

ARTICLE XI FLOOD HAZARD AREAS

Sec. 5-201. Authority.

This Article is enacted pursuant to the police powers granted to this City by the Illinois Municipal Code (65 IL. Compiled Statutes 5/1-2-1, 5/11-12-12, 5/11-30-2, 5/11-30-8, and 5/11-31-2.

Sec. 5-202 Findings of Fact.

A. *The flood hazard areas in the City and the extraterritorial area over which the City exercises jurisdiction are subject to periodic inundation which may 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 public health, safety, and general welfare.*

B. *These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.*

Sec. 5-203. Statement of Purpose.

It is the purpose of this Article 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:

- 1. protect human life and health;*
- 2. minimize expenditure of public money for costly flood control projects;*
- 3. minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;*
- 4. protect new buildings and major improvements to buildings from flood damage;*
- 5. prevent new development from increasing flood or drainage hazards to others;*
- 6. minimize prolonged business interruptions;*
- 7. minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;*
- 8. help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;*
- 9. make federally subsidized flood insurance available for property in the City;*
- 10. ensure that those who occupy the areas of special flood hazard assume responsibility for their actions; and*
- 11. preserve the natural characteristics and functions of watercourses and floodplains in order to moderate flood and storm water impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.*

Sec. 5-204. Methods of Reducing Flood Losses.

In order to accomplish its purpose, this Article includes methods and provisions for:

1. *restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;*
2. *requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;*
3. *controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;*
4. *controlling filling, grading, dredging, and other development which may increase flood damage; and*
5. *preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.*

Sec. 5-205. Definitions.

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

Appeal *means a request for a review of the City Engineer's or Building Official's interpretation of any provision of this article or a request for a variance.*

Base flood *means the flood having a 1% chance of being equaled or exceeded in any given year. The base flood is also known as the 100-year flood. The base flood elevation (BFE) at any location is as defined in section 5-207 and section 5-214 of this article.*

Base Flood Elevation (BFE) *means the elevation in relation to mean sea level of the crest of the base flood.*

Building *means a structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, or a prefabricated building. The term also includes recreational vehicles and travel trailers to be installed on a site for more than 180 days.*

City Engineer or Building Official *means the City Engineer or Building Official of the City as it pertains; whichever official by training, experience, or ordinance is best assigned to review and approve a particular type of development or a particular development issue which may arise in the administration of this flood damage prevention article.*

Critical Facility *means any public or private facility which, if flooded, would create an added dimension to the disaster or would increase the hazard to life and health. Examples are public buildings, emergency operations and communication centers, health care facilities and nursing homes, schools, and toxic waste treatment, handling or storage facilities.*

Development *means any human-made change to improved or unimproved real estate, including, but not limited to:*

1. *construction, reconstruction, or placement of a building or an addition to a building valued at more than \$1,000.00;*

2. installing a manufactured home on a site or preparing a site for a manufactured home;
3. drilling, mining, installing utilities or facilities, construction of roads, bridges or similar projects.
4. construction or erection of levees, walls or fences;
5. filling, dredging, grading, excavating, paving, or other nonagricultural alterations of the ground surface;
6. storage of materials including the placement of gas or liquid storage tanks; and
7. channel modifications or any other activity that might change the direction, height, or velocity of floodwaters or surface waters.

Development does not include:

1. maintenance of existing buildings and facilities such as re-roofing or re-surfacing roads;
2. repairs made to a damaged building that do not change the building's exterior dimensions and that are valued at less than 50% of the value of the building before the damage occurred; and
3. gardening, plowing, and similar agricultural practices that do not involve filling, grading, or construction of levees.

Existing Manufactured Home Park or Manufactured Home Subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this Article.

Expansion to an Existing Manufactured Home Park or Manufactured Home 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, either final site grading or pouring of concrete or the construction of streets).

FEMA means Federal Emergency Management Agency.

Flood or Flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the unusual and rapid accumulation or run-off of surface waters from any source.

Flood Fringe means that portion of the floodplain outside of the regulatory floodway.

Flood Insurance Rate Map (FIRM) means a map prepared by the Federal Emergency Management Agency that depicts the floodplain or special flood hazard area (SFHA) within a community. This map includes insurance rate zones and may or may not depict floodways and show base flood elevations.

Floodplain and Special Flood Hazard Area (SFHA) are synonymous. Those lands within the jurisdiction of the City of Urbana that are subject to inundation by the base flood. The floodplains of the Boneyard Creek, McCullough Creek and Saline Branch are generally identified as such on the Flood Insurance Rate Map of the City of Urbana prepared by the Federal Emergency Management

Agency and dated July 16, 1980, as amended. The floodplains of those parts of unincorporated City of Urbana that are within the extraterritorial jurisdiction of the City of Urbana or that may be annexed into the City of Urbana are generally identified as such on the Flood Insurance Rate Map prepared for Champaign County by the Federal Emergency Management Agency and dated July 16, 1980, as amended. Floodplain also includes those areas of known flooding as identified by the community.

Floodproofing means any combination of structural or nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate, property and their contents.

Floodproofing Certificate means a form published by the Federal Emergency Management Agency that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

Flood Protection Elevation or FPE means the elevation of the base flood plus one foot of freeboard at any given location in the floodplain.

Floodway means that portion of the floodplain required to store and convey the base flood. The floodway for the floodplains of the Boneyard Creek, McCullough Creek and Saline Branch shall be as delineated on the Flood Boundary and Floodway Map prepared by FEMA and dated July 16, 1980, as amended. The floodways for each of the remaining floodplains of the City of Urbana shall be according to the best data available from Federal, State, or other sources.

IDNR/OWR means Illinois Department of Natural Resources/Office of Water Resources.

Manufactured Home or Prefabricated Building means a structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers.

New Construction means structures for which the "start of construction" commenced on or after the effective date of this article.

New Manufactured Home Park or Manufactured Home Subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets) is completed on or after the effective date of this article.

NFIP means National Flood Insurance Program.

Repetitive Loss means flood related damages sustained by a structure on two separate occasions during a ten 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.

Special Flood Hazard Area (SFHA). See definition of floodplain.

Start of Construction means the first placement of permanent construction of a structure (other than a manufactured home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings such as garages or sheds not occupied as dwelling units or not as part of the main structure. For a structure (other than a manufactured home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of a structure or any part thereof on its piling or foundation. For manufactured homes not within a manufactured home park or manufactured home subdivision, "start of construction" means the affixing of the manufactured home to its permanent site. For manufactured homes within manufactured home parks or manufactured home subdivisions, "start of construction" is the date on which the construction of facilities for servicing the site on which the manufactured home is to be affixed (including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads, and installation of utilities) is completed.

Structure means a walled and roofed building, a manufactured home, or a gas or liquid storage tank, that is principally above ground.

Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50% of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination.

Substantial Improvement means any repair, reconstruction, addition, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either:

1. before the improvement or repair is started; or
2. if the structure has been damaged and is being restored to its market value before the damage occurred.

If the applicant is unable to produce reasonable evidence of the market value prior to the occurrence of flood damage, the City Engineer or Building Official shall establish the market value by multiplying the assessed valuation by three.

For purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

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

Travel Trailer (or Recreational Vehicle) means a vehicle which is:

1. built on a single chassis;

2. 400 square feet or less in size;
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.

VariANCES means a grant of relief from the requirements of this Article which permits construction in a manner that would otherwise be prohibited by this Article.

Sec. 5-206. Lands to Which this Article Applies.

This Article shall apply to special flood hazard areas within the jurisdiction of the City, those parts of unincorporated City of Urbana that are within the extraterritorial jurisdiction of the City of Urbana, or that may be annexed into the City of Urbana.

Sec. 5-207. Basis for Establishing Special Flood Hazard Areas.

The Special Flood Hazard Areas identified by the Federal Insurance Administration in an engineering report entitled "The Flood Insurance Study for the City of Urbana," dated July 16, 1980, as amended, with accompanying flood insurance rate maps and flood boundary-floodway maps and flood hazard boundary maps of the County of Champaign dated March 1, 1984, are hereby adopted by reference and declared to be a part of this Article. The Flood Insurance Study is on file at the Department of Community Development Services, City of Urbana.

Sec. 5-208. Abrogation and Greater Restrictions.

This Article repeals and replaces other ordinances adopted by the City of Urbana to fulfill the requirements of the National Flood Insurance Program. However, this Article does not repeal the original resolution or ordinance adopted to achieve eligibility in the program. Nor does this Article repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where this Article and other ordinance easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Sec. 5-209. Interpretation.

In the interpretation and application of this Article, all provisions shall be:

1. considered as minimum requirements;
2. liberally construed in favor of the governing body; and
3. deemed neither to limit nor repeal any other powers granted under state statutes.

Sec. 5-210. Warning and Disclaimer of Liability.

The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on available information derived from engineering and scientific methods of study. Larger floods can and will occur.

Flood heights may be increased by man-made or natural causes. This Article does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This Article shall not create liability on the part of the City, any officer

or employee thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made thereunder.

Sec. 5-211. Development Permit - Required; Application.

No person, firm, corporation, or governmental body not exempted by law shall commence any development in the SFHA without first obtaining a development permit from the City Engineer or Building Official. The City Engineer or Building Official shall issue a Development Permit if the proposed development meets the requirements of this Article.

A Development Permit shall be obtained before construction or development begins within any special flood hazard area established in Section 5-207. Application for a Development Permit shall be made on forms furnished by the City Engineer or Building Official. The application shall include, but not be limited to, plans in triplicate, prepared under the supervision of and sealed by a licensed engineer or land surveyor, drawn to scale, showing property line dimensions of the site and in those parts of the site that are below the base flood elevation, drawings or other information which will show the following:

- 1. existing and/or proposed grade elevations, in relation to mean sea level;*
- 2. the location and dimensions, where applicable, of all existing and/or proposed development, structures, fill, storage of materials, drainage facilities, etc.;*
- 3. elevation in relation to mean sea level, of the lowest floor, including basement, of all structures;*
- 4. elevation in relation to mean sea level to which any structure and/or development has been or will be floodproofed;*
- 5. existing and/or proposed direction of flow of surface drainage and flood flows;*
- 6. existing and/or proposed location of all watercourses and drainage facilities;*
- 7. description of the extent to which any watercourses will be altered or relocated as a result of proposed development;*
- 8. certification by a registered professional engineer that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Subsection 5-219; and*
- 9. such other information as the City Engineer or Building Official deems necessary to ensure that the development is consistent with the purposes set forth in this article.*
- 10. cost of project or improvements as estimated by a licensed engineer or architect. A signed estimate by a contractor may also meet this requirement.*

Sec 5-212. Development Permit Review.

Upon receipt of the application for Development Permit, the City Engineer or Building Official shall:

- A. Review all Development Permit applications to determine that the permit requirements of Section 5-211 have been satisfied;*
- B. Inform the applicant of any other local, state, and federal permits that may be required for this type of development activity of which the City has been informed and acknowledged in writing by other local, state, and federal agencies. The City's Development Permit will only be issued on the condition that the above specified permits are obtained. The City Engineer or Building Official shall not issue a use permit unless all required permits of which the City has been informed and acknowledged have been obtained;*

- C. *Review all Development Permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 5-220 are met;*
- D. *Compare the elevation of the site to the base flood elevation. Any development located on land higher than the base flood elevation is not in the SFHA and, therefore, not subject to the requirements of this Article. Conversely, any development located on land shown to be below the base flood elevation and hydraulically connected, but not shown on the current Flood Insurance Rate Map is subject to the provisions of this Article.*

Sec. 5-213. Reserved

Sec. 5-214. Base Flood Elevation.

This Article's protection standard is the base flood according to the best data available to the Illinois State Water Survey's Flood Plain Information Repository. Whenever a party disagrees with the best available data, said party may finance the detailed engineering study needed to replace existing data. The detailed engineering study shall be submitted to FEMA, IDNR/OWR, and the City Engineer for review and approval prior any development of the site.

- A. *The base flood elevation for the SFHA's of the Boneyard Creek, McCullough Creek and Saline Branch shall be as delineated on the 100-year flood profiles in the Flood Insurance Study of the City prepared by the Federal Insurance Administration and dated July 16, 1980, as amended.*
- B. *The base flood elevation for each floodplain delineated as an "AH Zone" or "AO Zone" shall be that elevation (or depth) delineated on the Flood Insurance Rate Map of the City of Urbana.*
- C. *The base flood elevation for each of the remaining floodplains delineated as an "A Zone" on the Flood Insurance Rate Map of the City of Urbana shall be according to the best data available from federal, state or other sources. Should no other data exist, an engineering study must be financed to determine base flood elevations.*
- D. *The base flood elevation for the SFHAs of those parts of unincorporated Champaign County that are within the extraterritorial jurisdiction of the City or that may be annexed into the City shall be as delineated on the 100 year flood profiles in the Flood Insurance Study of Champaign County prepared by the Federal Emergency Management Agency and dated September 1, 1983, as amended.*

Sec. 5-215. Alteration of Watercourses.

- A. *The applicant shall notify adjacent communities and the IDNR/OWR and other governmental units of jurisdiction prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.*
- B. *The City shall require of the applicant that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished. The applicant shall provide a statement from the appropriate party accepting such maintenance responsibility.*

Sec. 5-216. Interpretation of FIRM Boundaries.

The City Engineer or Building Official may make interpretations where needed, as to the exact location of the SFHA, for example, where there appears to be a conflict between a mapped boundary and actual field conditions. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 5-217.

Sec. 5-217. Variance Procedure.

A. Appeal Board.

1. *The Building Safety Code Board of Appeals as established by Ordinance No. 8788-40, as amended, shall hear and decide appeals and requests for variances from the requirements of this Article.*
2. *The Building Safety Code Board of Appeals shall hear and decide appeals when it is alleged there is an error in any requirements, decision or determination made by the City Engineer or Building Official in the enforcement or administration of this Article.*
3. *Those aggrieved by the decision of the Building Safety Code Board of Appeals, or any taxpayer, may appeal such decision to the court of appropriate jurisdiction.*
4. *In reviewing such applications, the Building Safety Code Board of Appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Article, and:*
 - a.) *the danger that materials may be swept onto other lands to the injury of others;*
 - b.) *the danger to life and property due to flooding or erosion damage;*
 - c.) *the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;*
 - d.) *the importance of the services provided by the proposed facility to the community;*
 - e.) *the availability of alternative locations for the proposed use which are not subjected to flooding or erosion damage;*
 - f.) *the compatibility of the proposed use with existing and anticipated development;*
 - g.) *the relationship of the proposed use to the comprehensive plan and floodplain management program of that area;*
 - h.) *the safety of access to the property in times of flood for ordinary and emergency vehicles;*
 - i.) *the expected heights, velocity, duration, rate of rise, and sediment transport of the waters and the effects of wave action, if applicable, expected at the site; and*
 - j.) *the cost 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, and streets and bridges.*
5. *Upon consideration of the factors of Subsection 5-217.4 and the purposes of this Article, the Building Safety Code Board of Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Article.*
6. *The Building Official shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Insurance Administration upon request.*

B. Conditions for Variances.

- 1. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items a) through j) in Subsection 5-217.4 have been fully considered. As the lot size increases beyond one-half acre, the technical justification 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 or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.*
- 3. Variances shall not be issued within any designated floodway if any increases 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 nuisance, cause fraud on or victimization of the public as identified in Subsection 5-217.4, or conflict with existing local laws or ordinances.*
- 6. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.*

The Building Official shall also notify the applicant in writing that a variance from the requirements of this ordinance that would lessen the degree of protection to a building will:

- a.) result in increased risk to life and property; and*
- b.) require that the applicant proceed with knowledge of these risks and that the applicant acknowledge in writing the assumption of all risk and liability and agrees to hold the City of Urbana harmless in the event of a flood.*

Sec 5-218. Subdivision Requirements

The City Engineer shall take into account flood hazards, to the extent that they are known, in all official actions related to land management use and development.

- A. New subdivisions, manufactured home parks, annexation agreements, planned unit developments, and additions to manufactured home parks and subdivisions shall meet the damage prevention and building protection standards of Sections 5-219 and 5-220 of this Article.*

- B. *Any proposal for such development shall include the following data:*
1. *the base flood elevation and the boundary of the floodplain (where the base flood elevation is not available from an existing study, the applicant shall be responsible for calculating the base flood elevation);*
 2. *the boundary of the floodway when applicable; and*
 3. *a signed statement by a Registered Professional Engineer that the proposed plat or plan accounts for changes in the drainage of surface waters in accordance with the Plat Act (765 IL Compiled Statutes 205/2).*

Sec. 5-219. – Floodproofing Standards

- A. *In addition to the damage prevention requirements of Section 5-220, all buildings located in the floodplain shall be protected from flood damage below the flood protection elevation. This building protection requirement applies to the following situations:*
1. *construction or placement of a new building valued at more than \$1,000 or containing at least 70 square feet in area;*
 2. *substantial improvements made to an existing building. This alteration shall be figured cumulatively beginning with any alteration which has taken place subsequent to the adoption of this Article;*
 3. *repairs made to a substantially damaged building. These repairs shall be figured cumulatively beginning with any repairs which have taken place subsequent to the adoption of this Article;*
 4. *structural alterations made to an existing building that increase the floor area by more than 20%;*
 5. *installing a manufactured home on a new site or a new manufactured home on an existing site (the building protection requirements do not apply to returning a manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage);*
 6. *installing a travel trailer or recreational vehicle on a site for more than 180 days per year; and*
 7. *repetitive loss to an existing building as defined in Section 5-205.*
- B. *Residential or non-residential buildings can meet the building protection requirements by one of the following methods:*
1. *The building may be constructed on permanent land fill in accordance with the following:*
 - a.) *the lowest floor (including basement) shall be at or above the flood protection elevation;*
 - b.) *the fill shall be placed in layers no greater than six inches before compaction and should extend at least ten feet beyond the foundation before sloping below the flood protection elevation;*
 - c.) *the fill shall be protected against erosion and scour during flooding by vegetative cover, riprap, or other structural measure;*

- d.) *the fill shall be composed of rock or soil and not incorporate debris or refuse materials; and*
 - e.) *the fill shall not adversely affect the flow of surface drainage from or onto neighboring properties and when necessary, storm water management techniques such as swales or basins shall be incorporated; or*
2. *The building may be elevated in accordance with the following:*
- a.) *The building or improvements shall be elevated on stilts, piles, walls, or other foundation that is permanently open to flood waters;*
 - b.) *The lowest floor and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation;*
 - c.) *If walls are used, all enclosed areas below the flood protection elevation shall address hydrostatic pressures by allowing the automatic entry and exit of flood waters. Designs must either be certified by a registered professional engineer or by having a minimum of one permanent opening on each wall no more than one foot above grade. The openings shall provide a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding below the base flood elevation;*
 - d.) *the foundation and supporting members shall be anchored, designed, and certified so as to minimize exposure to hydrodynamic forces such as current, waves, ice and floating debris;*
 - e.) *the finished interior grade shall not be less than the finished exterior grade;*
 - f.) *all structural components below the flood protection elevation shall be constructed of materials resistant to flood damage; and*
 - g.) *water and sewer pipes, electrical and telephone lines, submersible pumps, and other service facilities may be located below the flood protection elevation provided they are waterproofed.*
- C. *Manufactured homes or travel trailers to be permanently installed on site shall be:*
- 1. *elevated to or above the flood protection elevation; and*
 - 2. *anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the Rules and Regulations for the Illinois Mobile Home Tie-Down Act issued pursuant to 77 IL Adm. Code 870.*
- D. *Travel trailers and recreational vehicles on site for more than 180 days shall meet the elevation requirements of Subsection 5-219c unless the following conditions are met:*
- 1. *the vehicle must be either self-propelled or towable by a light duty truck. The hitch must remain on the vehicle at all times;*
 - 2. *the vehicle must not be attached to external structures such as decks and porches;*
 - 3. *the vehicle must be designed solely for recreation, camping, travel, or seasonal use rather than as a permanent dwelling;*
 - 4. *the vehicles largest horizontal projections must be no larger than 400 square feet;*
 - 5. *the vehicle's wheels must remain on axles and inflated;*

6. *air conditioning units must be attached to the frame so as to be safe for movement out of the floodplain;*
 7. *propane tanks, electrical and sewage connections must be quick-disconnect and above the 100-year flood elevation;*
 8. *the vehicle must be licensed and titled as a recreational vehicle or park model; and*
 9. *the vehicle must be either (a) entirely supported by jacks rather than blocks or (b) have a hitch jack permanently mounted, have the tires touching the ground, and be supported by blocks in a manner that will allow the blocks to be easily removed by use of the hitch jack.*
- E. *Non-residential buildings may be structurally dry floodproofed (in lieu of elevation) provided a registered professional engineer or architect certifies that:*
1. *below the flood protection elevation the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood;*
 2. *the building design accounts for flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and the impact from debris and ice; and*
 3. *floodproofing measures will be incorporated into the building design and operable without human intervention and without an outside source of electricity.*
- F. *Levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this Section.*
- G. *Garages or sheds constructed ancillary to a residential use may be permitted provided the following conditions are met:*
1. *the garage or shed must be non-habitable;*
 2. *the garage or shed must be used only for the storage of vehicles and tools and cannot be modified later into another use;*
 3. *the garage or shed must be located outside of the floodway;*
 4. *the garage or shed must be on a single family lot and be accessory to an existing principal structure on the same lot;*
 5. *below the base flood elevation, the garage or shed must be built of materials not susceptible to flood damage;*
 6. *all utilities, plumbing, heating, air conditioning and electrical must be elevated above the flood protection elevation;*
 7. *the garage or shed must have at least one permanent opening on each wall no more than one foot above grade with one square inch of opening for every square foot of floor area;*
 8. *the garage or shed must be less than \$7,500 in market value or replacement cost whichever is greater or less than 500 square feet in area;*
 9. *the structure shall be anchored to resist floatation and overturning;*
 10. *all flammable or toxic materials (gasoline, paint, insecticides, fertilizers, etc.) shall be stored above the flood protection elevation; and*
 11. *the lowest floor elevation should be documented and the owner advised of the flood insurance implications.*

H. *A building may be constructed with a crawlspace located below the flood protection elevation provided that the following conditions are met:*

1. *the building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;*
2. *any enclosed area below the flood protection elevation shall have openings that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. A minimum of one opening shall be provided on each wall having a total net area of not less than one square inch per one square foot of enclosed area. The openings shall be no more than one foot above grade;*
3. *the interior grade of the crawlspace below the flood protection elevation must not be more than two feet below the lowest adjacent exterior grade;*
4. *the interior height of the crawlspace measured from the interior grade of the crawl to the top of the foundation wall must not exceed four feet at any point;*
5. *an adequate drainage system must be installed to remove floodwaters from the interior area of the crawlspace within a reasonable period of time after a flood event;*
6. *portions of the building below the flood protection elevation must be constructed with materials resistant to flood damage; and*
7. *utility systems within the crawlspace must be elevated above the flood protection elevation.*

Sec. 5-220. Floodways.

Within the floodway identified on the Flood Boundary and Floodway Map, and within all other floodplains where a floodway has not been delineated, the following standards shall apply:

- A. *Except as provided in Section 5-220(B), no development shall be allowed which, acting in combination with existing and anticipated development, will cause any increase in flood heights or velocities or threat to public health and safety. The following specific development activities shall be considered as meeting this requirement:*
1. *barge fleeting facilities meeting the conditions of IDNR/OWR Statewide Permit No. 3;*
 2. *aerial utility crossings meeting the conditions of IDNR/OWR Statewide Permit No. 4;*
 3. *minor boat docks meeting the conditions of IDNR/OWR Statewide Permit No. 5;*
 4. *minor, non-obstructive activities meeting the conditions of IDNR/OWR Statewide Permit No 6;*
 5. *outfall structures and drainage ditch outlets meeting the conditions of IDNR/OWR Statewide Permit No. 7;*
 6. *underground pipeline and utility crossings meeting the conditions of IDNR/OWR Statewide Permit No. 8;*
 7. *bank stabilization projects meeting the conditions of IDNR/OWR Statewide Permit No. 9;*
 8. *accessory structures and additions to existing residential buildings meeting the conditions of IDNR/OWR Statewide Permit No. 10;*
 9. *minor maintenance dredging activities meeting the conditions of IDNR/OWR Statewide Permit No. 11;*
 10. *bridge and culvert replacement structures and bridge widenings meeting the conditions of IDNR/OWR Statewide Permit No. 12;*

11. temporary construction activities meeting the conditions of IDNR/OWR Statewide Permit No. 13; and
12. any development determined by IDNR/OWR to be located entirely within a Flood Fringe area.

B. Other development activities not listed in Section 5-220(A) may be permitted only if:

1. a permit has been issued for the work by IDNR/OWR (or written documentation is provided that an IDNR/OWR permit is not required); and
2. sufficient data has been provided to FEMA when necessary, and approval obtained from FEMA for a revision of the regulatory map and base flood elevation.

Sec. 5-221. Penalties for Noncompliance.

Failure to obtain a permit for development in the floodplain or failure to comply with the conditions of a permit or a variance shall be deemed to be a violation of this Article. Upon due investigation, the City Engineer or his designee may determine that a violation of the minimum standards of this Article exists. The City Engineer or his designee shall notify the owner in writing of such violation.

A. *If such owner fails after ten days notice to correct the violation:*

1. *The City shall make application to the Circuit Court for an injunction requiring conformance with this Article or make such other order as the court deems necessary to secure compliance with the Article;*
2. *Any person who violates this Article shall upon conviction thereof be fined not less than one hundred (\$100.00) nor more than five hundred dollars (\$500.00) for each offense; and*
3. *A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.*
4. *The City of Urbana shall record a notice of violation on the title to the property.*

B. *The City Engineer or his designee shall inform the owner that any such violation is considered a willful act to increase flood damages and therefore may cause coverage by a Standard Flood Insurance Policy to be suspended.*

C. *Nothing herein shall prevent the City of Urbana from taking such other lawful action to prevent or remedy any violations. All costs connected therewith shall accrue to the person or persons responsible.*

Sec. 5-222. Public Health and Other Standards

A. *Public health standards must be met for all floodplain development. In addition to the requirements of Sections 5-219 and 5-220, the following standards apply:*

1. *No development in the floodplain shall include locating or storing chemicals, explosives, buoyant materials, flammable liquids, pollutants, or other hazardous or toxic materials below the flood protection elevation unless such materials are stored in a floodproofed and anchored storage tank and certified by a professional engineer or floodproofed building constructed according to the requirements of Section 5-220 of this Article.*

2. *Public utilities and facilities such as sewer, gas, and electric shall be located and constructed to minimize or eliminate flood damage.*
 3. *Public sanitary sewer systems and water supply systems shall be located and constructed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.*
 4. *New and replacement on-site sanitary sewer lines or waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding. Manholes or other above ground openings located below the flood protection elevation shall be watertight.*
 5. *Critical facilities shall be protected to the 500-year flood elevation. In addition, all ingress and egress from any critical facility must be protected to the 500-year flood elevation.*
- B. All other activities defined as development shall be designed so as not to alter flood flows or increase potential flood damages.*

Secs. 5-223 – 5-230. Reserved.