

CITY OF WHEAT RIDGE, COLORADO
INTRODUCED BY COUNCIL MEMBER POND
Council Bill No. 14
Ordinance No. 1544

Series of 2013

**TITLE: AN ORDINANCE REVISING CHAPTER 26 ARTICLE VIII OF
THE WHEAT RIDGE CODE OF LAWS CONCERNING FLOOD-
PLAIN CONTROL**

WHEREAS, the City of Wheat Ridge ("City") is a Colorado municipal home rule corporation vested with powers under the Colorado constitution and statutes; and

WHEREAS, In late 2010, the Colorado Water Conservation Board (CWCB) adopted revised Floodplain Rules and Regulations for Colorado (Rules), effective January 14, 2011 to provide stricter floodplain management standards that will help communities to reduce the risks to people and property caused by flooding; and

WHEREAS, It is determined that failure to adopt floodplain regulations consistent with the Rules, as well as any updates necessary to bring local regulations into compliance with minimum National Flood Insurance Program (NFIP) criteria, could lead to severe sanctions; and

WHEREAS, non-compliance with the Rules may result in either NFIP suspension or probation and a reclassification under the Community Rating System (CRS) and the City may not be eligible for certain CWCB flood and watershed grant funding; and

WHEREAS, it is deemed to be in the best interest of the public health and welfare of the residents of the City for the City to comply with the proposed changes; and

WHEREAS, to this end, the City Council desires to revise Chapter 26 Article VIII of the Wheat Ridge Code of Laws, concerning flood plain control.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WHEAT RIDGE, COLORADO:

Section 1. Chapter 26 of the Code, concerning floodplain control, is hereby repealed and reenacted to read in its entirety as follows:

ARTICLE VIII. FLOODPLAIN CONTROL

Sec. 26-801. Authorization; findings, objectives.

- A. *Statutory authorization.* The Legislature of the State of Colorado has in C.R.S. § 31-23-301, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council of Wheat Ridge,

Colorado, acting pursuant to its powers and authorities granted and reserved in Title 29, of the Colorado Revised Statutes under Article 20 of the Constitution of the State of Colorado and the Home Rule Charter adopted thereunder, does hereby ordain following as its floodplain zoning provisions.

B. *Findings of fact.* The city council hereby finds that:

1. The flood hazard areas of Wheat Ridge are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
2. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and/or velocities and when inadequately anchored damage uses in other areas. Flood losses are also caused by uses that are inadequately floodproofed, inadequately elevated or otherwise protected from flood damage.

C. *Public objectives to be achieved.* The city council hereby finds it in the public interest, and in the furtherance of the public health, safety and welfare, that the following objectives be fulfilled:

1. To promote the public health, safety and general welfare, to minimize flood losses in areas subject to flood hazards, and to promote wise use of the special flood hazard area by:
 - a. Prohibiting certain uses which are dangerous to life or property in time of flood.
 - b. Restricting uses which would be hazardous to the public health in time of flood.
 - c. Restricting uses which are so particularly susceptible to flood damage, so as to alleviate hardship and reduce demands for public expenditures for relief and protection.
 - d. Restricting permitted special flood hazard area uses, including public facilities which serve such uses, to be protected against floods by providing floodproofing and general flood protection at the time of initial construction.
2. To protect occupants of the special flood hazard area from a flood which is or may be caused by their own, or other, land use and which is or may be undertaken without full realization of the danger through:
 - a. Regulating the manner in which structures designed for human occupancy may be constructed so as to prevent danger to human life within such structures.
 - b. Regulating the method of construction of water supply and sanitation systems so as to prevent disease, contamination, and unsanitary conditions.
 - c. Delineating and describing areas that could be inundated by floods so as to protect individuals from purchasing lands for purposes which are not in fact suitable.
 - d. Ensuring that potential buyers are notified that property is in an area of special flood hazard.
 - e. Ensuring that those who occupy the areas of special flood hazards assume responsibility for their actions.
3. To protect the public from the burden of extraordinary financial expenditures for flood control and relief.
 - a. Regulating all uses within the special flood hazard area so as to produce a method of construction and a pattern of development which will minimize the probability of damage to property and loss of life or injury to the inhabitants of the flood hazard areas.
 - b. Minimizing the need for rescue and relief efforts associated with flooding which are generally undertaken at the expense of the general public.
 - c. Minimizing prolonged business interruptions.
 - d. Minimizing damage to public facilities and utilities, such as water and gas mains; electric, telephone and sewer lines; streets and bridges located in areas of special flood hazard.

- e. Helping maintain a stable tax base by providing for sound use and development of areas of special flood hazard so as to minimize future flood-blight areas.
 - f. Participating in the National Flood Insurance Program to assist property owners in obtaining adequate insurance coverage.
4. To protect the hydraulic characteristics and storage capacity of the special flood hazard area and small watercourses, including the gulches, sloughs, and artificial water channels, used for conveying floodwaters so as to promote retention of sufficient floodway area to convey flood flows which can reasonably be expected to occur by:
- a. Regulating filling, dumping, dredging, and alteration of channels by deepening, widening or relocating, so as to maintain natural storage capacity and slow flow characteristics.
 - b. Prohibiting unnecessary encroachments.
 - c. Encouraging uses such as agriculture, open space, recreation, greenbelt, trails, and intermittent parking.
 - d. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.
 - e. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.
 - f. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

Sec. 26-802. Definitions.

Unless specifically defined below, words or phrases used in these regulations shall be interpreted so as to give them the meaning they have in common usage, so as to be consistent with the definition given the term in other portions of this zoning code, and to give these regulations their most reasonable application.

100-year flood. A flood that has a statistical frequency of occurring once in one hundred years. This is determined from an analysis of floods on a particular watercourse and other watercourses in the same general region. It has about a one (1) percent chance of being equaled or exceeded during any given year.

100-year floodplain. The area of land susceptible to being inundated as a result of the occurrence of a 100-year flood.

Appeal. A request for a review by the board of adjustment of any interpretation made by the floodplain administrator (or his representative) of any provision of these regulations.

Area of shallow flooding. A designated AO or AH zone on the current digital flood insurance rate map (DFIRM) with a one percent chance or greater annual chance of flooding. The base flood depths range from one (1) to three (3) feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may or may not be evident. Such flooding is characterized by ponding or sheet flow.

Base flood. The flood having a one (1) percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE). The elevation shown on the current DFIRM for various A zones that indicates the water surface elevation resulting from a flood that has a one (1) percent chance of equaling or exceeding that level in any given year.

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

Channel. That area of a watercourse where water normally flows.

Crawl space. An unfinished, enclosed area beneath a habitable floor or a building that is uninhabitable because of its shallow height of four (4) feet or less, but can be utilized for storage.

Critical Facility. A structure or related infrastructure, but not the land on which it is situated, as specified in Section 26-8??, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during, and after a flood.

Development. Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations or storage of equipment or materials located within the special flood hazard area.

Digital flood insurance rate map (DFIRM). FEMA digital floodplain map. These digital maps serve as "regulatory floodplain maps" for insurance and floodplain management purposes.

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

Elevated building. A non-basement building built to have the top of the elevated floor above the ground level by means of pilings, columns (posts and piers), shear walls parallel to the flow of the water, fill, or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters and 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.

FEMA. Federal emergency management agency, the agency responsible for administering the National Flood Insurance Program.

Flood or flooding. A general and temporary condition of partial or complete inundation of normally dry land areas from the unusual and rapid accumulation of runoff or surface waters from any source including the overflow of water from channels and reservoir spillways.

Flood insurance rate map (FIRM). The official map on which FEMA has delineated both the special flood hazards areas and the risk premium zones applicable to the community.

Flood insurance study. The official report provided by FEMA that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

Floodplain. 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. The director of public works or designee who is assigned the responsibility to coordinate and deal with all aspects of these regulations.

Floodplain permit. A permit required before construction or development begins within any special flood hazard area (SFHA). Permits are required to ensure that proposed development projects meet the requirements of the NFIP and this section.

Floodplain variance. A grant of relief from the requirements of these regulations, when approved by the board of adjustments under Section 26-808, D. when specific enforcement would result in unnecessary hardship, which permits construction in a manner that would otherwise be prohibited by these regulations.

Flood profile. A graph or longitudinal profile showing the relationship of the water surface elevation of a flood event to existing ground surface along a stream or river.

Floodproofing. A combination of structural provisions, changes, or adjustments to properties and structures subject to flooding primarily for the reduction or elimination of flood damages to properties, water and sanitary facilities, structures and contents of buildings.

Flood protection elevation. An elevation one (1) foot above the base flood elevation.

Floodway. The portion of the SFHA required for the reasonable passage or conveyance of the 100-year flood, which is characterized by hazardous and significant depths and velocities, without cumulatively increasing the water surface elevation more than a designated height. The current height to be used in the city is one (1) foot; however, the Colorado statewide standard for the designated

height to be used for all newly studied reaches shall be one-half foot (six inches). Letters of Map Revision to existing floodway delineations may continue to use the floodway criteria in place at the time of the existing floodway delineation.

Lowest floor. The lowest enclosed area of a building including basement. However, a crawl space usable solely for storage is not considered a building's lowest floor; provided, that the crawl space is built in conformance with section 26-806F.

Manufactured home. For the purposes of this Section, a structure that is transportable in one (1) or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. This term also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than one hundred eighty (180) consecutive days..

Manufactured home park or subdivision. A parcel or contiguous parcels of land divided into two (2) or more manufactured home lots for rent or sale.

Mean sea level. For purposes of the National Flood Insurance Program, the National American Vertical Datum (NAVD) of 1988 or other datum to which base flood elevations shown on the community's flood insurance rate map are referenced.

New construction. Structures for which the start of construction commences on or after the effective date of these regulations.

New manufactured home park or manufactured home subdivision. A parcel or contiguous parcels of land divided into two (2) or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot (including, at a minimum, the installation of utilities, final site grading, the construction of concrete pads, or the construction of streets) is completed on or after the effective date of these regulations.

Special flood hazard area (SFHA). The land in the floodplain subject to a one percent or greater chance of flooding in any given year.

Start of construction. The date the building permit was issued for any improvement; provided, that the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred and eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the 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, installation of streets and/or walkways; 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.

Structure. Anything constructed or erected, the use of which requires a more or less permanent location on or in the ground. Includes, but is not limited to, objects such as buildings, factories, sheds, cabins, manufactured housing, and fences. This term does not include signs, utility or light poles.

Substantial improvement. Any addition, repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the fair market value of the structure either before the improvement or repair is started or, if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not the alteration affects the external dimensions of the structure. The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assume safe living conditions; or
2. Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places at the effective date of these regulations.

Violation. The failure of a structure or other development to be fully compliant with these regulations.

Water surface elevation. The height above mean sea level of floods of various magnitudes and frequencies in the floodplain.

Sec. 26-803. General provisions.

- A. *Jurisdiction.* The provisions of this article shall apply to all lands within the SFHA as defined on the official maps and engineering reports of the City of Wheat Ridge, Colorado and areas removed from the floodplain by the issuance of a LOMR-F.
- B. *Establishment of Floodplain Permit.* A floodplain permit, either class I or class II shall be required to ensure conformance with the provisions of these regulations.
- C. *Compliance.* No structure or land shall hereafter be located, altered, or have its use changed within the SFHA without full compliance with these regulations and other applicable regulations. Nothing herein shall prevent the City of Wheat Ridge 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 National Flood Insurance Program.
- D. *Boundaries.* The boundaries of the SFHA have been defined by computing the 100-year flood limits under existing channel and floodplain conditions as shown on the official maps and engineering reports.

The boundaries of the SFHA shall be as they appear on the official maps and engineering reports kept on file in the office of the floodplain administrator. The boundary lines on the map shall be determined by the use of the scale and other surface features appearing on the map. When there is a conflict between the boundary lines illustrated on the map and the actual field conditions, the dispute shall be settled according to Section 26-808.

- E. *Interpretation.* In the interpretation and application of these floodplain regulations, these provisions shall be held to be minimum requirements, shall be liberally construed in favor of the governing body, and shall not be deemed a limitation or repeal of any other powers granted by Colorado Statutes or the Charter or ordinances of the City of Wheat Ridge.
- F. *Warning and disclaimer of liability.* The degree of flood protection intended to be provided by these floodplain regulations is considered reasonable for regulatory purposes and is based on nationally recognized and/or published engineering and scientific methods of study. Larger floods may occur on occasions or the flood height may be increased by manmade or natural causes, such as ice jams and bridge openings restricted by debris. These regulations do not imply that areas outside SFHA boundaries or land uses permitted within such districts will always be totally free from flooding or flood damage. Anyone constructing new structures within the SFHA is accepting complete responsibility for non-regulated events. These regulations shall not create a liability on the part of or a cause of action against the City of Wheat Ridge or any official or employee thereof for any flood damages that may result from reliance on these regulations.
- G. *Official maps and engineering reports.* The location and boundaries of the SFHA shall be as identified by the Federal Emergency Management Agency in "The Flood Insurance Study for Jefferson County, Colorado and Incorporated Areas," dated February 5, 2014, and any amendments or revisions thereto are hereby adopted by reference and declared to be a part of this article.

The location and boundaries of the SFHA shall be as shown in the following engineering reports and accompanying maps:

1. Digital Flood Insurance Rate Map (DFIRM) panels dated February 5, 2014 for portions of the City of Wheat Ridge.

The DFIRM constitute the current flood insurance study for the City of Wheat Ridge and is fully incorporated herein by this. The DFIRM which constitute the flood insurance study is on file at the Wheat Ridge Municipal Building, 7500 West 29th Avenue, Wheat Ridge, Colorado.

- H. *Severability.* These regulations and various parts thereof are hereby declared to be severable. Should any section of these regulations be declared by a court of competent jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of these regulations as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

Sec. 26-804. Special Flood Hazard Area.

A. *Application and description.*

1. The SFHA includes all lands that are inundated by the 100-year flood as shown on the official maps and engineering reports for the City of Wheat Ridge.

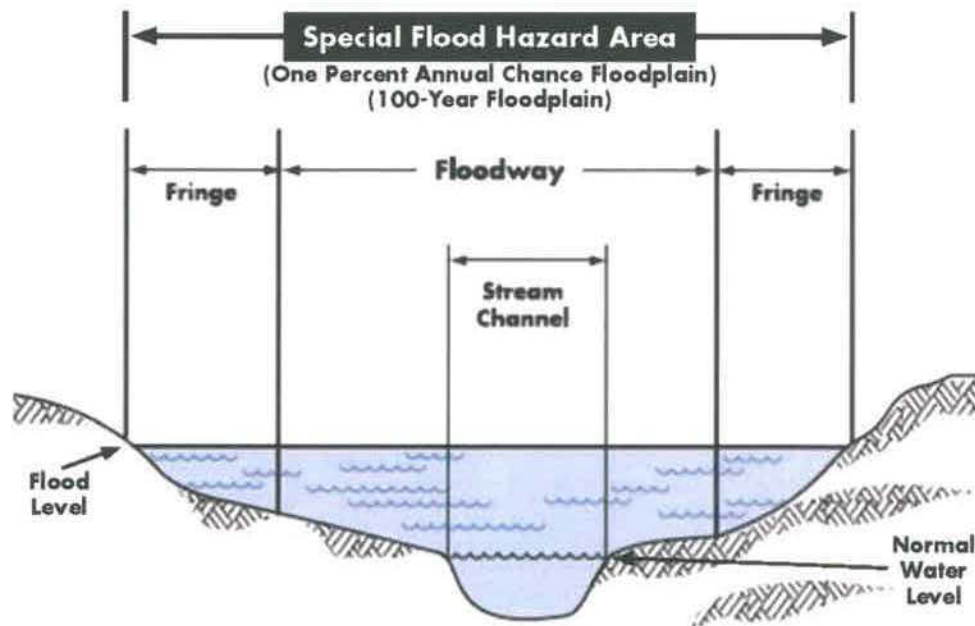


Figure 26-804.1 – Special Flood Hazard Area

2. Based upon the official maps and engineering reports for the City of Wheat Ridge, the SFHA contains several elements. (see Figure 26-804.1 above).
3. The respective regulations of section 26-805 and section 26-806 shall regulate all lands within the SFHA.

Sec. 26-805. Floodway Regulations.

- A. *Application and description.* These regulations shall apply to all properties designated as within the Floodway. Floodways are administrative limits and tools used to regulate existing and future floodplain development. The State of Colorado has adopted floodway standards that are more stringent than the FEMA minimum standard (see definition of floodway in Section 26-802). Located within SFHA established in Sec. 26-804, 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:

1. 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 registered 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 community during the occurrence of the base flood discharge.

2. If Sec. 26-805. A. 1. above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 26-806.
 3. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in Base Flood Elevations, provided that the community first applies for a CLOMR and floodway revision through FEMA.
- B. *Permitted uses.* The following open uses shall be permitted within the floodway to the extent that they are not prohibited in a particular area by any underlying zoning and do not include any structures, filling or deposition of materials, and do not cause any increase in the base flood elevation of the floodway.
1. Agricultural uses such as general farming, pasture, forestry, and urban gardens;
 2. Public and private recreational uses not requiring permanent or temporary structures such as parks, swimming areas, picnic grounds, wildlife and nature preserves, and fishing and hiking areas;
 3. Utility facilities such as ditches, transmission lines, pipelines, water monitoring devices, roadways, and bridges;
 4. Uses very similar in nature to these permitted uses may be allowed, provided that they are consistent with the provisions of these regulations.
- Except for the agricultural uses, the other uses shall require a class 1 floodplain permit in accordance with Section 26-808.
- C. *Special exceptions.* The following uses are permitted in the floodway subject to special requirements as noted:
1. Structures for human occupancy which were in existence as of February 26, 2001, subject to section 26-807 (nonconforming uses) and the requirements of section 26-806.D., E. and F., provided, however, that a floodplain permit shall not be required.
- D. *Prohibited uses.*
1. Structures, fill, or deposition of materials shall be prohibited in the floodway.
 2. The storage or processing of materials that are buoyant, flammable, or explosive, or any hazardous liquid or soluble matter which in times of flooding could be injurious to human, animal or plant life shall be prohibited within the floodway.

Sec. 26-806. Special Flood Hazard Area Regulations.

- A. *Application and description.* These regulations shall apply to all properties designated as within the SFHA.
- B. *Permitted uses.* The permitted uses in the SFHA are the same as those uses permitted in section 26-805B. However, in the SFHA, floodplain permits may be applied for as specified in paragraphs C. and D.
- C. *Prohibited uses hazardous materials.* The storage or processing of materials that are buoyant, flammable, or explosive, or any hazardous liquid or soluble matter which in times of flooding could be injurious to human, animal, or plant life shall be prohibited within the SFHA.
- D. *Development standards.* The following regulations shall apply to all permitted development and uses within the SFHA:

1. All new structures which are walled and roofed and greater than one hundred twenty (120) square feet in size must be elevated one (1) foot above the base flood elevation.
2. All development shall be evaluated based on any analysis of an equal degree of encroachment based on conveyance of the 100-year flood extending for a significant reach on both sides.
3. No SFHA uses shall adversely affect the efficiency of or unduly restrict the capacity of the channels or floodways of any tributaries to the main stream, drainage ditches, or any other drainage facilities or systems.
4. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure and to withstand hydrodynamic loads.
5. All new construction, substantial improvements, and fences shall be constructed with materials and utility equipment resistant to flood damage.
6. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
7. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
8. All development proposals shall have adequate drainage provided to reduce exposure to flood damage.
9. All new and replacement water supply, sanitary sewage, or onsite disposal systems shall be designed and located so as to minimize or eliminate infiltration of floodwaters into them and discharge from the systems into floodwaters.
10. All subdivision proposals shall be consistent with the need to minimize flood damage.
11. All development proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems, located and constructed to minimize flood damage.
12. All manufactured homes to be placed within the SFHA must be elevated and anchored to resist flotation, collapse, or lateral movement and capable of resisting the hydrostatic and hydrodynamic loads created by the 100-year flood. Methods of anchoring may include, but are not limited to, use of over-the-top and frame ties to ground anchors. Specific requirements may be:
 - a. Over-the-top ties shall be provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring one (1) additional tie per side;
 - b. Frame ties shall be provided at each corner of the home, with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side;
 - c. All components of the anchoring system shall be capable of carrying a force of four thousand eight hundred (4,800) pounds; and
 - d. Any additions to the manufactured home shall be similarly anchored.
13. Any fill or deposition of materials must be shown to have some beneficial purpose and the amount thereof will not be greater than is necessary to achieve that purpose, as demonstrated by a plan submitted by the owner showing the final dimensions of the proposed fill or other material and the use to which the filled land will be put.
14. Any fill or deposition that does reduce hydraulic capacity shall require appropriate hydraulic studies including an equal degree of encroachment analysis and a review of the urban impact of such reduction.
15. Any fill or deposition will be protected against erosion by riprap, strong vegetative cover, bulkheading, or other accepted means of erosion protection.

16. 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 registered Colorado Professional Engineer or architect or meet or exceed the following minimum criteria:

- a. 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.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- E. Properties removed from the *floodplain by fill*. The following regulations shall apply to all permitted development and uses within the properties that have been removed from the floodplain by the issuance of a FEMA Letter of Map revision Based on Fill (LOMR-F) to at least one (1) foot above the base flood level that existed prior to the placement of fill:
1. All new structures which are walled and roofed and greater than one hundred twenty (120) square feet in size must be elevated one (1) foot above the base flood elevation that existed prior to the placement of fill.
 2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
 3. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
 4. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- F. *Critical facilities*. A critical facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.
1. **CLASSIFICATION OF CRITICAL FACILITIES.** It is the responsibility of the city council to identify and confirm that specific structures in their community meet the following criteria:

Critical facilities are classified under the following categories: (a) Essential Services; (b) Hazardous Materials; (c) At-risk Populations; and (d) Vital to Restoring Normal Services.
 - a. 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:
 - (1) Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and, emergency operation centers);
 - (2) 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);
 - (3) Designated emergency shelters;

- (4) 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);
- (5) 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
- (6) 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 (WWTP), 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 council 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 Section, and an operations plan is in effect that states how 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 council on an as-needed basis upon request.

- b. Hazardous materials facilities include facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials. These facilities may include:
 - (1) Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);
 - (2) Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;
 - (3) Refineries;
 - (4) Hazardous waste storage and disposal sites; and
 - (5) 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 (OSHA) to keep a Material Safety Data Sheet (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 Threshold Planning Quantity (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 (2010), 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 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," 40 C.F.R. § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards," 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation this ordinance, but exclude later amendments to or editions of the regulations

Specific exemptions to this category include:

- (1) Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
- (2) 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.
- (3) 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 Section.

- c. At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:
 - (1) Elder care (nursing homes);
 - (2) Congregate care serving 12 or more individuals (day care and assisted living);
 - (3) Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving 12 or more children);
- d. Facilities vital to restoring normal services including government operations. These facilities consist of:
 - (1) Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);
 - (2) Essential structures for public colleges and universities (dormitories, offices, and classrooms only).

These facilities may be exempted if it is demonstrated to the city council 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 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 ordinance, 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 council on an as-needed basis upon request.

2. **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 Section, protection shall include one of the following:
 - a. Location outside the SFHA; or
 - b. Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two feet above the base flood elevation.
3. **INGRESS AND EGRESS FOR NEW CRITICAL FACILITIES** New critical facilities shall, when practicable as determined by the city council, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

Sec. 26-807. Nonconforming uses and structures.

The existing lawful use of a structure or premises which is not in conformity with the provisions of these regulations may be continued subject to the following conditions:

- A. No such use shall expand or enlarge the nonconformity except in compliance with the provisions of these regulations.
- B. No substantial improvement to any nonconforming structure over the life of the structure shall be allowed unless the nonconforming structure is permanently changed to a conforming structure.
- C. If such use is discontinued for two (2) consecutive years, any future use of the building and premises shall conform to these regulations.
- D. Uses or adjuncts thereof which are nuisances shall not be permitted to continue as nonconforming uses.
- E. Any alteration, addition, or repair to any nonconforming structure permitted pursuant to subsection B., above, shall be protected by floodproofing measures pursuant to section 26-808C.4.a.

Sec. 26-808. Administration.

- A. *Floodplain administrator.* The director of public works of the City of Wheat Ridge or designee shall be the floodplain administrator. The duties of the administrator shall include, but not be limited to:
 - 1. *Coordination between departments and divisions:*
 - a. Coordinate the application, permit, review, appeal, certification, and enforcement processes between the office of the floodplain administrator and other departments and divisions as appropriate to ensure compliance with these regulations and an efficient use of staff.
 - b. All applications and certifications shall be submitted to the department of public works from which further routing to other departments and divisions and utility companies shall occur.
 - c. All administrative decisions require the property to be posted for fifteen (15) days. If no protests are filed, the permit may be issued by the floodplain administrator. If a protest is filed, then a public hearing before the board of adjustment will be scheduled following the applicable noticing and other requirements of section 26-109.
 - 2. *Development permit review:*
 - a. Review all development permits, which include building permits, to determine whether a property is within the SFHA and that the applicable requirements of these regulations have been satisfied.
 - b. Review all development permits to determine that all necessary permits have been obtained from federal, state, or local governmental agencies from which prior approval is required.
 - 3. *Information to be obtained and maintained:*
 - a. Obtain certification from applicant's engineer and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures.
 - b. Maintain for public inspection all records pertaining to the provisions of these regulations.
 - c. All records required by these regulations shall be maintained with the associated development permits in the department of public works.
 - 4. *Use of other base flood data.* When base flood elevation data has not been provided by the applicant or his representative, the floodplain administrator may obtain, review, and reasonably utilize any base flood and floodway elevation data available from federal, state, or other sources

as criteria for requiring that new construction, substantial improvements, or other development in the SFHA in order to administer subsections 26-806C., D. and F.

5. *Alteration or relocation of watercourses:*

- a. No alteration or relocation of a watercourse shall occur without the approval of the floodplain administrator. Consideration of gravel extraction operations shall be in accordance with state law (C.R.S. § 3-4-1-301).
- b. Upon receiving approval, the applicant shall notify adjacent communities and the Colorado Water Conservation Board prior to any alteration or relocation of a watercourse and submit evidence of such notification to FEMA. The applicant shall provide all data required by FEMA for a letter of map revision.
- c. The carrying capacity of an altered or relocated watercourse shall be maintained.

6. *Interpretation of digital flood insurance rate map (DFIRM) boundaries.* The floodplain administrator shall make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in subsection B., below.

B. *Mapping disputes.* The following procedure shall be used by the floodplain administrator in deciding contested cases in which the location of a district boundary is disputed:

1. In all cases, the person contesting the location of the district boundary shall be given a reasonable opportunity to submit his own technical evidence if he so desires. The floodplain administrator shall not allow deviations from the boundary line as mapped. If the evidence clearly and conclusively establishes that the mapped location of the line is incorrect, a FEMA letter of map revision must be completed by the applicant prior to the issuance of a development permit.
2. The administrator shall render a written opinion within thirty (30) days following receipt of the applicant's technical evidence setting forth the findings of fact and the reasons for the decision.
3. Applicants shall have the right to appeal such decisions to the board of adjustment. Application for appeal must be made within thirty (30) days.

C. *Floodplain permits:*

1. *Application.* There shall be two (2) types of floodplain permits: Class I and Class II. The approval of either floodplain permit does not substitute for any other permit that may be required by city ordinance, such as building permits.
2. *Floodplain permit—Class I.* Any use enumerated in this paragraph may be permitted only upon the issuance of a Class I floodplain permit by the floodplain administrator and in compliance with section 26-806. D.
 - a. *Structures for non-human occupancy.* Fences, sheds, signs, and accessory buildings may be permitted only upon a finding that the structures do not create a negative impact on the base flood elevation or flow velocity.
 - b. *Structures for human occupancy.* Improvements to existing structures may be permitted only upon a finding that the improvements proposed are not substantial improvements, as defined in section 26-802
 - c. *Fill or deposition of material.* Fills or deposition of materials may be permitted only upon a finding that the proposed plan will comply with section 26-806. D.
3. *Floodplain permit—Class II.* Any use enumerated in this paragraph may be permitted only upon the issuance of a Class II floodplain permit by the board of adjustment after a public hearing and in compliance with section 26-806. D.

- a. *Structures for human occupancy.* New construction or substantial improvement of any residential, commercial, industrial, or other nonresidential structure may be permitted only upon a certification by a registered professional engineer to the floodplain administrator that the lowest floor, including basement, is elevated to one (1) foot or more above the base flood elevation.
- b. *Manufactured homes.* New manufactured home parks and manufactured home subdivisions, expansions of existing manufactured home parks and manufactured home subdivisions, and existing manufactured home parks and manufactured home subdivisions where the repair, reconstruction or improvement of the street utilities exceeds fifty (50) percent of the fair market value of the streets, utilities, and pads before the repair, reconstruction, or improvement has commenced, and for manufactured homes not placed in a manufactured home park or manufactured home subdivision, may be permitted only upon a certification by a registered professional engineer to the floodplain administrator that:
 - (1) All manufactured homes or those to be substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one (1) foot or more above the base flood elevation and is securely anchored to an adequately anchored foundation system. Manufactured homes shall be anchored in accordance with subsection F.12. of this section; and
 - (2). Adequate surface drainage and access for a hauler will be provided.
- 4. *Submittal requirements.* The applicant for a floodplain permit shall provide the following information as a part of the application, unless waived by the administrator:
 - a. Completed application form and required application fee,
 - b. A plan certified by a registered engineer, competent in open-channel hydraulics, which accurately locates the applicant's property with respect to the SFHA limits, channel of stream, existing developments, together with all pertinent information such as: the nature of the proposal; legal description of the property; fill limits and elevations; building's lowest floor elevations in relation to the datum used on the FEMA map and study; floodproofing measures and elevation in relation to mean sea level to which any structure has been floodproofed; a report covering the effects of equal degree of encroachment of other nearby properties of the SFHA; and a description to the extent to which any watercourse will be altered or relocated as a result of the proposed development.
 - c. In addition, all subdivision proposals and other proposed new developments which are located in any SFHA shall include within such proposals base flood elevations.
 - d. As much of the following additional information as is deemed necessary by the floodplain administrator for the evaluation of the effects of the proposal upon flood flows and the floodplain and to render a decision on the floodplain permit:
 - (1) A typical cross-section showing the channel of the stream, the floodplain adjoining each side of the channel, cross-sectional area to be occupied by the proposed development, and high-water information.
 - (2) 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, and sanitary facilities; soil types; and other pertinent information.
 - (3) Profile showing the slope of the 100-year flood and the bottom of the channel or thalweg of the stream.
 - (4) Specifications for building construction and materials, floodproofing, filling, dredging, grading, channel improvement, storage of materials, water supply, and sanitary facilities.

(5) Hydraulic calculations for all proposed channelization.

5. *Factors upon which the decision shall be based.* The determination of the floodplain administrator or the board of adjustment on each floodplain permit shall be based on the effects of the proposed project with respect to the objectives and purpose of these regulations as stated in section 26-801
6. *Conditions attached to floodplain permits.* Upon consideration of the factors listed above and purposes of these regulations, the floodplain administrator or board of adjustment may attach such conditions as deemed necessary in furthering the purposes of these regulations. A copy of these conditions shall be presented to the applicant and a copy of these conditions shall be transmitted to the chief building official, which shall be kept on file.

Such conditions may include specifications for, without limitation because of specific enumeration, modification of sewage disposal and water supply facilities, modification of other waste disposal methods and facilities, landscaping periods of operation, operational controls, sureties, deed restrictions, and adequate floodproofing.

- a. *Floodproofing:* Floodplain permits requiring floodproofing measures such as the following shall be designed consistent with the flood protection elevation for the particular area and flood velocities, forces, and other factors associated with the flood protection elevation.

The floodplain administrator shall require that the applicant submit a plan or document certified by a registered professional engineer that the floodproofing measures are consistent with the flood protection elevation for the particular area.

Floodproofing measures may include the following:

- (1) Anchorage to resist flotation and lateral movement.
- (2) Installation of watertight doors, bulkheads, and shutters.
- (3) Reinforcement of walls to resist water pressures.
- (4) Use of paints, membranes, or mortars to reduce seepage of water through walls.
- (5) Addition of mass or weight to structures to resist flotation.
- (6) Installation of pumps to lower water levels in structures.
- (7) Construction of water supply and waste treatment systems to prevent the entrance of floodwaters.
- (8) Pumping facilities for subsurface drainage systems for buildings to relieve external foundation wall and basement floor pressures.
- (9) Construction to resist rupture or collapse caused by water pressure or floating debris.
- (10) Cutoff valves on sewer lines or the elimination of gravity flow basement drains.

Furthermore, measures must be taken to ensure that the construction does not in any way cause the 100-year flood to become more damaging to other residents within the SFHA.

7. *Class I floodplain permits; timeliness of decision.* The floodplain administrator shall render a written decision granting or denying the floodplain permit application. If a denial is made, the decision shall set forth the floodplain administrator's findings of fact and reasons for the denial. Applicants shall have the right to appeal any adverse decision to the board of adjustment. Such appeal must be filed with the board of adjustment within thirty (30) days from the date of the floodplain administrator's decision.

D. *Review by the board of adjustment.*

1. The board of adjustment of the City of Wheat Ridge shall hear and decide appeals of Class I floodplain permits which have been denied or conditionally approved by the floodplain administrator and requests for Class II floodplain permits as provided within these regulations.
2. The board of adjustment shall hear and decide appeals of Class I floodplain permits when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of these regulations. Any decision in favor of the applicant shall be considered a variance.
3. Those aggrieved by the decision of the board of adjustment may appeal such decisions to the Jefferson County District Court, as provided by the Wheat Ridge Code of Laws.
4. In passing upon such application, the board of adjustment shall consider all technical evaluation, all relevant factors, standards specified in other sections of these regulations, and:
 - a. The danger that materials may be swept into other lands to the injury of others;
 - b. The danger to life and property due to flooding or erosion damage;
 - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. The importance of the services provided by the proposed facility to the community;
 - e. The necessity to the facility of a waterfront location, where applicable;
 - f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - g. The compatibility of the proposed use with the existing and anticipated development;
 - h. The relationship of the proposed use to the comprehensive development plan and floodplain management program for the area;
 - i. The safety of access to the property during times of flood for ordinary and emergency vehicles;
 - j. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site;
 - k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical, and water systems, streets, and bridges.
5. Upon consideration of the factors of subsection D.4., above, the board of adjustment shall affirm or reverse, in whole or in part, the decision of the floodplain administrator (with respect to Class I floodplain permits), and may attach such conditions to the granting of floodplain permits or variance as it deems necessary to further the purposes of these regulations.
6. The floodplain administrator shall maintain the records of all appeal actions, including technical information, and report any variance to FEMA, upon request.

E. Conditions for class 1 floodplain permit variances.

1. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure..
2. Variances shall not be issued within any designated floodway.
3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
4. Variances shall only be issued upon:

- a. A showing of good and sufficient cause;
- b. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
- c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, or create nuisances, cause fraud on, or victimization of the public as identified in section 26-801(c), or conflict with existing local laws or ordinances.

Sec. 26-809. Certificate of compliance.

- A. No vacant land shall be occupied or used, and no building hereafter erected, altered, or moved into the SFHA until a floodplain permit has been issued by the floodplain administrator or the board of adjustment indicating that the use or proposed use or structure complies with the provisions herein.
- B. A certificate of compliance shall be requested for upon completion of any project, construction, or use for which a floodplain permit was granted. The use permitted by the project shall not commence until a certificate of compliance is issued.
- C. Issuance of a certificate of compliance by the floodplain administrator shall be required before a certificate of occupancy or completion may be issued by the department of community development. The certificate of compliance shall indicate that there has been compliance with these SFHA regulations and any conditions attached to a floodplain permit.
- D. The floodplain administrator shall require the applicant, when required by Section 26-808. C. 2., to submit a certification by a registered professional engineer that the finished fill and building floor elevations, floodproofing measures, or other flood protection factors were accomplished in compliance with the provisions of these regulations and any conditions attached to a floodplain permit. The floodplain administrator shall within ten (10) days after receipt of such certification from the applicant issue a certificate of compliance only if the building or premises and the proposed use thereof conform with all the requirements of these regulations and any conditions attached to a floodplain permit. Said submitted certification, along with a copy of the certificate of compliance, shall be kept on record in the department of public works.

Sec. 26-810. Enforcement and penalties.

Every structure, building, fill, or development placed or maintained within the SFHA in violation of these regulations is a public nuisance and the creation thereof may be enjoined and maintenance thereof may be abated by action at suit of the City of Wheat Ridge, the state, or any citizen thereof. Any person who places or maintains any structure, building, fill, or development within the SFHA in violation of these regulations shall be guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars (\$1,000.00) or imprisoned not more than one (1) year or both. Each day during which such violation exists is a separate offense.

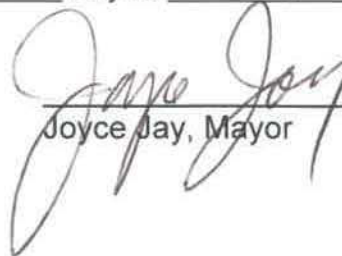
In the event it becomes necessary for the city to bring action to enjoin or abate any such violation of this section, the city shall be entitled to recover, in addition to any fine or penalty imposed hereby, its cost of bringing said action and/or abating any such structure, building, fill, or development placed or maintained within the SFHA, which costs shall include attorneys' fees as well as the actual costs incurred by the city.

Secs. 26-811—26-900. Reserved.

INTRODUCED, READ, AND ADOPTED on first reading by a vote of 8 to 0 on this **9th day of December, 2013**, ordered published with Public Hearing and consideration on final passage set for **January 13th, 2014**, at **7:00 p.m.**, in the Council Chambers, 7500 W. 29th, Wheat Ridge, CO, and that it take effect 15 day after final publication.

READ, ADOPTED AND ORDERED PUBLISHED on second and final reading by a vote of 8 to 0, this 13th day of January, 2014.

SIGNED by the Mayor on this 13th day of January, 2014.



Joyce Jay, Mayor

ATTEST:


Janelle Shaver, City Clerk



Approved As To Form


Gerald E. Dahl, City Attorney

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