

IN THE COUNTY LEGISLATURE OF JACKSON COUNTY, MISSOURI

AN ORDINANCE amending sections 24004., and 24006., Jackson County Code, 1984, relating to the development of land in unincorporated Jackson County.

ORDINANCE NO. 4755, July 20, 2015

INTRODUCED BY Frank White, Jr., County Legislator

WHEREAS, the Director of Public Works has recommended amendments to the County's Unified Development Code related to floodplain management governing the development of land in unincorporated Jackson County; and

WHEREAS, the Federal Emergency Management Agency has made certain recommendations to the County to bring the County's Floodplain Ordinance into compliance with the code of Federal Regulations; and

WHEREAS, at its meeting of May 21, 2015, the Plan Commission unanimously recommended these amendments; and

WHEREAS, the recommended amendments are in the best interests of the health, welfare, and safety of the citizens of Jackson County; now therefore

BE IT ORDAINED by the County Legislature of Jackson County, Missouri, as follows:

Section A. Enacting Clause. Sections 24004. and 24006., Jackson County, 1984, are hereby amended to incorporate the following revisions to specified subsections, with existing unaffected subsections to be renumbered as necessary:

24004.14 FLOODPLAIN OVERLAY DISTRICTS

a. Findings of Fact.

Flood losses resulting from periodic inundation. The flood hazard areas of the County are subject to inundation that 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.

b. General Causes of Flood Losses.

Flood losses are caused by (1) the cumulative effect of obstruction in floodways causing increases in flood heights and velocities; and (2) the occupancy of flood hazard by uses vulnerable to floods or hazardous to others that are inadequately elevated or otherwise protected from flood damages.

c. Methods Used to Analyze Flood Hazards.

The Flood Insurance Study (FIS) that is the basis of this section uses standard engineering methods of analyzing flood hazards which consist of a series of interrelated steps.

1. Selection of a regulatory flood that is based upon engineering calculations which permit a consideration of such flood factors as its expected frequency of occurrence, the area inundated, and the depth of inundation. The base flood selected for this section is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this section. It is in the general order of a flood which could be expected to have a one percent chance of occurrence in any one year as delineated on the Federal Insurance Administration's Flood Insurance Study, and illustrative materials (FIRM) of Jackson County, Missouri, dated September 29, 2006, as amended, and any future revisions thereto.

2. Calculation of water surface profiles based upon hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.

3. Computation of the floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.
4. Delineation of the floodway encroachment lines within which no obstruction is permitted that would cause any increases in flood height.
5. Delineation of the floodway fringes, i.e., that area outside the floodway encroachment lines, but that still is subject to inundation by the regulatory flood.

d. Statement of Purpose.

It is the purpose of the section to promote the public health, safety, and general welfare and to minimize those losses described above by provisions designed to:

1. Restrict prohibited uses which are dangerous to health, safety, or property in times of flood or cause increased flood heights or velocities;
2. Require that uses vulnerable to floods, including public facilities that serve those uses, be provided with flood protection at the time of initial construction;

3. Protect individuals from buying lands that are unsuited for intended purposes because of flood hazard; and

4. Ensure that eligibility is maintained for property owners in the community to purchase flood insurance in the Federal Flood Insurance Program.

e. Definitions.

The following definitions shall apply to this section:

"100-year Flood" see "Base Flood."

"Accessory Structure" means the same as "Appurtenant Structure."

"Actuarial Rates" see "Risk Premium Rates."

"Administrator" means the Federal Insurance Administrator.

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

"Appeal" means a request for review of the Floodplain Administrator's interpretation of any provision of this section or a request for a variance.

"Appurtenant Structure" means a structure that is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

"Area of Special Flood Hazard" is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

"Base Flood" means a flood having a one percent chance of being equaled or exceeded in any given year.

"Basement" means any area of the structure having its floor subgrade (below ground level) on all sides.

"Building" see *"Structure."*

"Chief Executive Officer" or "Chief Elected Official" means the Jackson County Executive who is charged with the authority to implement and administer laws, ordinances, and regulations for that community.

"Community" means any State or area or political subdivision thereof, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

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

"Elevated Building" means, for insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

"Eligible Community" or "Participating Community" means a community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

"Existing Construction" means, for the purposes of determining rates, structures for which the *"Start of Construction"* commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date.

"Existing Construction" may also be referred to as *"Existing Structures."*

"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 a community.

"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).

"Flood" or "Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters and/or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

"Flood Boundary and Floodway Map (FBFM)" means an official map of a community on which the Administrator has delineated both special flood hazard areas and the designated regulatory floodway.

"Flood Elevation Determination" means a determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

"Flood Elevation Study" means an examination, evaluation, and determination of flood hazards.

"Flood Fringe" means the area outside the floodway encroachment lines, but still subject to inundation by the regulatory flood.

"Flood Hazard Boundary Map (FHBM)" means an official map of a community, issued by the Administrator, where the boundaries of the flood areas having special flood hazards have been designated as (unnumbered or numbered) A zones.

"Flood Insurance Rate Map (FIRM)" means an official map of a community, on which the Administrator has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

"Flood Insurance Study (FIS)" means an examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations.

"Floodplain" or "Flood-prone Area" means any land area susceptible to being inundated by water from any source (see "Flood").

"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 floodplain and grading ordinances) and other applications of police power. The term describes such state or local regulations, in any combination thereof, that provide standards for the purpose of flood damage prevention and reduction.

"Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures that reduces or eliminates flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

"Floodway" or "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to

discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

"Floodway Encroachment Lines" means the lines marking the limits of floodways on Federal, State, and local floodplain maps.

"Freeboard" means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. *"Freeboard"* tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as bridge openings and the hydrological effect of urbanization of the watershed.

"Functionally Dependent Use" means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities and facilities that are necessary for the loading and unloading of cargo or passengers, 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 the proposed 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 U.S. 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 the 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.

"Lowest Floor" means the lowest floor of the lowest enclosed area, including basement. An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage, in an area other than a basement area, is not considered a building's lowest floor, **provided** that such enclosure is not built so as to render the structure in violation of the applicable floodproofing design requirements of this ordinance.

"Manufactured Home" means a structure, transportable in one or more sections, that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term *"Manufactured Home" does not include a "Recreational Vehicle."*

"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.

"Map" means the Flood Hazard Boundary Map (FHBM), Flood Insurance Rate Map (FIRM), or the Flood Boundary and Floodway Map (FBFM) for a community issued by the Federal Emergency Management Agency (FEMA).

"Market Value" or "Fair Market Value" means an estimate of what is fair, economic, just, and equitable value under normal local market conditions.

"Mean Sea Level" means, for purposes of the National Flood Insurance Program (NFIP), the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.

"New Construction" means, for the purposes of determining insurance rates, structures for which the *"Start of Construction"* commenced on or after the

effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "New Construction" means structures for which the "Start of Construction" commenced on or after the effective date of the floodplain management regulations adopted by a community and includes any subsequent improvements to such structures.

"New Manufactured Home Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lot 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 floodplain management regulations adopted by the community.

"NFIP" means the National Flood Insurance Program (NFIP).

"Participating Community" also known as an *"Eligible Community,"* means a community in which the Administrator has authorized the sale of flood insurance.

"Person" includes any individual or group of individuals, corporation, partnership, association, or any other entity, including Federal, State, and local governments and agencies.

"Principally Above Ground" means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

"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.

"Remedy A Violation" means to bring the structure or other development into compliance with Federal, State, or local floodplain management regulations; or, if this is not possible, to reduce the impacts of its noncompliance.

"Risk Premium Rates" means those rates established by the Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with Section 1307 of the National Flood Disaster Protection Act of 1973 and the accepted actuarial principles. *"Risk Premium Rates"* include provisions for operating costs and allowances.

"Special Flood Hazard Area" see *"Area of Special Flood Hazard."*

"Special Hazard Area" means an area having special flood hazards and shown on an FHBM, FIRM or FBFM as zones (unnumbered or numbered) A and AE.

"Start of Construction" includes substantial-improvements, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvements 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 slabs or footings, the installation of piles, the construction of columns, 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, the installation of streets and/or walkways, excavation for a basement, footings, piers, foundations, the erection of temporary forms, nor installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units or not part of the main structure. 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.

"State Coordinating Agency" means that agency of the state government, or other office designated by the governor of the state or by state statute at the

request of the Administrator to assist in the implementation of the National Flood Insurance Program (NFIP) in that state.

"Structure" means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. "Structure" for insurance purposes, means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

"Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to pre-damaged condition would equal or exceed 50 percent of the market value of the structure before 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. This term includes structures which have incurred "Substantial Damage," regardless of the actual repair work performed. The term does not, however, include either (1) any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or (2) any alteration of a "Historic Structure," provided that the alteration will not preclude the structure's continued designation as a "Historic Structure."

"Variance" means a grant of relief by the community from the terms of a floodplain management regulation. Flood insurance requirements remain in place for any varied use or structure and cannot be varied by the community.

"Violation" means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by this ordinance is presumed to be in violation until such time as that documentation is provided.

"Water Surface Elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain.

24004.[14] 15 FLOODWAY OVERLAY DISTRICT (FW)

- a. Purpose.** The areas designated in the Floodway Overlay (FW) District consist of land in drainageway channels where the construction of buildings would create obstructions to drainage or hazard to life or property. The FW District includes land in the floodway as defined by FEMA. It is intended that areas located in the FW District primarily will be used for private or public open space in accordance with the standards in section 24006.5 of this chapter.

- b. Permitted Uses.** In District FW, any use allowed in the underlying zoning district is permitted if none of these uses, when acting alone or in combination with other uses, will increase the regulatory flood elevation or in any way affect the free flow of floodwater. This effect of any allowed use must be documented by appropriate engineering studies if required by the Director.

- c. Identification of Boundaries.** The boundary limits of the FW District shall be identified and determined by the Flood Insurance Rate Maps for the unincorporated area of Jackson County, Missouri published by the Federal

Emergency Management Agency dated September 29, 2006; index panels 29095 CIND1A and 29095 CIND2A dated September 29, 2006.

- d. **Minimum Standards.** No filling or dumping shall be allowed which will increase flood hazard heights beyond existing limits or adversely affect the hydraulic efficiency or capacity of the floodway unless that filling or dumping is compensated by excavation in, or contiguous to, the filled area and does not adversely affect the hydraulic characteristics of the floodway. The term "filling" as used in this section shall mean the placement of structures, whether temporary or permanent, materials, or other matter which would obstruct the floodway or decrease its capacity.

24004.[15] 16 FLOODWAY FRINGE OVERLAY DISTRICT (FF)

- a. **Purpose.** The areas designated in the Floodway Fringe Overlay (FF) District consist of land outside the floodway but located where there is a one percent or greater chance of inundation in any given year. It is intended that areas located in the FF District primarily will be used for private or public open space in accordance with the standards in section 24006.5 of this chapter.

- b. Permitted Uses.** In the FF District, any use allowed in the underlying zoning district is permitted if none of those uses will adversely affect the capacity of channels or floodways of any tributary to the main stream, drainage ditch or any other drainage facility or system.
- c. Identification of Boundaries.** The boundary limits of FF District shall be identified and determined by the Flood Insurance Rate Maps for the unincorporated area of Jackson County, Missouri published by the Federal Emergency Management Agency dated September 29, 2006; index panels 29095 CIND1A and 29095 CIND2A dated September 29, 2006.
- d. Minimum Standards.**
1. **Construction of Structures.** All residential and non-residential structures shall be constructed on fill so that the first floor and basement floor are one (1) foot above the regulatory flood protection elevation.
 2. **Fill.** The fill shall at no point be lower than one foot (1') above the regulatory flood protection elevation for the particular area and shall extend at that elevation at least fifteen feet (15') beyond the limits of any structure erected on the fill.

3. **Certification of Elevation.** When elevation is used as a measure of flood protection, Certification as to the elevation of the lowest floor of a structure after its completion shall be provided to the Director by a qualified individual as defined by FEMA.

4. **Nonresidential Structures.** Nonresidential structures may be floodproofed to or above the regulatory flood elevation. When floodproofing is utilized for nonresidential structures, the Director shall be presented certification of the floodproofing measures from a qualified individual as defined by FEMA.

5. **Residences.** Any residence permitted in the FF District, whether site built or manufactured, shall be permanently anchored to a permanent foundation.

6. **Utility and Sanitary Facilities.** All utility and sanitary facilities shall be elevated or floodproofed up to regulatory flood protection elevation so that those facilities below the regulatory flood protection elevation are water tight with walls substantially impermeable to water.

7. **Structural Components.** The structural components of the utility and sanitary facilities shall have the capacity to resist hydrostatic and hydrodynamic loads and the effects of buoyancy.
8. **Certification.** Utilities and pipelines will be permitted on submission to the Director a letter certifying that all facilities will be below grade and that they will in no way affect the free flow of floodwater.
9. **Changes in Topography.** No changes in topography, such as by filling or excavation, will be allowed if these changes will result in a concentration of the natural flow of water so as to cause or increase drainage problems. The grading of any area shall be done in a manner to maintain proper drainage.
10. **Water Supply Systems.** Any water supply system must be designed to eliminate infiltration of flood waters into the system and discharges from the system into flood waters.
11. **On-Site Waste Disposal Systems.** Any on-site waste disposal system must be located or designed so as to eliminate contamination during or subsequent to flooding.

24006.5 STORMWATER MANAGEMENT

a. **Purpose.** The purposes of these stormwater management provisions are to protect life and property from reasonably preventable flood hazards; protect the quality of surface waters from contamination, and to minimize loss of valuable wildlife by preserving habitat and linkages between wildlife habitat areas.

b. **Design Objectives.**

1. In rural, suburban and, where appropriate, urban areas, natural drainageways shall be retained to minimize interference with floodwater conveyance, floodwater storage, wetlands, and both surface and subsurface hydrology. The Director may approve modifications to natural channels that are consistent with the other provisions of the UDC.
2. Development design should reduce the exposure of people and property to flood hazards and nuisances associated with inadequate management of stormwater runoff.

3. Erosion and sedimentation problems should be minimized to conserve/enhance water quality and conserve valuable top soil.
4. Development design should accommodate large floods and smaller, more frequent floods along major and minor waterways.
5. Stormwater systems should be designed to minimize future operational and maintenance expenses.
6. Stormwater systems should be designed to reduce the exposure of streets, utilities and other public facilities to damage from stormwater.
7. Development design should minimize need for rescue and relief efforts from floods, and provide sufficient access for such efforts when needed.

c. Stormwater System Design Requirements.

1. All improvements shall be designed in accordance with the most current version in Division V Design Criteria listed in Section 5600 of the standards established by the Kansas City Metropolitan

Chapter of the American Public Works Association (APWA Standards), except as modified in this section. All stormwater structures shall comply with the most current version in Section 5700 of the APWA Standards. Construction and materials specifications shall comply with Division II of the APWA Standards, except as modified by this UDC.

2. Stormwater pipe shall be rubber or neoprene gasketed. Drainage structures shall be precast or cast in place concrete in accordance with Jackson County Standard Details sheets, with eccentric cones for manholes and steps located under manhole access.
3. In urban development tiers as identified in the Master Plan, and in suburban tiers where average lot size is less than three (3) acres, the following exceptions shall apply:
 - (a) The provisions of Section 5601.5.A.1. of the APWA Standards shall be modified so that channelized stormwater flows are only required to be piped if the flow from a 10-year storm event can be conducted under gravity flow conditions by a 48-inch or narrower diameter reinforced concrete pipe at a one (1) percent grade.

- (b) The provisions of Section 5605.1.B of the APWA Standards shall be modified so that drainage easements are not automatically required for open stormwater conveyances. However, those areas which would be required to be located within easements according to the APWA Standards shall be designated as "no-build zone" on the proposed development plat or plan.
 - (c) The provisions of Section 5606 of the APWA Standards shall be modified to eliminate the requirement for dedication of detention and retention facilities. At the time of development approval, the applicant shall obtain the Director's approval of a plan for future maintenance of any such facilities required for the proposed development.
4. In rural development tiers as identified in the Master Plan, and in suburban tiers where average lot size is greater than two (2) acres, the following exceptions shall apply:
- (a) The provisions of Section 5601.5.A.1. of the APWA Standards shall be modified so that enclosed stormwater

conveyance systems are not required except under streets, driveways and other vehicular or pedestrian areas.

(b) The provisions of Section 5605.1.B. of the APWA Standards shall be modified so that drainage easements are not automatically required for open stormwater conveyances. However, those areas which would be required to be located within easements according to the APWA Standards shall be designated as "no-build zone" on the proposed development plat or plan.

(c) The provisions of Section 5606 of the APWA Standards shall be modified to eliminate the requirement for detention and retention facilities.

d. Drainage Study Required. A drainage study, sealed by a professional engineer, shall be required prior to approval of construction plans or issuance of a building permit for any development other than a single family dwelling, a two-family dwelling or farm structure. The drainage study shall include information necessary to demonstrate compliance with the APWA Standards as modified by this section and applicable DNR, U.S. Army Corps of Engineers or FEMA requirements. All applications for

single family permits shall clearly show the boundaries of the 100-year floodplain, if applicable, any channelized water conveyance draining an area of ten (10) acres or larger and sufficient grading information to illustrate the direction of storm water drainage. The Drainage Study shall be supported by a Hydrological Analysis, prepared by a Missouri Registered Engineer. The Director may require the analysis area include the entire inundation area, watershed, or sub-watershed.

All building permit applications within the Sni-a-bar Inundation (SBI) Overlay District shall be supported by a Hydrological Analysis incorporating an Inundation Study as required by MoDNR Dam Safety Program, prepared by a Missouri Registered Engineer. The Director may require that the analysis area include the entire inundation area, watershed, or sub-watershed.

e. Stormwater Facility Management.

1. Stormwater facilities shall be maintained to prevent retention of water on site except in designated retention ponds.
2. Landscaping and storage shall be maintained to prevent soil erosion or blockage of drainageways.

3. Property owners are responsible for removal of debris from stormwater conveyances and facilities on their property.
4. No fence, berm or structure shall interfere with drainage patterns unless approved by the Director or part of a Soil Conservation Service project.

f. Floodplain/Inundation Management.

1. **Scope of Floodplain/Inundation Management.** The provisions of this sub-section shall apply to all unincorporated areas of Jackson County identified on the Flood Insurance Rate Maps (FIRM) or Floodway Maps as promulgated by the Federal Emergency Management Agency (FEMA) and the Sni-a-bar Inundation Map and determined to be within the FW, FF, and SBI districts as defined in this unified development code.
2. **Disclaimer of Liability.** The provisions of this sub-section do not imply or otherwise warrant that areas outside of the FW, FF, and SBI districts or land uses permitted in said districts will be free from flooding or flood damage nor does this code create liability on the

part of Jackson County, its officers or employees for any flood damages that may result from reliance on these floodplain/inundation management provisions, FEMA or any regulations or administrative decision made hereunder.

3. **Permit Required.** In all areas covered by these floodplain/inundation management provisions, no development or construction, including manufactured homes, located, extended, converted, structurally altered or otherwise shall be permitted except upon County issuance of a permit to develop granted under the procedures stated herein:

(a) No person, firm or corporation shall initiate any development, construction or substantial improvement or cause the same to be done within the FW, FF, or SBI districts without first obtaining a separate permit for development under these floodplain/inundation management provisions and in compliance with FEMA or Missouri Department of Natural Resources Dam Safety regulations.

(b) Application for a permit for development, construction or substantial improvement within the FW, FF or SBI districts shall be made in writing on a form provided by the Director.

4. **Residences within the FW or FF Districts.** All residences to be placed or substantially improved within the FW or FF districts shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is at least one foot above base flood elevation and shall be permanently anchored to said foundation.

5. **Residences within the SBI District.** All residences to be placed or substantially improved within the SBI District shall be elevated on a permanent foundation such that the residence is at least three (3) feet above the inundation protection elevation and anchored to said foundation or hydrological event.

6. **Preventing Water Accumulation.** 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 or hydrological event.

7. **Automatic Equalization of Hydrostatic Flood Forces.** For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: 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. The bottom of all openings shall be no higher than one foot above grade in the FW or FF Districts and three feet above the inundation protection elevation in the SBI District. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

8. **Enforcement Officer.** The Director is hereby designated as the Enforcement Officer for compliance under these floodplain/inundation management provisions and FEMA regulations.

9. **Duties of Enforcement Officer.** The duties of the Enforcement Officer shall include, but not be limited, to the following:

- (a) Review of all applications for development permits to require that sites are reasonably safe from flooding/inundation and that the permit requirements of this section have been satisfied as well as the other requirements of these regulations.
- (b) Review of all permits for proposed developments to confirm that all necessary permits have been obtained from those Federal, state or local governmental agencies from which prior approval is required.
- (c) Notify adjacent communities and the Missouri Department of Natural Resources prior to any alteration or relocation of a watercourse, and to provide evidence of such notification for FEMA.
- (d) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

- (e) Require verification, recording and updating of records of the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, using reference marks ("RM") established by FEMA.

- (f) Require verification, recording and updating of records of the actual elevation (in relation to mean sea level) using reference marks ("RM") established by FEMA, to which the new or substantially improved structures have been floodproofed and certified by a qualified individual as defined by FEMA when floodproofing as defined herein is utilized for a particular structure.

- (g) Take any actions necessary to assure compliance with County and FEMA regulations in the granting or denial of applications for any permits in the FW, FF and SBI districts.

- (h) Require that all proposals for subdivisions and other new development (including manufactured home subdivisions or

parks) are consistent with the need to minimize floor damage and that:

- (1) all public utilities and facilities such as sewer, gas, electrical, and water systems are located, elevated and constructed to minimize or eliminate damage from floods or an hydrological event; and
- (2) adequate drainage is provided for the purpose of reducing exposure to flood or inundation hazards; and
- (3) regulatory flood and inundation protection elevations utilizing FEMA "RM" are included in all proposals for all development.

(i) Require annual training for continued education in floodplain management for all applicable staff.

(j) Maintain records of certification when issuing development permits in conformance with this section.

10. **Floodplain/Inundation Permit Application Requirements.** All written applications for development or substantial improvement in said districts shall:

- (a) Identify and describe the development to be covered by the permit;
- (b) Describe the land on which the proposed development is to be done by lot, block, tract and house and street address, or similar description that will readily identify and definitely locate the proposed building or development;
- (c) Indicate the use or occupancy for which the proposed development is intended;
- (d) Be accompanied by plans and specifications for proposed construction;
- (e) Be signed by the proposed permittee or his authorized agent who may be required to submit evidence to indicate such authority;

- (f) Provide such other information as reasonably may be required by the Enforcement Officer or as required from the applicant under any part of these regulations, including, but not limited, to evidence of compliance with FEMA regulations or guidelines for anchoring to prevent flotation and lateral movement, the use of flood resistant materials and utility equipment and construction methods which minimize flood damage.

11. **Flood Plain Considerations in Granting Variances.** The Board of Zoning Adjustment shall hear and decide appeals and requests for variances from the requirements of this sub-section. In passing upon such applications, the Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of these regulations, and:

- (a) the danger that materials may be swept onto other lands to the injury of others;
- (b) the danger to life and property due to flooding, inundation or erosion damage

- (c) the susceptibility of the proposed land use to flood damage or inundation and the effect of such damage on the individual owner;
- (d) the importance of the services provided by the proposed land use to the community;
- (e) the necessity to the proposed land use of a waterfront location, where applicable;
- (f) the availability of alternative locations, not subject to flooding, inundation or erosion damage, for the proposed land use;
- (g) the compatibility of the proposed land use with existing and anticipated development;
- (h) the relationship of the proposed land use to the comprehensive plan and floodplain/inundation management program for that area;

- (i) the safety of access to the property in times of flood/inundation for ordinance and emergency vehicles;
- (j) the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
- (k) the costs of providing governmental services during and after flood or inundation conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Effective Date: This Ordinance shall be effective immediately upon its passage by the County Executive.

APPROVED AS TO FORM:


Chief Deputy County Counselor


County Counselor

I hereby certify that the attached Ordinance, Ordinance No. 4755 introduced on July 20, 2015, was duly passed on August 10, 2015 by the Jackson County Legislature. The votes thereon were as follows:

Yeas 8

Nays 0


Abstaining 0

Absent 0

Excused 1

This Ordinance is hereby transmitted to the County Executive for his signature.

8-10-15
Date


Mary Jo Spino, Clerk of Legislature

I hereby approve the attached Ordinance No. 4755.

8-11-15
Date


Michael D. Sanders, County Executive