

TITLE III: PROPERTY/LAND USE AND DEVELOPMENT

CHAPTER IV.

FLOOD PLAIN MANAGEMENT

SECTION 1. DEFINITIONS.

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

- 1.1 Basement. Any enclosed area of a building which has its floor or lowest level below ground level (subgrade) on all sides. Also see "lowest floor".
- 1.2 Development. Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.
- 1.3 Factory-built Home. Any structure, designed for residential use, which is wholly or in substantial part, made, fabricated, formed or assembled in manufacturing facilities for installation or assembly and installation, on a building site. For the purpose of this ordinance, factory-built homes include mobile homes, manufactured homes and modular homes and also include park trailers, travel trailers and other similar vehicles placed on a site for greater than one hundred eighty (180) consecutive days.
- 1.4 Factory-Built Home Park. A parcel or contiguous parcels of land divided into two or more factory-built home lots for rent or sale.
- 1.5 Flood. A general and temporary condition or partial or complete inundation of normally dry land areas resulting from the overflow of streams or rivers or from the unusual and rapid runoff of surface waters from any source.
- 1.6 Flood Elevation. The elevation floodwaters would reach at a particular site during the occurrence of a specific flood. For instance, the 100-year flood elevation if the elevation of floodwaters related to the occurrence of the 100-year flood.
- 1.7 Flood Insurance Rate Map. The official map prepared as part of (but published separately from) the Flood Insurance Study which delineates both the flood hazard areas as the risk premium zones applicable to the community.
- 1.8 Flood Insurance Study. A study initiated, funded, and published by the Federal Insurance Administration for the purpose of evaluating in detail the existence and severity of flood hazards; providing the city with necessary information for adopting a floodplain management program; and establishing actuarial flood insurance rates.
- 1.9 Floodplain. Any land area susceptible to being inundated by water as a result of a flood.
- 1.10 Floodplain Management. An overall program of corrective and preventive measures of reducing flood damages and promoting the wise use of floodplains, including but not limited to, emergency preparedness plans, flood control works, floodproofing and floodplain management regulations.
- 1.11 Floodproofing. Any combination of structural and nonstructural additions, changes or adjustments to structures, including utility and sanitary facilities, which will reduce or eliminate flood damage to such structures.

- 1.12** Floodway. The channel of a river or stream and those portions of the floodplains adjoining the channel, which are reasonably required to carry and discharge floodwaters or flood flows so that confinement of flood flows to the floodway area will not result in substantially higher flood levels and flow velocities.
- 1.13** Floodway Fringe. Those portions of the floodplain, other than the floodway, which can be filled, levied, or otherwise obstructed without causing substantially higher flood levels or flow velocities.
- 1.14** Lowest Floor. The floor of the lowest enclosed area is a building including a basement except when all the following criteria are met:
- a. The enclosed area is designed to flood to equalize hydrostatic pressure during floods with walls or openings that satisfy the provisions of Section 4.1(D)1 and
 - b. The enclosed area is unfinished (not carpeted, dry walled, etc.) and used solely for low damage potential uses such as building access, parking or storage, and
 - c. Machinery and service facilities (e.g., hot water heater, furnace & electrical service) contained in the enclosed area are located at least one foot (1') above the 100-year flood level, and
 - d. The enclosed area is not a "basement" as defined in this section.
- In cases where the lowest enclosed area satisfies criteria a, b, c, and d above, the lowest floor is the floor of the next highest enclosed area that does not satisfy the criteria above.
- 1.15** New Construction. (new buildings, factory-built home parks). Those structures or development for which the start of construction commenced on or after October 17, 1986 (the effective date of the Flood Insurance Rate Map).
- 1.16** One Hundred (100) Year Flood. A flood, the magnitude of which has a one percent (1%) chance of being equaled or exceeded in any given year or which, on the average, will be equaled or exceeded at least once every one hundred (100) years.
- 1.17** Structure. Anything constructed or erected on the ground or attached to the ground, including, but not limited to, buildings, factories, sheds, cabins, factory-built homes, storage tanks, and other similar uses.
- 1.18** Substantial Improvement. Any improvement to a structure which satisfies either of the following criteria:
- a. Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred "substantial damage" regardless of the owner or actual work performed. Substantial Improvement also means "cumulative substantial improvement." The term "substantial improvement" does not, however, include either (1) any project for improvement of the structure to correct existing violation of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement officer and which are the minimum necessary to assure safe living conditions or (2) any alteration of a "historic

structure" provided that the alteration will not preclude the structures continued designation as a "historic structure".

- b. Any addition which increase the original floor area of a building by twenty-five percent (25%) or more. All additions constructed after April 1, 1987 shall be added to any proposed addition in determining whether the total increase in original floor space would exceed twenty-five percent (25%).

- 1.19** Recreational Vehicle. A vehicle which is: (a) built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (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.
- 1.20** 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 50% of the market value of the structure before the damage occurred. Substantial Damage also means flood-related damages sustained by a structure on two separate occasions, and not specific to one owner, during a 10 year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred. For the purposes of this definition, "restoration" is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the building commences.
- 1.21** Historic Structure. A structure that is: (a) listed individually in the Natural 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 Natural 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, 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.
- 1.22** Cumulative Substantial Improvement. Any reconstruction, rehabilitation, addition, or other improvements of a structure that equals or exceeds 50% of the market value of the structure at the time of the improvement or repair, regardless of the owner, when counted cumulatively for 10 years.
- 1.23** Repetitive Loss. Flood related damages sustained by a structure on two separate occasions, during a 10 year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred .
- 1.24** Existing Construction. Any structure for which the "start of construction" commenced before the effective date of the first floodplain management regulations adopted by the community.
- 1.25** Existing Factory-Built Home Park or Subdivision. A factory-built home park or subdivision for which the construction of facilities for servicing the lots on which the factory-built 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 first floodplain management regulations adopted by the community.
- 1.26** Expansion of Existing Factory-Built Home Park or Subdivision. The preparation of additional sites by the construction of facilities for servicing the lots on which the factory-built 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.)

- 1.27** Minor Projects. Small development activities (except for filling, grading, and excavating) valued at less than \$ 500.
- 1.28** Routine Maintenance of Existing Buildings and facilities. Repairs necessary to keep a structure in a safe and habitable condition that do not trigger a building permit, provided they are not associated with a general improvement of the structure or repair of damaged structure. Such repairs include:
 - a. Normal maintenance of structures such as re-roofing, replacing roofing tiles and replacing siding.
 - b. Exterior and interior painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.
 - c. Basement sealing.
 - d. Repairing or replacing damaged or broken window panes.
- 1.29** Variance. A grant of relief by a community from the terms of the floodplain management regulations.
- 1.30** Violation. The failure of a structure or other development to be fully compliant with the community's floodplain management regulations.

SECTION 2. LEGAL AUTHORITY, FINDINGS OF FACT AND PURPOSE.

- 2.1** Legal Authority. Chapter 331 of the Code of Iowa grants counties the authority, except as expressly limited by the Constitution and if not inconsistent with the laws of the General Assembly, to exercise any power and perform any function it deems appropriate to protect and preserve the rights, privileges, and property of the County or of its residents, and to preserve and improve the peace, safety, health, welfare, comfort, and convenience of its residents.
- 2.2** Findings of Fact.
 - a. The flood hazard areas of Muscatine County are subject to periodic inundation which can result 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 peace, safety, health, welfare, comfort, and convenience of its residents.
 - b. These flood losses, hazards, and related adverse effects are caused by: (1) the occupancy of flood hazard areas by uses vulnerable to flood damages which create hazardous conditions as a result of being inadequately elevated or otherwise protected from flooding and (2) the cumulative effect of obstructions on the floodplain causing increases in flood heights and velocities.
 - c. This ordinance relies upon engineering methodology for analyzing flood hazards which is consistent with the standards established by the Department of Natural Resources.
- 2.3** Statement of Purpose. It is the purpose of this ordinance to protect and preserve the rights, privileges and property of Muscatine County, and its residents and to preserve and improve the peace, safety, health, welfare, and comfort and convenience of its residents by minimizing those flood losses described in Section 2.2(b) with provisions designed to:

- a. Reserve sufficient floodplain area for the conveyance of flood flows so that flood heights and velocities will not be increased substantially.
- b. Restrict or prohibit uses which are dangerous to health, safety or property in times of flood or which cause excessive increases in flood heights or velocities.
- c. Require that uses vulnerable to floods, including public utilities which serve such uses, be protected against flood damage at the time of initial construction.
- d. Protect individuals from buying lands which are unsuited for intended purpose because of flood hazard.
- e. Assure that eligibility is maintained for property owners in the County to purchase flood insurance through the National Flood Insurance Program.

SECTION 3. GENERAL PROVISIONS.

- 3.1** Lands to Which Regulations Apply. The provisions of this ordinance shall apply to all lands and uses which have significant flood hazards. The Flood Insurance Rate Maps (FIRM) for Muscatine County and Incorporated Areas, dated April 16, 2014, which were prepared as part of the Muscatine County Flood Insurance Study, shall be used to identify such flood hazard areas and all areas shown thereon to be within the boundaries of the 100-year flood boundary, the location shall be considered as having significant flood hazards. Where uncertainty exists with respect to the precise location of the 100-year flood boundary, the location shall be determined on the basis of the 100-year flood elevation at the particular site in question. The Muscatine County Flood Insurance Study is hereby adopted by reference and is made a part of this ordinance for the purpose of administering floodplain management regulations.
- 3.2** Compliance. No structure or land shall hereafter be used and no structure shall be located, extended, converted or structurally altered without full compliance with the terms of this ordinance and other applicable regulations which apply to uses within the jurisdiction of this ordinance.
- 3.3** Abrogation and Greater Restrictions. It is not intended by this ordinance to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this ordinance imposes greater restrictions the provision of this ordinance shall prevail. All other ordinances inconsistent with this ordinance are hereby repealed to the extent of the inconsistency only.
- 3.4** Interpretation. In their interpretation and application, the provision of this ordinance shall be held to be minimum requirements and 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.
- 3.5** Warning and Disclaimer of Liability. The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This ordinance does not imply to the areas outside the regulated areas or that uses permitted to the areas outside the regulated areas or that uses permitted within the regulated areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Muscatine County or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

- 3.6 Severability. If any section, clause, provision or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected thereby.

SECTION 4. FLOODPLAIN MANAGEMENT STANDARDS.

- 4.1 General Floodplain Standards. All uses must be consistent with the need to minimize flood damage and shall meet the following applicable performance standards. Where floodway and 100-year flood data have not been provided in the Flood Insurance Study, the Department of Natural Resources shall be contacted to compute such data.
- a. All structures shall be (1) adequately anchored to prevent floatation, collapse or lateral movement of the structure, (2) be constructed with materials and utility equipment resistant to flood damage, and (3) be constructed by methods and practices that minimize flood damage.
 - b. Residential buildings - All new or substantially improved residential structures shall have the lowest floor, including basement, elevated a minimum of 1.0 foot above the 100-year flood level. Construction shall be upon compacted fill which shall, at all points, be no lower than 1.0 foot above the 100-year flood level and extend at such elevation at least eighteen feet (18') beyond the limits of any structure erected thereon. Alternative methods of elevating (such as piers) may be allowed, subject to favorable consideration by the Board of Adjustment and the Department of Natural Resources, where existing topography, street grades, or other factors preclude elevating by fill. In such cases, the methods used must be adequate to support the structure as well as withstand the various forces and hazards associated with flooding.
 - c. Non-residential buildings - All new or substantially improved non-residential buildings shall have the first floor (including basement) elevated a minimum of 1.0 foot above the 100-year flood level, or together with attendant utility and sanitary systems, be floodproofed to such a level. When floodproofing is utilized, a professional engineer registered in the State of Iowa shall certify that the floodproofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the 100-year flood; and that the structure, below the 100-year flood level, is watertight with walls substantially impermeable to passage of water. A record of the certification indicating the specific elevation (in relation to North American Vertical Datum (1988)) to which any structures are floodproofed shall be maintained by the Administrator.
 - d. All new and substantially improved structures:
 1. Fully enclosed areas below the "lowest floor" (not including basements) that are subject to flooding shall be designed to automatically equalize hydrostatic floodforces 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 meet or exceed the following minimum criteria:
 - (a) A minimum of two openings having a total net area of not less than one square inch (1") for every square foot of enclosed area subject to flooding shall be provided.

- (b) The bottom of all openings shall be no higher than 1.0 foot above grade.
 - (c) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - (d) Such areas shall be used solely for parking of vehicles, building access and low damage potential storage.
2. New and substantially improved structures must be designed (or modified) and adequately anchored to prevent floatation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
 3. New and substantially improved structures must be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- e. Factory-built homes:
1. Factory-built homes including those placed in existing factory-built home parks or subdivisions shall be anchored to resist floatation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements are that: (1) over-the-top ties be provided at each of the four corners of the factory-built home with two additional ties per side at intermediate locations for factory-built homes fifty feet (50') or more in length or one such tie for factory-built homes less than fifty feet (50') in length; (2) frame ties be provided at each corner of the home with five additional ties per side at intermediate points for factory-built homes fifty feet (50') or more in length or four such ties for homes less than fifty feet (50') in length; (3) all components of the anchoring system be capable of carrying a force of 4,800 pounds; and (4) any additions to the factory-built home be similarly anchored.
 2. Factory-built homes including those placed in existing factory-built home parks or subdivisions shall be elevated on a permanent foundation such that the lowest floor of the structure is a minimum of 1.0 foot above the 100-year flood level. In addition, the tie down specification of Section 4.1(e)1 must be met and adequate surface drainage and access for a hauler must be provided.
 3. New factory-built home parks, expansions to existing factory-built home parks and factory-built home parks where the repair, reconstruction or improvement of the streets, utilities, and pads equals or exceeds fifty percent (50%) or more of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced shall provide: (1) lots or pads that have been elevated by means of compacted fill so that the lowest floor of factory-built homes will be a minimum of 1.0 foot above the 100-year flood level, (2) adequate surface drainage, (3) access for a hauler, and (4) ground anchors for factory-built homes.

f. Utility and Sanitary Systems

1. All new and replacement sanitary sewage systems shall be designed to minimize and eliminate infiltration of floodwaters into the system as well as the discharge of effluent into floodwaters. Wastewater treatment facilities shall be provided with a level of flood protection equal to or greater than 1.0 foot above the 100-year flood elevation.
 2. On site waste disposal systems shall be located or designed to avoid impairment to the system or contamination from the system during flooding.
 3. New or replacement water supply system shall be designed to minimize or eliminate infiltration of floodwaters into the system. Water supply treatment facilities shall be provided with a level of protection equal to or greater than 1.0 foot above the 100-year flood elevation.
 4. Utilities such as gas or electrical systems shall be located and constructed to minimize or eliminate flood damage to the system and the risk associated with such flood damaged or impaired systems.
- g. Storage of materials and equipment that are flammable, explosive or injurious to humans, animals or plant life is prohibited unless elevated a minimum of 1.0 foot above the 100-year flood level and either be anchored to prevent movement due to floodwaters or be readily removable from the area within the time available after the flood warning. Other material and equipment must either be similarly elevated or (1) not be subject to major flood damage and be anchored to prevent movement due to floodwaters or (2) be readily removable from the area within the time available after flood warning.
- h. Flood control structural works such as levees, flood walls, etc. shall provide, at a minimum, protection from a 100-year flood with a minimum of 3.0 foot of design freeboard and shall provide for adequate interior drainage. In additions, structural flood control works shall be approved by the Department of Natural Resources.
- i. No use shall affect the capacity or conveyance of the channel or floodway of any tributary to the main stream drainage ditch, or other drainage facility or system.
- j. Subdivision (including factory-built home parks and subdivisions) shall be consistent with the need to minimize flood damages and shall have adequate drainage provided to reduce exposure to flood damage. Development associated with subdivision proposals (including the installation of public utilities) shall meet the applicable performance standards of this ordinance. Subdivision proposals intended for residential development shall provide all lots with a means of vehicular access that will remain dry during occurrence of the 100-year flood. Proposals for subdivisions greater than five (5) acres or fifty (50) lots (whichever is less) shall include 100-year flood elevation data for those areas located within the Floodplain (Overlay) District.
- k. No seasonal recreational cottage shall be moved onto, constructed, or structurally altered on land known to have been flooded unless the lowest floor of such structure is elevated 1.0 foot or more above the level of the 100-year flood.

- I. The exemption of detached garages, sheds, and similar structures from the 100-year flood elevation requirements may result in increase premium rates for insurance coverage of the structure and contents, however, said detached garages, sheds, and similar accessory type structures are exempt from the 100-year flood elevation requirements when:
 - 1. The structure shall not be used for human habitation.
 - 2. The structure shall be designed to have low flood damage potential.
 - 3. The structure shall be constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters.
 - 4. Structures shall be firmly anchored to prevent floatation which may result in damage to other structures.
 - 5. The structure's service facilities such as electrical and heating equipment shall be elevated or flood-proofed to at least 1.0 foot above the 100-year flood level.
- m. Recreational vehicles placed on sites within Zones A, A1-30, AE, AO and AH on the flood insurance rate map shall either (1) be on the site for fewer than 180 consecutive days, (2) be fully licensed and ready for highway use, or (3) meet the permit requirements of elevation and anchoring for a factory-built home. 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.

4.2 Special Floodway Provisions. In additions to the General Flood Planning Standards, uses within the floodway must meet the following applicable standards. The floodway is that portion of the floodplain which must be protected from developmental encroachment to allow the free flow of floodwaters. Where floodway data has been provided in the Flood Insurance Study, such data shall be used to define the floodway limits. Where no floodway data has been provided, the Department of Natural Resources shall be contacted to provide a floodway delineation.

- a. No use shall be permitted in the floodway that would result in any increase in the 100-year flood level. Consideration of the effects of any development on flood levels shall be based upon the assumption that any equal degree of development would be allowed for similarly situation lands.
- b. All uses within the floodway shall:
 - 1. Be consistent with the need to minimize flood damage.
 - 2. Use construction methods and practices that will minimize flood damage.
 - 3. Use construction materials and utility equipment that are resistant to flood damage.
- c. No use shall affect the capacity or conveyance of the channel or floodway or any tributary to the main stream, drainage ditch, or any other drainage facility or system.

- d. Structures, buildings and sanitary and utility systems, if permitted, shall meet the applicable General Floodplain standards and shall be constructed or aligned to present the minimum possible resistance to flood flows.
- e. Buildings, if permitted, shall have a low flood damage potential and shall not be for human habitations.
- f. Storage of materials or equipment that are buoyant, flammable, explosive or injurious to human, animals or plant life is prohibited. Storage of other material may be allowed if readily removable from the floodway within the time available after flood warning.
- g. Watercourse alterations or relocation (channel changes and modifications) must be designed to maintain the flood carrying capacity within the altered or relocated portion. In addition, such alterations or relocations must be approved by the Department of Natural Resources.
- h. Any fill allowed in the floodway must be shown to have some beneficial purpose and shall be limited to the minimum amount necessary.
- i. Pipeline river or stream crossings shall be buried in the streams and banks or otherwise sufficiently protected to prevent rupture due to channel degradation and meandering or due to the action of flood flows.
- j. No factory-built homes shall be permitted except in existing factory-built home parks. Tie-down standards of Section 4.1(e)1 shall be met in such cases.

SECTION 5. ADMINISTRATION.

5.1 Appointment, Duties and Responsibilities of Administrator

- a. The Muscatine County Zoning Administrative Officer shall administer and enforce the provisions of this ordinance and will herein to be referred to as the Administrator.
- b. Duties and responsibilities of the Administrator shall include, but not necessarily be limited to, the following:
 - 1. Review all floodplain development permit applications to ensure that the provisions of this ordinance will be satisfied.
 - 2. Review all floodplain development permit applications to ensure that all necessary permits have been obtained from federal, state or local governmental agencies.
 - 3. Record and maintain a record of: (1) the elevation (in relation to North American Vertical Datum (1988)) of the lowest floor of all new or substantially improved buildings or (2) the elevation to which new or substantially improved structures have been floodproofed.
 - 4. Notify adjacent communities and/or counties and the Department of Natural Resources prior to any proposed alteration or relocation of a watercourse and submit evidence of such notifications to the Federal Insurance Administration.

5. Keep a record of all permits, appeals, variances and such other transactions and correspondence pertaining to the administrator of this ordinance.
6. Submit to the Federal Insurance Administrator an annual report concerning the county's participation, utilizing the annual report form supplied by the Federal Insurance Administrator.
7. Notify the Federal Insurance Administration of any annexations or modifications to the County's boundaries.
8. Review subdivision proposals to insure such proposals are consistent with the purpose of this ordinance and advise the Zoning Commission of potential conflicts.

5.2 Floodplain Development Permit Required.

- a. **Permit Required.** A floodplain development permit issued by the Administrator shall be secured prior to initiation of any floodplain development (any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, filling, grading, paving, excavation or drilling operation) including the placement of factory-built homes.
- b. **Application for Permit.** Application for a floodplain development permit shall be made on forms supplied by the Administrator and shall include the following information:
 1. Description of the work to be covered by the permit for which application is to be made.
 2. Description of the land on which the proposed work is to be done (i.e. - lot, block, tract, street address or similar description) that will readily identify and locate the work to be done.
 3. Indication of the use or occupancy for which the proposed work is intended.
 4. Elevation of the 100-year flood.
 5. Elevation (in the relation to North American Vertical Datum (1988)) of the lowest floor (including basement) of buildings or of the level to which a building is to be floodproofed.
 6. For buildings being improved or rebuilt, the estimated cost of improvements and market value of the building prior to the improvements.
 7. Such other information as the Administrator deems reasonably necessary for the purpose of this ordinance.
- c. **Action on Permit Application.** The Administrator shall, within thirty (30) days, make a determination as to whether the proposed floodplain development meets the applicable standards of this ordinance and shall approve or disapprove the application. For disapprovals, the applicant shall be informed, in writing, of the specific reason. The Administrator shall not issue permits for variances except as directed by the Board of Adjustment.

- d. Construction and Use to be as Provided in Application and Plans. Floodplain development permits are based on approved plans and floodplain development permit applications authorize only the use, arrangement and construction set forth in such approved plans and applications and no other use, arrangement or construction. Any use, arrangement, or construction at variance with that authorized shall be deemed a violation of this Ordinance. The applicant shall be required to submit certification by a professional engineer or land surveyor, as appropriate, registered in the State of Iowa, that the finished fill, building floor elevations, floodproofing, or other flood protection measures were accomplished in compliance with the provisions of this Ordinance, prior to the use or occupancy of any structure.

5.3 Variance.

- a. The Board of Adjustment may authorize upon request in specific cases such variances from the terms of this ordinance that will not be contrary to the public interest where, owing to special conditions, a literal enforcement of the provisions of this ordinance will result in unnecessary hardship. Variances granted must meet the following applicable standards.
 1. No variance shall be granted for any development within the floodway which would result in any increase in flood heights during the occupancy of the 100-year flood. Consideration of the effects of any development on flood levels shall be based upon the assumption that any equal degree of development would be allowed for similarly situated lands.
 2. Variances shall only be granted 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 the 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.
 3. Variances shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 4. In cases where the variance involves a lower level of flood protection for buildings than what is ordinarily required by this Ordinance, the applicant shall be notified in writing over the signature of the Administrator that: (1) the issuance of a variance 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 increases risks of life and property.
 5. All variances granted shall have the concurrence or approval of the Department of Natural Resources.
- b. In considering applications for a variance, the Board shall consider all relevant factors specified in other sections of this ordinance and:
 1. The danger to life and property due to increased flood heights or velocities caused by encroachments.
 2. The danger that materials may be swept onto other land or downstream to the injury of others.

3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.
 4. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
 5. The importance of the services provided by the proposed facility to the County.
 6. The requirements of the facility for a floodplain location.
 7. The availability of alternative locations not subject to flooding for the proposed use.
 8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
 9. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
 10. The safety of access to property in times of flood for ordinary and emergency vehicles.
 11. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwater expected at the site.
 12. Such other factors which are relevant to the purpose of this ordinance.
- c. Upon consideration of the factors listed above, the Board may attach such conditions to the granting of variances as it deems necessary to further the purpose of this ordinance. Such conditions may include, but not necessarily be limited to:
1. Modification of waste disposal and water supply facilities.
 2. Limitation of periods of use and operation.
 3. Imposition of operational controls, sureties, and deed restrictions.
 4. Requirements for construction of channel modifications, dikes, levees, and other protection measures, provided such are approved by the Department of Natural Resources and are deemed the only practical alternative to achieving the purpose of this ordinance.
 5. Floodproofing measures.

SECTION 6. PENALTIES FOR VIOLATION.

Any person who violates this ordinance or fails to comply with any of its requirements shall be guilty of a misdemeanor and shall be punished by a fine not to exceed seven hundred fifty (\$750.00) dollars. If the violation is a repeated offense, a penalty not to exceed one thousand (\$1,000.00) dollars may be imposed. Nothing herein contained shall prevent Muscatine County from taking such other lawful action as is necessary to prevent or remedy any violation.

SECTION 7. AMENDMENTS.

The regulations and standards set forth in this ordinance may from time to time be amended, supplemented, changed, or repealed. No amendment, supplement, change or modification shall be undertaken without prior approval of the Department of Natural Resources.