*

With the exception of Critical Facilities outlined in Section 70-37 of this code, all new construction and substantial improvements of non-residential structures, must have the lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the city's FIRM (at least three feet above the existing grade if no depth number is specified), or together with attendant utility and sanitary facilities, be designed so the structure is watertight to at least one foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A licensed Colorado Professional Engineer or architect shall submit a certification to the floodplain administrator that the standards of this section are satisfied prior to issuance of a certificate of occupancy.

Within zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from new and substantially improved structures.

#### Sec. 70-33. Regulatory floodways.

Floodways are administrative limits and tools used to regulate existing and future floodplain development. Located within SFHA are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

- (a) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed by a licensed Colorado Professional Engineer and in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a No-Rise Certification) in flood levels within the city during the occurrence of the base flood discharge.
- (b) If subsection (a) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Division 5 of this article.
- (c) Under the provisions of Section 65.12, of the NFIR, the city may permit encroachments within the adopted regulatory floodway that would result in an increase in BFE, provided the city first applies for a CLOMR and floodway revision through FEMA.

#### Sec. 70-34. Alteration of a watercourse.

For all proposed developments that alter a watercourse within a SFHA, the following standards apply:

- (a) Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition, and channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed

analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.

- (b) Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.
- (c) Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable Federal, State and local floodplain rules, regulations and ordinances.
- (d) Any stream alteration activity shall be designed and sealed by a licensed Colorado Professional Engineer.
- (e) All activities within the regulatory floodplain shall meet all applicable Federal, State and city floodplain requirements and regulations.
- (f) Within the regulatory floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a floodway analysis and report, sealed by a licensed Colorado Professional Engineer, that there is not more than a 0.00-foot rise in the proposed conditions compared to existing conditions floodway resulting from the project, otherwise known as a No-Rise Certification, unless the city first applies for a CLOMR and Floodway Revision in accordance with Section 70-33 of this code.
- (g) Maintenance shall be required for any altered or relocated portions of watercourses so the flood-carrying capacity is not diminished.

Sec. 70-35. Properties removed from the floodplain by fill.

A flood development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA LOMR-F unless such new structure or addition complies with the following:

(a) *Residential construction.*

The lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to two feet above the BFE that existed prior to the placement of fill.

(b) *Nonresidential construction.*

The lowest floor (including basement or crawl space), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one foot above the BFE that existed prior to the placement of fill, or together with attendant utility and sanitary facilities be designed so the structure or addition is watertight to at least one foot above the base flood level that existed prior to the placement of fill with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

Sec. 70-36. Standards for subdivision proposals.



(a) All subdivision proposals including the placement of manufactured home parks and subdivisions shall be reasonably safe from flooding. If a subdivision or other development proposal is in a flood-prone area, the proposal shall minimize flood damage.

(b) All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet flood development permit requirements of Section 70-109; Section 70-22; and the provisions of Division 5 of this article.

(c) Base Flood Elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks which is greater than 50 lots or five acres, whichever is less, if not otherwise provided pursuant to Section 70-6 or Section 70-21 of this code.

(d) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

(e) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

Sec. 70-37. Standards for critical facilities.

(a) *Classification of critical facilities.* It is the responsibility of the city manager to identify and confirm that specific structures in the City meet the following criteria. Critical facilities are classified under the following categories:

(1) *Essential services facilities.* Essential services facilities include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities, and transportation lifelines. These facilities consist of:

(A) Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and, emergency operation centers);

(B) Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctors offices, and non-urgent care medical structures that do not provide these functions);

(C) Designated emergency shelters;

(D) Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables, and conduits);

- (E) Public utility plant facilities for generation and distribution ( hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines); and
- (F) Air Transportation lifelines (airports (municipal and larger), helicopter pads and structures serving emergency functions, and associated infrastructure (aviation control towers, air traffic control centers, and emergency equipment aircraft hangars).

Specific exemptions to this category include wastewater treatment plants, non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.

Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the city manager that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this division, and an operations plan is in effect that states how the redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the city manager on an as-needed basis upon request.

(2) *Hazardous materials facilities.* Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials. These facilities may include:

- (A) Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);
- (B) Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;
- (C) Refineries;
- (D) Hazardous waste storage and disposal sites; and
- (E) Above ground gasoline or propane storage or sales centers.

Facilities shall be determined to be critical facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration to keep a MSDS on file for any chemicals stored or

used in the work place, and the chemical(s) is stored in quantities equal to or greater than the TPQ for that chemical, then that facility shall be considered to be a critical facility. The TPQ for these chemicals is: either 500 pounds or the TPQ listed (whichever is lower) for the 356 chemicals listed under 40 C.F.R. 302, also known as Extremely Hazardous Substances (EHS); or 10,000 pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Health and Environment. OSHA requirements for MSDS can be found in 29 C.F.R. 1910. The Environmental Protection Agency regulation “Designation, Reportable Quantities, and Notification,” 40 C.F.R. Sec. 302 and OSHA regulation “Occupational Safety and Health Standards,” 29 C.F.R.1910 are incorporated herein by reference and include the regulations in existence at the time of the promulgation this article, but exclude later amendments to or editions of the regulations.

Specific exemptions to this category include:

- i. Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
- ii. Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.
- iii. Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.

These exemptions shall not apply to buildings or other structures that also function as critical facilities under another category outlined in this division.

(3) *At-risk population facilities.* At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:

(A) Elder care (nursing homes);

(B) Congregate care serving 12 or more individuals (day care and assisted living);

(C) Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving 12 or more children).

(4) *Facilities vital to restoring normal services including government operations.* Facilities vital to restoring normal services including government operations consist of:

(A) Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);

(B) Essential structures for public colleges and universities (dormitories, offices, and classrooms only).

These facilities may be exempted if it is demonstrated to the city manager that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated the redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this article, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the city manager on an as-needed basis upon request.

(b) *Protection for critical facilities.* All new and substantially improved critical facilities and new additions to critical facilities located within the SFHA shall be regulated to a higher standard than structures not determined to be critical facilities. For the purposes of this article, protection shall include one of the following:

(1) Location outside the SFHA; or

(2) Elevation of the lowest floor, including basement or crawl space, or flood proofing of the structure, together with attendant utility and sanitary facilities, to at least two feet above the Base Flood Elevation.

(c) *Ingress and egress for new critical facilities.* New critical facilities shall, when practicable as determined by the city manager, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

Section 2. That all ordinances or parts of ordinances of the City Code of the City of Aurora, Colorado, in conflict herewith are expressly repealed.

Section 3. That, pursuant to Section 5-5 of the Charter of the City of Aurora, Colorado, the second publication of this ordinance shall be by reference, utilizing the ordinance title. Copies of this ordinance are available at the office of the City Clerk.

INTRODUCED, READ AND ORDERED PUBLISHED this 25<sup>th</sup> day of November, 2013.

PASSED AND ORDERED PUBLISHED BY REFERENCE this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
STEPHEN D. HOGAN, Mayor

ATTEST:

\_\_\_\_\_  
JANICE NAPPER, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Jack D. Bajorek, Assistant City Attorney  
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