

**APPENDIX B  
Floodplain Ordinances by Community**


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## **Floodplain Ordinances: City of Arnold**

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### **Chapter 420 Floodplain Management**

#### **Section 420.010 Statutory Authorization, Findings Of Fact And Purposes.**

**[Ord. No. 14.529 (2734), 5-2-2019]** 

- A. Statutory Authorization. The Legislature of the State of Missouri, has in Section 77.260, RSMo., delegated the responsibility to local governmental units to adopt floodplain management regulations designed to protect the health, safety, and general welfare. Therefore, the City Council of the City of Arnold, Missouri, ordains as follows.
- B. Findings Of Fact.
  1. Flood Losses Resulting From Periodic Inundation. The special flood hazard areas of the City of Arnold, Missouri, are subject to 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. General Causes Of The Flood Losses. These flood losses are caused by:
    - a. The cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and
    - b. The occupancy of flood hazard areas by uses vulnerable to floods, hazardous to others, inadequately elevated, or otherwise unprotected from flood damages.
  3. Methods Used To Analyze Flood Hazards. The Flood Insurance Study (FIS) that is the basis of this Chapter uses a standard engineering method of analyzing flood hazards which consist of a series of interrelated steps.
    - a. Selection of a base 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 Chapter is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this Chapter. It is in the general order of a flood which could be expected to have a one-percent chance of occurrence in any one (1) year as

delineated on the Federal Insurance Administrator's FIS, and illustrative materials for Jefferson County dated June 20, 2019, as amended, and any future revisions thereto.

- b. Calculations of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.
  - c. Computation of a floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.
  - d. Delineation of floodway encroachment lines within which no development is permitted that would cause any increase in flood height.
  - e. Delineation of flood fringe, i.e., that area outside the floodway encroachment lines, but still subject to inundation by the base flood.
- C. **Statement Of Purpose.** It is the purpose of this Chapter to promote the public health, safety, and general welfare; to minimize those losses described in Section **420.010(B)(1)**; to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(d) by applying the provisions of this Chapter to:
1. Restrict or prohibit uses that are dangerous to health, safety, or property in times of flooding or cause undue increases in flood heights or velocities;
  2. Require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction; and
  3. Protect individuals from buying lands that are unsuited for the intended development purposes due to the flood hazard.

**Section 420.020 General Provisions.**  
**[Ord. No. 14.529 (2734), 5-2-2019]**

- A. **Lands To Which Chapter Applies.** This Chapter shall apply to all lands within the jurisdiction of the City of Arnold, Missouri, identified as numbered and unnumbered A Zones and AE Zones, on the Flood Insurance Rate Maps (FIRMs) for Jefferson County on map panels 29099C0108F, 29099C0109F, 29099C0116F, 29099C0117F, 29099C0119F, 29099C0128F, 29099C0129F, 29099C0136F, and 29099C0138F dated June 20, 2019, as amended, and any future revisions thereto. In all areas covered by this Chapter, no development shall be permitted except through the issuance of a floodplain development

permit, granted by the City Council or its duly designated representative under such safeguards and restrictions as the City Council or the designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community, and as specifically noted in Section **420.040**.

- B. Floodplain Administrator. The Community Development Director is hereby designated as the Floodplain Administrator under this Chapter.
- C. Compliance. No development located within the special flood hazard areas of this community shall be located, extended, converted, or structurally altered without full compliance with the terms of this Chapter and other applicable regulations.
- D. Abrogation And Greater Restrictions. It is not intended by this Chapter to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter imposes greater restrictions, the provisions of this Chapter shall prevail. All other ordinances inconsistent with this Chapter are hereby repealed to the extent of the inconsistency only.
- E. Interpretation. In their interpretation and application, the provisions of this Chapter 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 State Statutes.
- F. Warning And Disclaimer Of Liability. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions or the flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Chapter does not imply that areas outside the floodway and flood fringe or land uses permitted within such areas will be free from flooding or flood damage. This Chapter shall not create a liability on the part of the City of Arnold, any officer or employee thereof, for any flood damages that may result from reliance on this Chapter or any administrative decision lawfully made thereunder.
- G. Severability. If any Section, clause, provision, or portion of this Chapter is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this Chapter shall not be affected thereby.

**Section 420.030 Administration.**  
**[Ord. No. 14.529 (2734), 5-2-2019]**

- A. Floodplain Development Permit (Required). A floodplain development permit shall be required for all proposed construction or other development, including the placement of

manufactured homes, in the areas described in Section **420.020(A)**. No person, firm, corporation, or unit of government shall initiate any development or substantial-improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development.

- B. Designation Of Floodplain Administrator. The Community Development Director is hereby appointed to administer and implement the provisions of this Chapter.
- C. Duties And Responsibilities Of Floodplain Administrator. Duties of the Community Development Director shall, include, but not be limited to:
  - 1. Review of all applications for floodplain development permits to assure that sites are reasonably safe from flooding and that the floodplain development permit requirements of this Chapter have been satisfied.
  - 2. Review of all applications for floodplain development permits for proposed development to assure that all necessary permits have been obtained from Federal, State, or local governmental agencies from which prior approval is required by Federal, State, or local law.
  - 3. Review all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding.
  - 4. Issue floodplain development permits for all approved applications.
  - 5. Notify adjacent communities and the Missouri State Emergency Management Agency (Mo SEMA) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
  - 6. Assure that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse.
  - 7. Verify and maintain a record of the actual elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures.
  - 8. Verify and maintain a record of the actual elevation (in relation to mean sea level) that the new or substantially improved non-residential structures have been floodproofed.
  - 9. When floodproofing techniques are utilized for a particular non-residential structure, the Community Development Director shall require certification from a registered professional engineer or architect.

- D. Application For Floodplain Development Permit. To obtain a floodplain development permit, the applicant shall first file an application, in writing, on a form furnished for that purpose. Every floodplain development permit application shall:
1. Describe the land on which the proposed work is to be done by lot, block and tract, house and street address, or similar description that will readily identify and specifically locate the proposed structure or work.
  2. Identify and describe the work to be covered by the floodplain development permit.
  3. Indicate the use or occupancy for which the proposed work is intended.
  4. Indicate the assessed value of the structure and the fair market value of the improvement.
  5. Specify whether development is located in designated flood fringe or floodway.
  6. Identify the existing base flood elevation and the elevation of the proposed development.
  7. Give such other information as reasonably may be required by the Community Development Director.
  8. Be accompanied by plans and specifications for proposed construction which provide the following information:
    - a. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
    - b. Elevation in relation to mean sea level to which any nonresidential structure has been floodproofed;
    - c. Provide a certificate from a registered professional engineer or architect that nonresidential floodproofed structures meet the floodproofing criteria; and
    - d. Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development.
  9. Be signed by the permittee or his/her authorized agent who may be required to submit evidence to indicate such authority.

**Section 420.040 Provisions For Flood Hazard Reduction.  
[Ord. No. 14.529 (2734), 5-2-2019]**

- A. General Standards.

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1. No permit for floodplain development shall be granted for new construction, substantial-improvements, and other improvements, including the placement of manufactured homes, within any numbered or unnumbered A Zones and AE Zones, unless the conditions of this Section are satisfied.
2. All areas identified as unnumbered A Zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A Zones is subject to all provisions of this Chapter. If Flood Insurance Study data is not available, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources.
3. Until a floodway is designated, no new construction, substantial-improvements, or other development, including fill, shall be permitted within any numbered A Zone or AE Zone on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.
4. All new construction, subdivision proposals, substantial-improvements, prefabricated structures, placement of manufactured homes, and other developments shall require:
  - a. Design or adequate anchorage to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
  - b. Construction with materials resistant to flood damage;
  - c. Utilization of methods and practices that minimize flood damages;
  - d. All electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
  - e. New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems be located so as to avoid;
  - f. Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:
    - (1) All such proposals are consistent with the need to minimize flood damage;

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- (2) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
  - (3) Adequate drainage is provided so as to reduce exposure to flood hazards; and
  - (4) All proposals for development, including proposals for manufactured home parks and subdivisions, of five (5) acres or fifty (50) lots, whichever is less, include within such proposals base flood elevation data.
5. Storage, Material, And Equipment.
- a. The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive, or could be injurious to human, animal, or plant life is prohibited.
  - b. Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a flood warning.
6. Accessory Structures. Structures used solely for parking and limited storage purposes, not attached to any other structure on the site, of limited investment value, and not larger than four hundred (400) square feet, may be constructed at-grade and wet-floodproofed provided there is no human habitation or occupancy of the structure; the structure is of single-wall design; a variance has been granted from the standard floodplain management requirements of this Chapter; and a floodplain development permit has been issued.
- B. Specific Standards.
1. In all areas identified as numbered and unnumbered A Zones and AE Zones, where base flood elevation data have been provided, as set forth in Section **420.040(A)(2)** following provisions are required:
    - a. Residential Construction; Residential Remodel/Repair.
      - (1) Residential Construction. New construction of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to three (3) feet above base flood elevation.
      - (2) Residential Remodel/Repair. Substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to three (3) feet above the base flood elevation or higher.



- b. **Non-Residential Construction.** New construction or substantial-improvement of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to three (3) feet above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this Subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section **420.030(C)(9)**.
  
- c. **Requirements For All New Construction.**
  - (1) Require, for all new construction and substantial-improvements that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and 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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
    - (a) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
    - (b) The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
  2. Roadway access shall be provided for all new construction to an elevation at least to the 100-year flood elevation.
  
- C. **Manufactured Homes.**
  1. All manufactured homes to be placed within all unnumbered and numbered A Zones and AE Zones, on the community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement.
  2. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.
    - a. Over-the-top ties shall be provided at each of the four (4) corners of the manufactured

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- 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 a carrying force of four thousand eight hundred (4,800) pounds; and
  - d. Any building or additions to the manufactured home shall be anchored in accordance with this Subsection.
3. Require manufactured homes that are placed or substantially improved within unnumbered or numbered A Zones and AE Zones, on the community's FIRM on sites:
    - a. Outside of manufactured home park or subdivision;
    - b. In a new manufactured home park or subdivision;
    - c. In an expansion to an existing manufactured home park or subdivision; or
    - d. In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial-damage as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to three (3) feet above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
  4. Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A Zones and AE Zones, on the community's FIRM, that are not subject to the provisions of Section **420.040(C)(3)** of this Chapter, be elevated so that either:
    - a. The lowest floor of the manufactured home is at three (3) feet above the base flood level; or
    - b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- D. Floodway. Located within areas of special flood hazard established in Section **420.020(A)** are areas designated as floodways. Since the floodway is an extremely hazardous area due

to the velocity of flood waters that carry debris and potential projectiles, the following provisions shall apply:

1. The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.
2. The community shall prohibit any encroachments, 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 in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
3. If Section **420.040(D)(2)** is satisfied, all new construction and substantial-improvements shall comply with all applicable flood hazard reduction provisions of this Section.
4. In unnumbered A Zones, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources as set forth in Section **420.040(A)(2)**.

E. Recreational Vehicles.

1. Require that recreational vehicles placed on sites within all unnumbered and numbered A Zones and AE Zones on the community's FIRM either:
  - a. Be on the site for fewer than one hundred eighty (180) consecutive days;
  - b. Be fully licensed and ready for highway use\*; or
  - c. Meet the permitting, elevation, and the anchoring requirements for manufactured homes of this Chapter.

\* A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions.

F. Nonconforming Structures.

1. A structure or premises which was lawful before the passage or amendment of this Section but is not in conformity with the provisions of this Section may remain subject to the following conditions:

- a. No substantial improvement of that structure shall be allowed, which increases its nonconformity.
  - b. Structures or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming structures.
2. If any nonconforming structure suffers substantial damage by any means, including flood, it shall not be reconstructed if the cost is more than fifty percent (50%) of the market value of the structure before damage occurred, except if it is reconstructed in conformity with the provisions of this Section. This limitation does not include the cost of any alteration to comply with existing State or local health, sanitary, building or safety codes or regulations or the cost of any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.
  3. If any nonconforming structure is damaged by any means, including flood, the owner of the property shall be responsible for providing construction estimates from two (2) building contractors licensed by the City that shall certify the accuracy and completeness of the bid to repair all such damage. The construction estimates shall be reviewed by a professional estimator provided by the City unless the repair estimates are determined by the Community Development Director to be less than thirty percent (30%) of the market value of the structure before the damage occurred.
  4. Any substantial improvement to a structure shall require the entire structure to conform with the provisions of this Section.

**Section 420.050 Floodplain Management Variance Procedures.  
[Ord. No. 14.529 (2734), 5-2-2019]**

- A. Establishment Of Appeal Board. The Board of Adjustment as established by the City of Arnold shall act as the Appeal Board for the purposes of the Floodplain Regulations and will hear and decide appeals and requests for variances from the floodplain management requirements of this Chapter.
- B. Responsibility Of Appeal Board.
  1. Where an application for a floodplain development permit or request for a variance from the floodplain management regulations is denied by the Community Development Director, the applicant may apply for such floodplain development permit or variance directly to the Board of Adjustment, as defined in Section **420.050(A)**.
  2. The Board of Adjustment shall hear and decide appeals when it is alleged that there is an error in any requirement, decision, or determination made by the Community Development

Director in the enforcement or administration of this Chapter.

- C. Further Appeals. Any person aggrieved by the decision of the Zoning Board of Adjustment or any taxpayer may appeal such decision to the Jefferson County Circuit Court as provided in Section 89.110, RSMo.
- D. Floodplain Management Variance Criteria. In passing upon such applications for variances, the Board of Adjustment shall consider all technical data and evaluations, all relevant factors, standards specified in other Sections of this Chapter, and the following criteria:
  - 1. The danger to life and property due to flood damage;
  - 2. The danger that materials may be swept onto other lands to the injury of others;
  - 3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  - 4. The importance of the services provided by the proposed facility to the community;
  - 5. The necessity to the facility of a waterfront location, where applicable;
  - 6. The availability of alternative locations, not subject to flood damage, for the proposed use;
  - 7. The compatibility of the proposed use with existing and anticipated development;
  - 8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
  - 9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - 10. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters, if applicable, expected at the site; and
  - 11. 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.
- E. Conditions For Approving Floodplain Management Variances.
  - 1. Generally, variances may be issued for new construction and substantial-improvements to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing Subsections

**(E)(2)** through **(6)** below have been fully considered. As the lot size increases beyond the one-half (1/2) acre, the technical justification required for issuing the variance increases.

2. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination provided the proposed activity will not preclude the structure's continued historic designation.
3. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. 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, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
6. Notification.
  - a. A community shall notify the applicant, in writing, over the signature of a community official that:
    - (1) The issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage; and
    - (2) Such construction below the base flood level increases risks to life and property.
  - b. Such notification shall be maintained with the record of all variance actions as required by this Chapter.
- F. **Conditions For Approving Variances For Accessory Structures.** Any variance granted for an accessory structure shall be decided individually based on a case by case analysis of the building's unique circumstances. Variances granted shall meet the following conditions as

well as those criteria and conditions set forth in Subsections **(D)** and **(E)** of this Section. In order to minimize flood damages during the 100-year flood and the threat to public health and safety, the following conditions shall be included for any variance issued for accessory structures that are constructed at-grade and wet-floodproofed.

1. Use of the accessory structures must be solely for parking and limited storage purposes in flood-prone areas only.
2. For any new or substantially damaged accessory structures, the exterior and interior building components and elements (i.e., foundation, wall framing, exterior and interior finishes, flooring, etc.) below highest adjacent grade, must be built with flood-resistant materials in accordance with Section 420.040(A)(2)(b) of this Chapter.
3. The accessory structures must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure in accordance with Section **420.040(A)(4)(a)** of this Chapter. All of the building's structural components must be capable of resisting specific flood-related forces including hydrostatic, buoyancy, and hydrodynamic and debris impact forces.
4. Any mechanical, electrical, or other utility equipment must be located above highest adjacent grade or floodproofed so that they are contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with Section **420.040(A)(4)(d)** of this Chapter.
5. The accessory structures must meet all National Flood Insurance Program (NFIP) opening requirements. The NFIP requires that enclosure or foundation walls, subject to the 100-year flood, contain openings that will permit the automatic entry and exit of floodwaters in accordance with Section **420.040(B)(1)(c)**.
6. Equipment, machinery, or other contents must be protected from any flood damage.
7. No disaster relief assistance under any program administered by any Federal agency shall be paid for any repair or restoration costs of the accessory structures.
8. Notification.
  - a. A community shall notify the applicant, in writing, over the signature of a community official that:
    - (1) The issuance of a variance to construct a structure below highest adjacent grade will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars

(\$25.00) for one hundred dollars (\$100.00) of insurance coverage; and

- (2) Such construction below highest adjacent grade increases risks to life and property.
- b. Such notification shall be maintained with the record of all variance actions as required by this Chapter.
9. Wet-floodproofing construction techniques must be reviewed and approved by the community and registered professional engineer or architect prior to the issuance of any floodplain development permit for construction.

**Section 420.060 Penalties For Violation.**  
**[Ord. No. 14.529 (2734), 5-2-2019]**

- A. Violation of the provisions of this Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with granting of variances) shall constitute an ordinance violation. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars (\$500.00) and/or imprisoned for up to ninety (90) days, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense.
- B. Nothing herein contained shall prevent the City of Arnold or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

**Section 420.070 Amendments.**  
**[Ord. No. 14.529 (2734), 5-2-2019]**

The regulations, restrictions, and boundaries set forth in this Chapter may from time to time be amended, supplemented, changed, or appealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided, however, that no such action may be taken until after a public hearing in relation thereto, at which parties of interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in the City of Arnold. At least fifteen (15) days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Region VII office of the Federal Emergency Management Agency (FEMA). The regulations of this Chapter are in compliance with the National Flood Insurance Program (NFIP) regulations.

**Section 420.080 Definitions.**  
**[Ord. No. 14.529 (2734), 5-2-2019]**

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the same meaning they have in common usage and to give this Chapter its most



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reasonable application.

**100-YEAR FLOOD**

See "BASE FLOOD."

**ACCESSORY STRUCTURE**

The same as "APPURTENANT STRUCTURE."

**ACTUARIAL RATES**

See "RISK PREMIUM RATES."

**ADMINISTRATOR**

The Federal Insurance Administrator.

**AGENCY**

The Federal Emergency Management Agency (FEMA).

**AGRICULTURAL COMMODITIES**

Agricultural products and livestock.

**AGRICULTURAL STRUCTURE**

Any structure used exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities.

**APPEAL**

A request for review of the Floodplain Administrator's interpretation of any provision of this Chapter or a request for a variance.

**APPURTENANT STRUCTURE**

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**

The land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year.

**BASE FLOOD**

The flood having a one-percent chance of being equaled or exceeded in any given year.

**BASEMENT**

Any area of the structure having its floor subgrade (below ground level) on all sides.

**BUILDING**

See "STRUCTURE."

**CHIEF EXECUTIVE OFFICER, CHIEF ELECTED OFFICIAL or ENFORCEMENT OFFICER**

The official of the community who is charged with the authority to implement and administer laws, ordinances, and regulations for that community.

**COMMUNITY**

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**

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**

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**

A community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

**EXISTING CONSTRUCTION**

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**

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**

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 BOUNDARY AND FLOODWAY MAP (FBFM)**

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**

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**

An examination, evaluation and determination of flood hazards.

### **FLOOD FRINGE**

The area outside the floodway encroachment lines, but still subject to inundation by the regulatory flood.

### **FLOOD HAZARD BOUNDARY MAP (FHBM)**

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)**

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)**

An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

### **FLOOD or FLOODING**

A general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of inland; and/or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

### **FLOODPLAIN MANAGEMENT**

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**

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.

**FLOODPLAIN or FLOOD-PRONE AREA**

Any land area susceptible to being inundated by water from any source (see "FLOOD or FLOODING").

**FLOODPROOFING**

Any combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

**FLOODWAY ENCROACHMENT LINES**

The lines marking the limits of floodways on Federal, State and local floodplain maps.

**FLOODWAY or REGULATORY FLOODWAY**

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 (1) foot.

**FREEBOARD**

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**

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**

The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**HISTORIC STRUCTURE**

Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. 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;
3. 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
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - a. By an approved State program as determined by the Secretary of the Interior; or
  - b. Directly by the Secretary of the Interior in States without approved programs.

#### **LOWEST FLOOR**

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 Chapter.

#### **MANUFACTURED HOME**

A structure, transportable in one (1) 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**

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

#### **MAP**

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**

An estimate of what is fair, economic, just and equitable value under normal local market conditions.

### **MEAN SEA LEVEL**

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**

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**

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**

The National Flood Insurance Program (NFIP).

### **PARTICIPATING COMMUNITY or ELIGIBLE COMMUNITY**

Also known as an "ELIGIBLE COMMUNITY," a community in which the Administrator has authorized the sale of flood insurance.

### **PERSON**

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

### **PRINCIPALLY ABOVE GROUND**

At least fifty-one percent (51%) of the actual cash value of the structure, less land value, is above ground.

### **RECREATIONAL VEHICLE**

A vehicle which is:

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

### **REMEDY A VIOLATION**

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 non-compliance.

### **REPETITIVE LOSS**

Flood-related damages sustained by a structure on two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred.

### **RISK PREMIUM RATES**

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**

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 were within one hundred eighty (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**

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**

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**

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred. The term includes repetitive loss buildings (see definition).

For the purposes of this definition, "repair" is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the building commences.

The term does not apply to:

1. Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely 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, or
3. Any improvement to a building.



## **SUBSTANTIAL-IMPROVEMENT**

Any combination of reconstruction, alteration, or improvement to a building, taking place during a ten-year period, in which the cumulative percentage of improvement equals or exceeds fifty percent (50%) of the current market value of the building. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual repair work done.

The term does not apply to:

1. Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely 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, or
3. Any building that has been damaged from any source or is categorized as repetitive loss.

## **SUBSTANTIALLY IMPROVED EXISTING MANUFACTURED HOME PARKS OR SUBDIVISIONS**

The repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

## **VARIANCE**

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**

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 Chapter is presumed to be in violation until such time as that documentation is provided.

## **WATER SURFACE ELEVATION**

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.

# Floodplain Ordinances: City of Eureka

## Chapter 10A

### FLOODPLAIN MANAGEMENT

Editor's Note — Former Chapter 10A, Floodplain Management, derived from Ord. No. 801 §2; Ord. No. 805 §1; Ord. No. 1000 §§1 - 3, 9-3-1991; Ord. No. 1178 §1, 6-20-1995; Ord. No. 1256 §1, 10-15-1996; Ord. No. 1403 §§1 - 2, 4-20-1999 and Ord. No. 1561 §1, 10-2-2001, was repealed 12-13-2014 by §1 of Ord. No. 2319.

#### ARTICLE I

#### Statutory Authorization, Findings of Fact and Purposes

##### Section 10A-1. Statutory Authorization. [Ord. No. 2319 §1, 12-16-2014]

The Legislature of the State of Missouri has in Section 79.110 RSMo., delegated the responsibility to local governmental units to adopt floodplain management regulations designed to protect the health, safety, and general welfare. Therefore, the Board of Aldermen of the City of Eureka, Missouri, ordains as follows.

##### Section 10A-2. Findings of Fact. [Ord. No. 2319 §1, 12-16-2014]

(a) *Flood Losses Resulting From Periodic Inundation.* The special flood hazard areas of the City of Eureka, Missouri are subject to 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.

(b) *General Causes Of The Flood Losses.* These flood losses are caused by:

(1) The cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and

(2) The occupancy of flood hazard areas by uses vulnerable to floods, hazardous to others, inadequately elevated, or otherwise unprotected from flood damages.

(c) *Methods Used To Analyze Flood Hazards.* The Flood Insurance Study (FIS) that is the basis of this Chapter uses a standard engineering method of analyzing flood hazards which consist of a series of interrelated steps.

(1) Selection of a base 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 Chapter is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this Chapter. It is in the general order of a flood which could be expected to have a one percent (1%) chance of occurrence in

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any one (1) year as delineated on the Federal Insurance Administrator's FIS, and illustrative materials for St. Louis County dated February 4, 2015, as amended, and any future revisions thereto.

(2) Calculation of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.

(3) Computation of a floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.

(4) Delineation of floodway encroachment lines within which no development is permitted that would cause any increase in flood height.

(5) Delineation of flood fringe, i.e., that area outside the floodway encroachment lines, but still subject to inundation by the base flood.

**Section 10A-3. Statement of Purpose.** [Ord. No. 2319 §1, 12-16-2014]

It is the purpose of this Chapter to promote the public health, safety, and general welfare; to minimize those losses described in Article I, Section 10A-2(a); to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(d) by applying the provisions of this Chapter to:

(a) Restrict or prohibit uses that are dangerous to health, safety, or property in times of flooding or cause undue increases in flood heights or velocities;

(b) Require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction; and

(c) Protect individuals from buying lands that are unsuited for the intended development purposes due to the flood hazard.

ARTICLE II

**Definitions**

**Section 10A-4. Definitions.** [Ord. No. 2319 §1, 12-16-2014]

Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the same meaning they have in common usage and to give this Chapter its most reasonable application.

ACCESSORY STRUCTURE — The same as "Appurtenant Structure."

ACTUARIAL RATES — See "Risk Premium Rates."

ADMINISTRATOR — The Federal Insurance Administrator.

AGENCY — The Federal Emergency Management Agency (FEMA).

AGRICULTURAL COMMODITIES — Agricultural products and livestock.

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**AGRICULTURAL STRUCTURE** — Any structure used exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities.

**APPEAL** — A request for review of the Floodplain Administrator's interpretation of any provision of this Chapter or a request for a variance.

**APPURTENANT STRUCTURE** — A structure that is on the same parcel of property as the principle structure to be insured and the use of which is incidental to the use of the principal structure.

**AREA OF SPECIAL FLOOD HAZARD** — The land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year.

**BASE FLOOD** — The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

**BASEMENT** — 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** — The official of the community who is charged with the authority to implement and administer laws, ordinances and regulations for that community.

**COMMUNITY** — 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** — 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** — 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** — A community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP).

**EXISTING CONSTRUCTION** — 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** — 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** —

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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** — A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (a) The overflow of inland, and/or
- (b) The unusual and rapid accumulation or runoff of surface waters from any source.

**FLOOD BOUNDARY AND FLOODWAY MAP (FBFM)** — 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** — A determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent (1%) or greater chance of occurrence in any given year.

**FLOOD ELEVATION STUDY** — An examination, evaluation and determination of flood hazards.

**FLOOD FRINGE** — The area outside the floodway encroachment lines, but still subject to inundation by the regulatory flood.

**FLOOD HAZARD BOUNDARY MAP (FHBM)** — 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)** — 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)** — An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

**FLOODPLAIN OR FLOOD-PRONE AREA** — Any land area susceptible to being inundated by water from any source (see "flooding").

**FLOODPLAIN MANAGEMENT** — 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** — 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** — Any combination of structural and non-structural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

**FLOODWAY or REGULATORY FLOODWAY** — 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 (1) foot.

**FLOODWAY ENCROACHMENT LINES** — The lines marking the limits of floodways on Federal, State and local floodplain maps.

**FREEBOARD** — 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** — 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** — The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**HISTORIC STRUCTURE** — Any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a State Inventory of Historic Places in States with historic preservation programs which have been approved by the Secretary of 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** — 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 Chapter.

**MANUFACTURED HOME** — A structure, transportable in one (1) 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."

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**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.

**MAP** — 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** — An estimate of what is fair, economic, just and equitable value under normal local market conditions.

**MEAN SEA LEVEL** — 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** — 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** — 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) — The National Flood Insurance Program (NFIP).

**ONE HUNDRED (100) YEAR FLOOD** — See "Base Flood."

**PARTICIPATING COMMUNITY, ALSO KNOWN AS AN "ELIGIBLE COMMUNITY"** — 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** — At least fifty-one percent (51%) of the actual cash value of the structure, less land value, is above ground.

**RECREATIONAL VEHICLE**— A vehicle which is:

- (a) Built on a single chassis;
- (b) Four hundred (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** — To bring the structure or other development into compliance with

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Federal, State, or local floodplain management regulations; or, if this is not possible, to reduce the impacts of its non-compliance.

**REPETITIVE LOSS** — Flood-related damages sustained by a structure on two (2) separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred.

**RISK PREMIUM RATES** — 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** — 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 were within one hundred eighty (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** — The 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** — 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** — Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred. The term includes repetitive loss buildings (see definition). — For the purposes of this definition, "repair" is considered



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to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the building commences. —The term does not apply to:

- (a) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions, or
- (b) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure," or
- (c) Any improvement to a building.

**SUBSTANTIAL IMPROVEMENT** — Any combination of reconstruction, alteration, or improvement to a building, taking place during a 10-year period, in which the cumulative percentage of improvement equals or exceeds fifty percent (50%) of the current market value of the building. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures, which have incurred "repetitive loss" or "substantial damage," regardless of the actual repair work done. — The term does not apply to:

- (a) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions, or
- (b) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure," or
- (c) Any building that has been damaged from any source or is categorized as repetitive loss.

**SUBSTANTIALLY IMPROVED EXISTING MANUFACTURED HOME PARKS OR SUBDIVISIONS** — Is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

**VARIANCE** — 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 City.

**VIOLATION** — 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 Chapter is presumed to be in violation until such time as that documentation is provided.

**WATER SURFACE ELEVATION** — 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.

**ARTICLE III**

**General Provisions**

**Section 10A-5. Lands to Which This Chapter Applies.** [Ord. No. 2319 §1, 12-16-2014]

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This Chapter shall apply to all lands within the jurisdiction of the City of Eureka, Missouri, identified as numbered and unnumbered A Zones and AE Zones, on the Flood Insurance Rate Maps (FIRMs) for St. Louis County on map panels 29189C0265K, 29189C0268K, 29189C0269K, 29189C0288K, 29189C0289K, 29189C0352K, 29189C0356K, 29189C0357K, 29189C0376K, and 29189C0377K dated February 4, 2015, as amended, and any future revisions thereto. In all areas covered by this Chapter, no development shall be permitted except through the issuance of a floodplain development permit, granted by the Eureka Building Department or its duly designated representative under such safeguards and restrictions as the Eureka Building Department or the designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community, and as specifically noted in Article IV.

**Section 10A-6. Floodplain Administrator.** [Ord. No. 2319 §1, 12-16-2014]

The Building Commissioner is hereby designated as the Floodplain Administrator under this Chapter.

**Section 10A-7. Compliance.** [Ord. No. 2319 §1, 12-16-2014]

No development located within the special flood hazard areas of this community shall be located, extended, converted, or structurally altered without full compliance with the terms of this Chapter and other applicable regulations.

**Section 10A-8. Abrogation and Greater Restrictions.** [Ord. No. 2319 §1, 12-16-2014]

It is not intended by this Chapter to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter imposes greater restrictions, the provisions of this Chapter shall prevail. All other Municipal Code provisions inconsistent with this Chapter are hereby repealed to the extent of the inconsistency only.

**Section 10A-9. Interpretation.** [Ord. No. 2319 §1, 12-16-2014]

In their interpretation and application, the provisions of this Chapter 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 State Statutes.

**Section 10A-10. Warning and Disclaimer of Liability.** [Ord. No. 2319 §1, 12-16-2014]

The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions or the flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Chapter does not imply that areas outside the floodway and flood fringe or land uses permitted within such areas will be free from flooding or flood damage. This Chapter shall not create a liability on the part of the City of Eureka, any officer or employee thereof, for any flood damages that may result from reliance on this Chapter or any administrative decision lawfully made thereunder.

**Section 10A-11. Severability.** [Ord. No. 2319 §1, 12-16-2014]

If any Section, clause, provision, or portion of this Chapter is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this Chapter shall not be affected thereby.

ARTICLE IV

**Administration**

**Section 10A-12. Floodplain Development Permit (Required).** [Ord. No. 2319 §1, 12-16-2014]

A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in Article III, Section 10A-5. No person, firm, corporation, or unit of government shall initiate any development or substantial improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development.

**Section 10A-13. Designation of Floodplain Administrator.** [Ord. No. 2319 §1, 12-16-2014]

The Building Commissioner is hereby appointed to administer and implement the provisions of this Chapter.

**Section 10A-14. Duties and Responsibilities of Floodplain Administrator.** [Ord. No. 2319 §1, 12-16-2014]

Duties of the Building Commissioner shall, include, but not be limited to:

- (1) Review of all applications for floodplain development permits to assure that sites are reasonably safe from flooding and that the floodplain development permit requirements of this Chapter have been satisfied;
- (2) Review of all applications for floodplain development permits for proposed development to assure that all necessary permits have been obtained from Federal, State, or local governmental agencies from which prior approval is required by Federal, State, or local law;
- (3) Review all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding;
- (4) Issue floodplain development permits for all approved applications;
- (5) Notify adjacent communities and the Missouri State Emergency Management Agency (Mo SEMA) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA);
- (6) Assure that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse;
- (7) Verify and maintain a record of the actual elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures;
- (8) Verify and maintain a record of the actual elevation (in relation to mean sea level) that the new or substantially improved non-residential structures have been floodproofed;

(9) When floodproofing techniques are utilized for a particular non-residential structure, the Building Commissioner shall require certification from a registered professional engineer or architect.

**Section 10A-15. Application For Floodplain Development Permit.** [Ord. No. 2319 §1, 12-16-2014]

To obtain a floodplain development permit, the applicant shall first file an application, in writing, on a form furnished for that purpose. Every floodplain development permit application shall:

- (1) Describe the land on which the proposed work is to be done by lot, block and tract, house and street address, or similar description that will readily identify and specifically locate the proposed structure or work;
- (2) Identify and describe the work to be covered by the floodplain development permit;
- (3) Indicate the use or occupancy for which the proposed work is intended;
- (4) Indicate the assessed value of the structure and the fair market value of the improvement;
- (5) Specify whether development is located in designated flood fringe or floodway;
- (6) Identify the existing base flood elevation and the elevation of the proposed development;
- (7) Give such other information as reasonably may be required by the Building Commissioner;
- (8) Be accompanied by plans and specifications for proposed construction; and
- (9) Be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.

ARTICLE V

**Provisions for Flood Hazard Reduction**

**Section 10A-16. General Standards.** [Ord. No. 2319 §1, 12-16-2014]

(a) No permit for floodplain development shall be granted for new construction, substantial improvements, and other improvements, including the placement of manufactured homes, within any numbered or unnumbered A Zones and AE Zones, unless the conditions of this Section are satisfied.

(b) All areas identified as unnumbered A Zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A Zones is subject to all provisions of this Chapter. If Flood Insurance Study data is not available, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources.

(c) Until a floodway is designated, no new construction, substantial improvements, or other development, including fill, shall be permitted within any numbered A Zone or AE Zone on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

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(d) All new construction, subdivision proposals, substantial improvements, prefabricated structures, placement of manufactured homes, and other developments shall require:

(1) Design or adequate anchorage to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(2) Construction with materials resistant to flood damage;

(3) Utilization of methods and practices that minimize flood damages;

(4) All electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

(5) New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems be located so as to avoid impairment or contamination; and

(6) Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:

a. All such proposals are consistent with the need to minimize flood damage;

b. All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;

c. Adequate drainage is provided so as to reduce exposure to flood hazards; and

d. All proposals for development, including proposals for manufactured home parks and subdivisions, of five (5) acres or fifty (50) lots, whichever is lesser, include within such proposals base flood elevation data.

(e) *Storage, Material, And Equipment.*

(1) The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive, or could be injurious to human, animal, or plant life is prohibited.

(2) Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a flood warning.

(f) *Accessory Structures.* Structures used solely for parking and limited storage purposes, not attached to any other structure on the site, of limited investment value, and not larger than four hundred (400) square feet, may be constructed at-grade and wet-floodproofed provided there is no human habitation or occupancy of the structure; the structure is of single-wall design; a variance has been granted from the standard floodplain management requirements of this Chapter and a floodplain development permit has been issued.

(g) *Non-Conforming Use.* A structure, or the use of a structure or premises that was lawful

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before the passage or amendment of this Chapter, but which is not in conformity with the provisions of this Chapter, may be continued subject to the following conditions:

- (1) If such structure, use, or utility service is discontinued for sixty (60) consecutive months, any future use of the building shall conform to this Chapter.
- (2) If any non-conforming use or structure is destroyed by any means, including flood, it shall not be reconstructed if the cost is more than fifty percent (50%) of the pre-damaged market value of the structure. This limitation does not include the cost of any alteration to comply with existing State or local health, sanitary, building, safety codes, regulations or the cost of any alteration of a structure listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination.

**Section 10A-17. Specific Standards.** [Ord. No. 2319 §1, 12-16-2014]

In all areas identified as numbered and unnumbered A Zones and AE Zones, where base flood elevation data have been provided, as set forth in Article V, Section 10A-16(b), the following provisions are required:

- (1) *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.
- (2) *Non-residential construction.* New construction or substantial-improvement of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article IV, Section 10A-14(9).
- (3) Require, for all new construction and substantial-improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and 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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
  - (a) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and
  - (b) The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

**Section 10A-18. Manufactured Homes.** [Ord. No. 2319 §1, 12-16-2014]

(a) All manufactured homes to be placed within all unnumbered and numbered A Zones and AE Zones, on the community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may, include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(b) Require manufactured homes that are placed or substantially improved within unnumbered or numbered A Zones and AE Zones, on the community's FIRM on sites:

- (1) Outside of manufactured home park or subdivision;
- (2) In a new manufactured home park or subdivision;
- (3) In an expansion to and existing manufactured home park or subdivision; or
- (4) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial-damage as the result of a flood,

Be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one (1) foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(c) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A Zones and AE Zones, on the community's FIRM, that are not subject to the provisions of Article V, Section 10A-18(2) of this Chapter, be elevated so that either:

- (1) The lowest floor of the manufactured home is at one (1) foot above the base flood level; or
- (2) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

**Section 10A-19. Floodway.** [Ord. No. 2319 §1, 12-16-2014]

Located within areas of special flood hazard established in Article III, Section 10A-5 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris and potential projectiles, the following provisions shall apply:

- (1) The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.
- (2) The community shall prohibit any encroachments, 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 in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(3) If Article V, Section 10A-19(b) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article V.

(4) In unnumbered A Zones, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from Federal, State, or other sources as set forth in Article V, Section 10A-16(b).

(5) No buildings shall be constructed within one hundred (100) feet of a designated floodway. Detached elevated residential recreational structures are exempt from this restriction.

**Section 10A-20. Recreational Vehicles.** [Ord. No. 2319 §1, 12-16-2014]

Require that recreational vehicles placed on sites within all unnumbered and numbered A Zones and AE Zones on the community's FIRM either:

(1) Be on the site for fewer than one hundred eighty (180) consecutive days,

(2) Be fully licensed and ready for highway use\*; or

(3) Meet the permitting, elevation, and the anchoring requirements for manufactured homes of this Chapter.

\*A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions.

ARTICLE VI

**Floodplain Management Variance Procedures**

**Section 10A-21. Establishment of Appeal Board.** [Ord. No. 2319 §1, 12-16-2014]

The Planning and Zoning Commission as established by the City of Eureka shall hear and decide appeals and requests for variances from the floodplain management requirements of this Chapter.

**Section 10A-22. Responsibility of Appeal Board.** [Ord. No. 2319 §1, 12-16-2014]

(a) Where an application for a floodplain development permit or request for a variance from the floodplain management regulations is denied by the Building Commissioner, the applicant may apply for such floodplain development permit or variance directly to the Planning and Zoning Commission, as defined in Article VI, Section 10A-21.

(b) The Planning and Zoning Commission shall hear and decide appeals when it is alleged that there is an error in any requirement, decision, or determination made by the Building Commissioner in the enforcement or administration of this Chapter.



**Section 10A-23. Further Appeals.** [Ord. No. 2319 §1, 12-16-2014]

Any person aggrieved by the decision of the Planning and Zoning or any taxpayer may appeal such decision to the St. Louis County Circuit Court as provided in Section 89.110, RSMo.

**Section 10A-24. Floodplain Management Variance Criteria.** [Ord. No. 2319 §1, 12-16-2014]

In passing upon such applications for variances, the Planning and Zoning Commission shall consider all technical data and evaluations, all relevant factors, standards specified in other Sections of this Chapter, and the following criteria:

- (1) The danger to life and property due to flood damage;
- (2) The danger that materials may be swept onto other lands to the injury of others;
- (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (4) The importance of the services provided by the proposed facility to the community;
- (5) The necessity to the facility of a waterfront location, where applicable;
- (6) The availability of alternative locations, not subject to flood damage, for the proposed use;
- (7) The compatibility of the proposed use with existing and anticipated development;
- (8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (10) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters, if applicable, expected at the site; and
- (11) 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.

**Section 10A-25. Conditions For Approving Floodplain Management Variances.** [Ord. No. 2319 §1, 12-16-2014]

- (a) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (b) through (f) below have been fully considered. As the lot size increases beyond the one-half (1/2) acre, the technical justification required for issuing the variance increases.
- (b) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination provided the proposed activity will not preclude the structure's continued historic designation.
- (c) Variances shall not be issued within any designated floodway if any increase in flood levels

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during the base flood discharge would result.

(d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances shall only be issued upon:

(1) A showing of good and sufficient cause,

(2) A determination that failure to grant the variance would result in exceptional hardship to the applicant, and

(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(f) A community shall notify the applicant, in writing, over the signature of a community official that:

(1) The issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage, and

(2) Such construction below the base flood level increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this Chapter.

**Section 10A-26. Conditions For Approving Variances For Accessory Structures.** [Ord. No. 2319 §1, 12-16-2014]

(a) Any variance granted for an accessory structure shall be decided individually based on a case by case analysis of the building's unique circumstances. Variances granted shall meet the following conditions as well as those criteria and conditions set forth in Article VI, Sections 10A-24 and 10A-25 of this Chapter.

(b) In order to minimize flood damages during the 100-year flood and the threat to public health and safety, the following conditions shall be included for any variance issued for accessory structures that are constructed at-grade and wet-floodproofed.

(1) Use of the accessory structures must be solely for parking and limited storage purposes in flood-prone areas only.

(2) For any new or substantially damaged accessory structures, the exterior and interior building components and elements (e.g., foundation, wall framing, exterior and interior finishes, flooring, etc.) below highest adjacent grade, must be built with flood-resistant materials in accordance with Article V, Section 10A-16(d)(2) of this Chapter.

(3) The accessory structures must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure in accordance with Article V, Section 10A-16(d)(1) of this Chapter. All of the building's structural components must be

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capable of resisting specific flood related forces including hydrostatic, buoyancy, and hydrodynamic and debris impact forces.

(4) Any mechanical, electrical, or other utility equipment must be located above highest adjacent grade or floodproofed so that they are contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with Article V, Section 10A-16(d)(4) of this Chapter.

(5) The accessory structures must meet all National Flood Insurance Program (NFIP) opening requirements. The NFIP requires that enclosure or foundation walls, subject to the 100-year flood, contain openings that will permit the automatic entry and exit of floodwaters in accordance with the NFIP regulations.

(6) Equipment, machinery, or other contents must be protected from any flood damage.

(7) No disaster relief assistance under any program administered by any Federal agency shall be paid for any repair or restoration costs of the accessory structures.

(8) A community shall notify the applicant, in writing, over the signature of a community official that:

a. The issuance of a variance to construct a structure below highest adjacent grade will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage, and

b. Such construction below highest adjacent grade increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this Chapter.

(9) Wet floodproofing construction techniques must be reviewed and approved by the community and registered professional engineer or architect prior to the issuance of any floodplain development permit for construction.

#### ARTICLE VII

##### **Penalties for Violation**

**Section 10A-27. Penalties For Violation.** [Ord. No. 2319 §1, 12-16-2014]

Violation of the provisions of this Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with granting of variances) shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars (\$500.00), and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Eureka or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

#### ARTICLE VIII

##### **Amendments**

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**Section 10A-28. Amendments.** [Ord. No. 2319 §1, 12-16-2014]

The regulations, restrictions, and boundaries set forth in this Chapter may from time to time be amended, supplemented, changed, or appealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided, however, that no such action may be taken until after a public hearing in relation thereto, at which parties of interest and citizens shall have an opportunity to be heard. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in the City of Eureka. At least twenty (20) days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Region VII office of the Federal Emergency Management Agency (FEMA). The regulations of this Chapter are in compliance with the National Flood Insurance Program (NFIP) regulations.

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# **Floodplain Ordinances: City of Fenton**

*No Ordinances Provided*

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# **Floodplain Ordinances: City of Pacific**

*No Ordinances Provided*

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# **Floodplain Ordinances: City of Sunset Hills**

*No Ordinances Provided*

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# **Floodplain Ordinances: City of Union**

*No Ordinances Provided*



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# **Floodplain Ordinances: City of Valley Park**

*No Ordinances Provided*

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# **Floodplain Ordinances: City of Wildwood**

*No Ordinances Provided*

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# **Floodplain Ordinances: Franklin County**

*No Ordinances Provided*

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# **Floodplain Ordinances: Jefferson County**

*No Ordinances Provided*

# Floodplain Ordinances: St. Louis County

## 1003.101 - "FP" Flood Plain District Regulations.

—1. *Purpose and intent.* The flood hazard areas of St. Louis County, Missouri 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. These flood losses are caused by the cumulative effect of obstructions in flood plains causing increases in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise protected from flood damages.

This section is therefore necessary to protect human life and health; to minimize expenditure of public money for costly flood control projects; to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; to minimize prolonged business interruptions; to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in flood plains; and to help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas.

It is the purpose of this section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion or in flood heights or velocities; require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; control the alteration of natural flood plains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters; and control filling, grading, dredging and other development which may increase erosion or flood damage.

2. *Scope of provisions.* This section contains the regulations for the "FP" Flood Plain District of St. Louis County. Property zoned "FP" is also zoned under another applicable District governed by the St. Louis County Zoning Ordinance. The "FP" District constitutes an "overlay" district, and the other applicable zoning district constitutes the underlying zoning. This section controls in the case of any conflict between the regulations contained in this section and the regulations otherwise applicable to any property by virtue of its "underlying" zoning.

All of the area within the "FP" District is the flood plain, as defined in this chapter, and is subject to all of the provisions of this section. A portion of the area within this district is designated as the floodway, as established by the maps applicable to this district. Property within the floodway is subject to those provisions of this section which so state.

3. *Permitted land uses and developments.* The following land uses and developments are permitted in this district:

- (1) Boat docks for other than commercial or industrial use.
- (2) Farming.
- (3) Golf courses.
- (4) Hunting, fishing and propagation of wildlife.
- (5) Local public utility facilities of one hundred thousand (100,000) cubic feet in volume or less, provided that any installation, other than poles and equipment attached to the poles, shall be:
  - (a) Adequately screened with landscaping, fencing or walls, or any combination thereof, or

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- (b) Placed underground, or
- (c) Enclosed in a structure in such a manner so as to blend with and complement the character of the surrounding area.

All plans for screening these facilities shall be submitted to the department of planning for review. No building permit or installation permit shall be issued until these plans have been approved by the department of planning.

- (6) Public parks.
- (7) Scenic areas.
- (8) Swimming pools.
- (9) Wildlife refuge.
- (10) Portions of single-family lots when a contiguous area is provided for each lot which is either out of the flood plain or removed from flooding in accordance with subsection 13 of this section or both, provided that such contiguous area must provide the minimum lot area required by the applicable zoning district or special procedure permit or one (1) acre, whichever is less.

4. *Conditional land use and development permits issued by the commission.* The following land uses and developments may be permitted under conditions and requirements specified in section 1003.181, "Conditional Use Permits":

- (1) Airports, heliports and landing strips.
- (2) Drive-in theaters.
- (3) Extraction of raw materials from the earth and processing of these raw materials.
- (4) Facilities for the composting of yard wastes.
- (5) Local public utility facilities over one hundred thousand (100,000) cubic feet in volume.
- (6) Outdoor rifle and archery ranges.
- (7) Port and dock facilities.
- (8) Public utility facilities.
- (9) Railroad tracks and associated structures.
- (10) Recreational uses such as athletic fields and picnic grounds.

5. *Conditional land use and development, based on underlying zoning, issued by the commission.* The following land uses and developments, if permitted or conditional uses in the underlying zoning district applicable to the property, may be authorized in this district under conditions and requirements specified in section 1003.181, "Conditional Use Permits".

- (1) Towed vehicle storage yards.
- (2) Open storage, not including salvage yards or junk yards.
- (3) Sewage treatment plants.
- (4) Miniature golf courses and golf driving ranges.

6. *Accessory land uses and developments.* Subject to compliance with the procedures of this section, accessory buildings, structures and uses are permitted in conjunction with a permitted land use or development or (unless restricted by applicable condition) a conditional land use or development when such accessory building, structure or use is customarily found in conjunction with the primary use, is a reasonably necessary incident to the primary use, is clearly subordinate to the primary use, and serves only to further the successful utilization of the primary use. Accessory uses include the following:

- (1) Devices for the generation of energy, such as solar panels, wind generators or similar devices.

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(2) Individual sewage treatment facilities serving an individual nonresidential use, as approved by the appropriate regulatory agency. The sewage treatment facilities shall not exceed five thousand (5,000) gallons per day flow.

(3) Manufacturing plants, such as asphalt or concrete plants, when located on the same premises as an operation authorized under section 1003.181, "Conditional Use Permit Procedure," engaged in the extraction of raw materials from the earth and the processing of these raw materials.

(4) Storage and processing of reclaimed asphalt pavement ("RAP") for use in the production of asphalt when an approved asphalt plant is located on the same premises or when an approved asphalt plant is located adjacent to premises used as quarry authorized under section 1003.181, "Conditional Use Permit Procedure." RAP stockpiles shall be no closer than four hundred (400) feet to any adjoining residence district and shall be no more than twenty-five (25) feet in height or contain more than seventy-five thousand (75,000) tons of RAP; except, however, that stockpiles more than one thousand (1,000) feet from a residence district shall be no more than thirty-five (35) feet in height nor contain more than a twenty-four-month estimated supply of RAP for the adjoining asphalt plant. On or before January 15 of each year, the owner of any property supporting this accessory use shall file with the director of planning, subject to audit by the St. Louis County Auditor, separate written reports for RAP less than and RAP more than one thousand (1,000) feet from a residence district, stating (a) estimated tonnage as of January 1st of the preceding year, (b) amount of RAP in tons received during the preceding year, (c) amount of RAP in tons that was processed into asphalt mix during the preceding year, (d) estimated tonnage as of December 31 of the preceding year, and (e) estimated number of months' supply as of January 1 of that year.

Accessory uses in this district do not include residences.

7. *Performance standards.* All uses in the "FP" Flood Plain District shall operate in conformity with the appropriate performance standards contained in section 1003.163, "Zoning Performance Standard Regulations."

8. *Height limitations for structures.* The total height of any structure shall not exceed that permitted in the underlying zoning district, except where the use of the property includes structures restricted in height by the requirements of a conditional use permit.

9. *Lot area and yard requirements.* The minimum lot area and yard requirements for land uses in the "FP" Flood Plain District shall be as set out below:

(1) Minimum lot area requirement:

(a) The following permitted land uses shall be situated on tracts of land providing not less than the following areas:

Use	Minimum Area
Farming	20 acres
Golf courses	5 acres

(b) Permitted and conditional land uses shall be situated on tracts of not less than the minimum lot area required by the provisions of the underlying zoning district regulations.

(2) Yard Requirements: General:

(a) Front yards. No structure shall be allowed within twenty-five (25) feet of any roadway right-of-way line.

Flood plain:

(b) No residential building or structure attached thereto shall be allowed within twenty-five (25) feet of any area designated "FP" Flood Plain District, or within any stream buffer or setback

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area, whichever is greater.

(3) Specific yard requirements and exceptions:

(a) Notwithstanding any other provision of this chapter, on corner lots, no structure or plant material exceeding three (3) feet in height above the elevation of the street pavement is allowed within the sight distance triangle.

(b) Permitted information signs, six (6) feet or less in height, are allowed within the minimum front yard setback.

(c) Permitted directional signs, three (3) feet or less in height, are allowed within the minimum front yard setback.

(d) Any structure, other than a public utility tower authorized by a conditional use permit, which exceeds thirty (30) feet in height shall be set back from all property lines at least one (1) additional foot for every foot of height above thirty (30) feet.

10. *Off-street parking and loading requirements.* Off-street parking and loading requirements and setbacks for parking areas, loading spaces and internal drives are set forth in section 1003.165, "Off-Street Parking and Loading Requirements."

11. *Sign regulations.* Sign regulations are set forth in section 1003.165, "Sign Regulations."

12. *Use and development of floodway.* All development or use of the Floodway is prohibited involving any encroachment, including fill, new construction or material improvement of any existing structure unless certification by a registered professional engineer is provided to and approved by the Department of Highways and Traffic that the development will not result in any increase in flood levels during occurrence of the base flood discharge. If and only if this subsection is complied with, use or development of the floodway may be carried out subject to the restrictions of the remainder of this section.

13. *Use and development under underlying district regulations.* Property in this district may be used and developed in accordance with the regulations of the underlying zoning upon compliance with the following procedure:

(1) The property is placed in such conditions as to effectively remove the property from flooding based on the flood elevation study approved by the United States Federal Emergency Management Agency ("FEMA") and used as basic data for determining the boundaries of the Flood Hazard Boundary Map, being the "FP" Flood Plain District as governed by this section. Effective removal of the property from flooding requires provision of adequate freeboard as determined by the Department of Highways and Traffic in light of the reasonably anticipated ultimate development of the watershed. If the standards required by this subsection are satisfactorily met in respect to any lot or tract of land in the "FP" Flood Plain District, the property may then be used for such uses and under such regulations as are contained in the district regulations of the district designated after the "FP" designation as the underlying district for the particular property .

(2) (a) The property owner or user shall submit to the department of highways and traffic a plan for flood protection. The plan shall be approved if its implementation would adequately protect against the amount of water that would flow past the property in cubic feet per second during the base flood, as determined by the flood elevation study approved by FEMA and used as basic data for determining the boundaries of the flood insurance rate map and the flood hazard boundary map.

(b) The plan must include a report by a registered professional engineer of demonstrated competence in hydrology as to the adequacy of the proposed plan for flood protection relative to the elevation of the flood plain and the flow as determined in the flood elevation study approved by FEMA and hydrologic problems as may result from the improvements. Where the plan only delineates the flood plain elevation on the ground and no change or construction is proposed involving land below the flood plain elevation, the plan may be submitted under the seal of a registered land surveyor.

(c) The department of highways and traffic may require such additional data or engineering



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studies from the applicant as may be necessary to determine the adequacy of the proposed plan for flood protection.

14. *Use and development in the "FP" Flood Plain District.* Prior to any use or development of property pursuant to the permitted or conditional uses designated in this district, if such use or development involves man-made change to real property below the flood elevation, including construction or erection of any building or structure, or any filling, grading, paving, mining, dredging, excavation or drilling, the following procedure shall be complied with:

(1) The property owner or user shall submit to the department of highways and traffic a development plan.

(2) The plan shall include a report by a registered professional engineer of demonstrated competence in hydrology as to the adequacy of the proposed plan to avoid hydrologic problems as may result from the improvements. Where the plan only delineates the flood plain elevation on the ground and no change or construction is proposed involving land below the flood plain elevation, the plan may be submitted under the seal of a registered land surveyor.

(3) The department of highways and traffic may require such additional data or engineering studies from the applicant as may necessary to determine the adequacy of the proposed plan.

15. *Effect of plan approval.*

(1) The approval by the department of highways and traffic of such plans for flood protection does not constitute a representation, guarantee, or warranty of any kind by St. Louis County, the department of highways and traffic, the county planning commission or by any officer or employee of either as to the practicality or safety of any protective measure and shall create no liability upon or cause of action against such public body, officers, or employees for any damage that may result pursuant thereto.

(2) Approval of the plan by the department of highways and traffic does not relieve an owner or user from fulfilling the requirements set forth in any other county ordinance regarding construction or development within the flood plain.

(O. No. 25982, 1-13-15)

Chapter 1008 - FLOODPLAIN MANAGEMENT REGULATIONS

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1008.010 - Findings of Fact and Purposes.

—St. Louis County derives its zoning authority from its Charter, as authorized by Article VI, Section 18(c) of the Missouri Constitution, and has the power and authority to adopt floodplain management regulations designed to protect the health, safety, and general welfare. Therefore, the County Council of St. Louis County, Missouri ordains as follows:

1. *Findings of fact.*

(1.) *Flood losses resulting from periodic inundation.* The special flood hazard areas of unincorporated St. Louis County, Missouri are subject to 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.) *General causes of the flood losses.* These flood losses are caused by (1) the cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and (2) the occupancy of flood hazard areas by uses vulnerable to floods, hazardous to others, inadequately elevated, or otherwise unprotected from flood damages.

(3.) *Methods used to analyze flood hazards.* The flood insurance study (FIS) that is the basis of this chapter uses a standard engineering method of analyzing flood hazards which consist of a series of interrelated steps.

(a.) Selection of a base 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 chapter is representative of large floods which are characteristic of what can be expected to occur on the particular streams subject to this chapter. It is in the general order of a flood which could be expected to have a one (1) percent chance of occurrence in any one (1) year as delineated on the Federal Insurance Administrator's FIS, and illustrative for materials for St. Louis County dated February 4, 2015 as amended, and any future revisions thereto.

(b.) Calculation of water surface profiles are based on a standard hydraulic engineering

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analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.

(c.) Computation of a floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.

(d.) Delineation of floodway encroachment lines within which no development is permitted that would cause any increase in flood height.

(e.) Delineation of flood fringe, i.e., that area outside the floodway encroachment lines, but still subject to inundation by the base flood.

2. *Statement of purpose.* It is the purpose of this chapter to promote the public health, safety, and general welfare; to minimize those losses described in Section 1008.010-1(1); to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(d) by applying the provisions of this chapter to:

(1.) Restrict or prohibit uses that are dangerous to health, safety, or property in times of flooding or cause undue increases in flood heights or velocities;

(2.) Require uses vulnerable to floods, including public facilities that serve such uses, be provided with flood protection at the time of initial construction; and

(3.) Protect individuals from buying lands that are unsuited for the intended development purposes due to the flood hazard.

(O. No. 25982, 1-13-15)

1008.020 - Definitions.

—Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the same meaning they have in common usage and to give this chapter its most reasonable application.

*100-year flood.* See "base flood."

*Accessory structure* means the same as "appurtenant structure."

*Actual start of construction* 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. 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. 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.

*Actuarial rates.* See "risk premium rates."

*Administrator* means the Federal Insurance Administrator.

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

*Agricultural commodities* means agricultural products and livestock.

*Agricultural structure* means any structure used exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities.

*Appeal* means a request for review of the floodplain administrator's interpretation of any provision of this chapter or a request for a variance.

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

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*Area of special flood hazard* is the land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year.

*Base flood* means the flood having a one (1) 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 official of the community 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 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 (1) 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.

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*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 "flooding").

*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 reduce or eliminate 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 (1) 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 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 chapter.

*Manufactured home* means a structure, transportable in one (1) 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 (2) or more manufactured home lots for rent or sale.

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*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 North American Vertical Datum 1988 (NAVD88) 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 fifty-one (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) four hundred (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.

*Repetitive loss* means flood-related damages sustained by a structure on two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, equals or exceeds twenty-five (25) percent of the market value of the structure before the damage occurred.

*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 were within one hundred eighty (180) days of the permit date. See also "Actual start of construction."

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*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 its before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred. The term includes "repetitive loss" buildings (see definition).

For the purposes of this definition, "repair" is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the building commences.

The term does not apply to:

- a.) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions; or
- b.) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure"; or
- c.) Any improvement to a building.

*Substantial improvement* means any combination of reconstruction, alteration, or improvement to a building, taking place during a ten-year period, in which the cumulative percentage of improvement equals or exceeds fifty (50) percent of the current market value of the building. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures, which have incurred "repetitive loss" or "substantial damage", regardless of the actual repair work done.

The term does not apply to:

- a.) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions; or
- b.) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure;" or
- c.) Any building that has been damaged from any source or is categorized as repetitive loss.

*Substantially improved existing manufactured home parks or subdivisions* is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty (50) percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced in an "existing manufactured home park or subdivision" as defined in this section.

*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 chapter is in violation.

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*Water surface elevation* means the height, in relation to the North American Vertical Datum 1988 (NAVD88) (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain.

(O. No. 25982, 1-13-15)

1008.030 - General provisions.

—1. *Lands to which chapter applies.* This chapter shall apply to all lands within unincorporated St. Louis County identified as numbered and unnumbered A zones, AE, AO, and AH Zones, on the Flood Insurance Rate Map (FIRM) for St. Louis County on Index panels 29189CIND1A, 29189CIND2A and 29189CIND3A dated February 4, 2015 as amended, and any future revisions thereto. In all areas covered by this chapter, no development shall be permitted except after the issuance of a floodplain development permit, granted by the Director of Highways and Traffic or their duly designated representative under such safeguards and restrictions as the Floodplain Administrator or their designated representative may reasonably impose for the promotion and maintenance of the general welfare, health of the inhabitants of the community, and as specifically noted in Section 1008.040.

2. *Compliance.* No development located within the special flood hazard areas of this community shall be located, extended, converted, or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

3. *Abrogation and greater restrictions.* It is not intended by this chapter to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail. In the event of an inconsistency between the provisions of this chapter and the provisions of other ordinances, it is the intention of the County Council that the provisions of this chapter shall prevail and be applied.

4. *Interpretation.* In their interpretation and application, the provisions of this chapter 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 State statutes.

5. *Warnings and disclaimer of liability.* The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions or the flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This chapter does not imply that areas outside the floodway and flood fringe or land uses permitted within such areas will be free from flooding or flood damage. This chapter shall not be construed to create a liability on the part of St. Louis County, any officer or employee thereof, for any flood damages that may result from reliance on this chapter or any administrative decision lawfully made thereunder.

6. *Severability.* If any section, clause, provision, or portion of this chapter is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this chapter shall not be affected thereby.

(O. No. 25982, 1-13-15)

1008.040 - Administration.

—1. *Floodplain development permit.* A floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas described in Section 1008.030-1. No person, firm, corporation, or unit of government shall initiate any development or substantial improvement or cause the same to be done without first obtaining a separate floodplain development permit for each structure or other development. A land disturbance permit as required by Chapter 1114 Land Disturbance Code and/or a building



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permit as required by Chapter 1115 Building Code or Chapter 1116 Residential Code is also required prior to starting any construction.

2. *Designation of Floodplain Administrator.* The Director of Highways and Traffic shall administer and implement the provisions of this chapter.

3. *Duties and responsibilities of Floodplain Administrator.* Duties of the Director of Highways and Traffic, or the Director's duly authorized representative, shall include, but not be limited to:

(1.) Review of all applications for floodplain development permits to examine whether the sites are reasonably safe from flooding and that the floodplain development permit requirements of this chapter have been satisfied;

(2.) Review of all applications for floodplain development permits for proposed development to determine whether all necessary permits have been obtained from federal, state, or local governmental agencies from which prior approval is required by federal, state, or local law;

(3.) Review all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding;

(4.) Issue floodplain development permits for all approved applications;

(5.) Notify adjacent communities and the Missouri State Emergency Management Agency (Mo SEMA) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA);

(6.) Verify that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse.

(7.) Verify and maintain a record of the actual elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved structures;

(8.) Verify and maintain a record of the actual elevation (in relation to mean sea level) that the new or substantially improved non-residential structures have been floodproofed;

(9.) When floodproofing techniques are utilized for a particular non-residential structure, the Director of Highways and Traffic shall require certification from a registered professional engineer or architect.

4. *Application for floodplain development permit.* To obtain a floodplain development permit, the applicant shall first file an application in writing on a form furnished by the Director of Highways and Traffic for that purpose. Every floodplain development permit application shall:

(1.) Describe the land on which the proposed work is to be done by lot, block and tract, house and street address, or similar description that will readily identify and specifically locate the proposed structure or work;

(2.) Identify and describe the work to be covered by the floodplain development permit;

(3.) Indicate the use or occupancy for which the proposed work is intended;

(4.) Indicate the assessed value of the structure and the fair market value of the improvement;

(5.) Specify whether development is located in designated flood fringe or floodway;

(6.) Identify the existing base flood elevation and the elevation of the proposed development;

(7.) Give such other information as reasonably may be required by the Director of Highways and Traffic;

(8.) Be accompanied by plans and specifications for proposed construction; and

(9.) Be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.

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1008.050 - Provisions for Flood Hazard Reduction.

—1. *General standards.*

(1.) No permit for floodplain development shall be granted for new construction, substantial improvements, and other improvements, including the placement of manufactured homes, within any numbered or unnumbered A zones, AE, AO, and AH zones, unless the conditions of this section are satisfied.

(2.) All areas identified as unnumbered A zones on the FIRM are subject to inundation of the 100-year flood; however, the base flood elevation is not provided. Development within unnumbered A zones is subject to all provisions of this chapter. If Flood Insurance Study data is not available, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from federal, state, or other sources.

(3.) Until a floodway is designated, no new construction, substantial improvements, or other development, including fill, shall be permitted within any numbered A zone or AE zone on the FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

(4.) All new construction, subdivision proposals, substantial improvements, prefabricated structures, placement of manufactured homes, and other developments shall require:

- (a.) Design or adequate anchorage to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (b.) Construction with materials resistant to flood damage;
- (c.) Utilization of methods and practices that minimize flood damages;
- (d.) All electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (e.) New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems be located so as to avoid impairment or contamination; and
- (f.) Subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, located within special flood hazard areas are required to assure that:
  - (1) All such proposals are consistent with the need to minimize flood damage;
  - (2) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
  - (3) Adequate drainage is provided so as to reduce exposure to flood hazards; and
  - (4) All proposals for development, including proposals for manufactured home parks and subdivisions, of five (5) acres or fifty (50) lots, whichever is lesser, include within such proposals base flood elevation data.

(5.) *Storage, material, and equipment.*

(a.) The storage or processing of materials within the special flood hazard area that are in time of flooding buoyant, flammable, explosive, or could be injurious to human, animal, or plant life is prohibited.

(b.) Storage of other material or equipment may be allowed if not subject to major damage by floods, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a flood warning.

2. *Specific standards.*

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(1.) In all areas identified as numbered and unnumbered A zones, AE, and AH Zones, where base flood elevation data have been provided, as set forth in Section 1008.050-1(2.), the following provisions are required:

(a.) *Residential construction.* New construction or substantial improvement of any residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated to one (1) foot above base flood elevation.

(b.) *Non-residential construction.* New construction or substantial improvement of any commercial, industrial, or other non-residential structures, including manufactured homes shall have the lowest floor, including basement, elevated to one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 1008.040-3(9.).

(c.) *Roadway construction.* New public roadways shall be constructed to a minimum of one (1) foot above base flood elevation.

(d.) Require, for all new construction and substantial improvements, that fully enclosed areas below lowest floor used solely for parking of vehicles, building access, or storage in an area other than a basement and 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 floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

(1) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided; and

(2) The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

3. *Manufactured homes.*

(1.) All manufactured homes to be placed within all unnumbered and numbered A zones, AE, and AH zones, on the community's FIRM shall be required to be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

(2.) Require manufactured homes that are placed or substantially improved within unnumbered or numbered A zones, AE, and AH zones, on the community's FIRM on sites:

(a.) Outside of manufactured home park or subdivision;

(b.) In a new manufactured home park or subdivision;

(c.) In an expansion to an existing manufactured home park or subdivision; or

(d.) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood;

be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one (1) foot above the base flood elevation and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(3.) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within all unnumbered and numbered A zones, AE and AH

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zones, on the community's FIRM, that are not subject to the provisions of Section 1008.050-3(2.) of this chapter, be elevated so that either:

- (a.) The lowest floor of the manufactured home is at one (1) foot above the base flood level; or
- (b.) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

4. *Areas of shallow flooding (AO and AH zones).* Located within the areas of special flood hazard as described in Section 1008.030-1 are areas designated as AO zones. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions apply:

(1.) *AO zones.*

- (a.) All new construction and substantial improvements of residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two (2) feet if no depth number is specified).
- (b.) All new construction and substantial improvements of any commercial, industrial, or other non-residential structures, including manufactured homes, shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community FIRM (at least two (2) feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely floodproofed to that so that the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (c.) Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.

(2.) *AH zones.*

- (a.) The specific standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in Article 4, Section B.
- (b.) Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.

5. *Floodways.* Located within areas of special flood hazard established in Section 1008.030-1 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters that carry debris and potential projectiles, the following provisions shall apply:

- (1.) The community shall select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood without increasing the water surface elevation of that flood more than one (1) foot at any point.
- (2.) The community shall prohibit any encroachments, 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 in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
- (3.) If Section 1008.050-5.2 is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 1008.050.

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(4.) In unnumbered A zones, the community shall obtain, review, and reasonably utilize any base flood elevation or floodway data currently available from federal, state, or other sources as set forth in Section 1008.050-1.2.

6. *Recreational vehicles.*

(1.) Require that recreational vehicles placed on sites within all unnumbered and numbered A zones, AO, AE, and AH zones on the community's FIRM either:

- (a.) Be on the site for fewer than one hundred eighty (180) consecutive days;
- (b.) Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions; or
- (c.) Meet the permitting, elevation, and anchoring requirements for manufactured homes of this chapter.

(O. No. 25982, 1-13-15)

1008.060 - Floodplain Management Variance Procedures.

—1. The Board of Zoning Adjustment shall hear and decide appeals and requests for variances from the floodplain management requirements of this chapter pursuant to its powers and procedures set forth in Chapter 1004. Any person aggrieved by the decision of the Board of Zoning Adjustment may pursue a review of such decision to the Circuit Court of St. Louis County pursuant to law.

2. *Floodplain management variance criteria.* In passing upon such applications for variances, the Board of Zoning Adjustment shall consider all technical data and evaluations, all relevant factors, standards specified in other sections of this chapter, and the following criteria:

- (1.) The danger to life and property due to flood damage;
- (2.) The danger that materials may be swept onto other lands to the injury of others;
- (3.) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (4.) The importance of the services provided by the proposed facility to the community;
- (5.) The necessity to the facility of a waterfront location, where applicable;
- (6.) The availability of alternative locations, not subject to flood damage, for the proposed use;
- (7.) The compatibility of the proposed use with existing and anticipated development;
- (8.) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- (9.) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (10.) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters, if applicable, expected at the site; and,
- (11.) 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.

3. *Conditions for approving floodplain management variances.*

(1.) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (2.) through (6.) below have been fully

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considered. As the lot size increases beyond the one-half (½) acre, the technical justification required for issuing the variance increases.

(2.) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or local inventory of historic places upon determination provided the proposed activity will not preclude the structure's continued historic designation.

(3.) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(4.) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(5.) 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, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(6.) A community shall notify the applicant in writing over the signature of a community official that (1) the issuance of a variance to construct a structure below base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage and (2) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with the record of all variance actions as required by this chapter.

(O. No. 25982, 1-13-15)

1008.070 - Disclosure of Flood Hazard Status of Property Upon Conveyance.

—1. Any person who sells property in a flood hazard area shall disclose the floodplain status of the property in writing to the person(s) or entity(ies) to whom the property is being conveyed. Written disclosure shall be made prior to execution of any written contract for conveyance of the property, or prior to conveyance if no written contract is executed.

2. For purposes of this section, the term "person who sells property" shall include, in addition to the seller, any agent of the seller with respect to the transaction who has direct contact either with the buyer or with a person who is an agent of the buyer with respect to the transaction. This includes real estate agents and brokers, attorneys, and corporate officers or other persons acting on behalf of an entity selling property subject to the provisions of this chapter.

3. The term "flood hazard area" shall be defined as land in the floodplain subject to a one (1) percent or greater chance of flooding in any given year, as established by Section 1008.030-1.

4. It shall be a complete defense and bar to prosecution that the person selling property, or an agent on such person's behalf, has sought and obtained within six (6) months prior to execution of the contract for sale, or six (6) months prior to conveyance if no written contract is executed, a floodplain determination from the St. Louis County Department of Public Works or from a registered engineer or surveyor stating that the property is not located in a flood hazard area.

5. The Department of Public Works shall, within five (5) days of an application therefor pursuant to this section, issue a floodplain determination stating whether or not the property designated by the named locator number is within a flood hazard area. Applications for floodplain determination shall be upon the form designated by the Director of Public Works and shall include the locator number of the parcel of land for which determination is sought, and shall be accompanied by a fee as required by Zoning Code Chapter 1003, Section 1003.200-2.3(d).

6. Any person found guilty of violating Section 1008.070-1 shall upon conviction be fined not more than one thousand dollars (\$1,000.00), but shall not be subject to the penalties set forth in Section 1008.090.

(O. No. 25982, 1-13-15)

1008.080 - Nonconforming Use.

—1. A structure or the use of a structure or premises which was lawful before the passage or amendment of the chapter but which is not in conformity with the provisions of this chapter may be continued subject to the following conditions:

(1) No such use or substantial improvement of that use shall be expanded, changed, enlarged, or altered in a way which increases its nonconformity.

(2) If such use is discontinued for twelve (12) consecutive months, any future use of the building premises shall conform to this chapter. All public utilities shall notify the Zoning Enforcement Officer in writing of instances of nonconforming uses where utility services have been discontinued for a period of twelve (12) months.

(3) Uses or adjuncts thereof which are or become nuisances shall not be entitled to continue as nonconforming uses.

2. If any nonconforming use or structure is destroyed by any means, including flood, it shall not be reconstructed if the cost is more than fifty (50) percent of the market value of the structure before the damage occurred except that if it is reconstructed in conformity with the provisions of this chapter. This limitation does not include the cost of any alteration to comply with existing state or local health, sanitary, building, or safety codes or regulations or the cost of any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.

(O. No. 25982, 1-13-15)

1008.090 - Penalties for Violation.

—No person shall violate any of the provisions of this chapter. Any person who violates a provision of this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than one thousand dollars (\$1,000.00). Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent St. Louis County or other appropriate authority from taking such other lawful action as is necessary to prevent or remedy any violation.

(O. No. 25982, 1-13-15)

1008.100 - Amendments.

—The regulations, restrictions, and boundaries set forth in this chapter may from time to time be amended, supplemented, changed, or appealed to reflect any and all changes in the National Flood Disaster Protection Act of 1973, provided, however, that no such action may be taken until after a public hearing in relation thereto, at which parties of interest and members of the public shall have an opportunity to be heard. Notice of the time and place of such hearing shall be published in a newspaper of general circulation in St. Louis County. At least twenty (20) days shall elapse between the date of this publication and the public hearing. A copy of such amendments will be provided to the Region VII office of the Federal Emergency Management Agency (FEMA). The regulations of this chapter are in compliance with the National Flood Insurance Program (NFIP) regulations.

(O. No. 25982, 1-13-15)