

**FLOOD HAZARD MITIGATION PLAN  
CITY OF HOPKINSVILLE, KENTUCKY  
ATTACHMENT E**

## **§ 155.01 PURPOSE.**

In order to promote the health, safety, and general welfare of the public by minimizing as much as possible the dangers of flooding to life and property, it is the intent of this chapter that runoff control devices be provided as land areas are developed or redeveloped. It is not the intent that these areas be used exclusively for detaining storm water, but be put to use for other compatible urban uses.

(Ord. 14-79, passed 10-16-79)

## **§ 155.02 DEFINITIONS.**

For the purpose of this chapter the following definitions shall apply unless the context clearly indicates or requires a different meaning.

**"CONTROLLED RELEASE STRUCTURE."** A facility constructed to regulate the volume of storm water runoff that is conveyed during a specific length of time.

**"DEVELOPED."** Conditions after construction or other man-made change to improved or unimproved, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations.

**"EXCESS STORM WATER."** That portion of storm water runoff which exceeds the capacity of storm sewers or natural drainage channels serving a specific watershed.

**"EXCESS STORM WATER PASSAGE."** A channel formed in the ground surface to carry storm water runoff which cannot be carried by normal drainage channels.

**"FLOOD SAFETY OFFICER."** The person appointed by the City Council to administer the provisions of this chapter.

**"IMPERVIOUS SURFACE."** Asphalt, concrete, or any other surface which does not allow measurable infiltration.

**"NATURAL DRAINAGE."** Water which follows by gravity in channels formed by the surface topography of the earth prior to changes made by the efforts of man.

**"ON-SITE."** Internal to the boundary of a development.

**"POINT DISCHARGE."** Release of storm water at a specific location.

**"RETENTION."** (Sometimes termed "DETENTION") restraining the rate of storm water runoff through some natural or man-made device.

**"RUNOFF."** Rainfall excess after natural losses from infiltration, evaporation, transportation, or incidental pondage.

**"STORM WATER RUNOFF RELEASE RATE."** The rate at which storm water runoff is released from dominant to servient land.

**"STORM WATER STORAGE AREA."** An area designed to temporarily accumulate excess storm water.

**"SWALE."** Surface-type conveyance for storm water, usually designed to carry incidental, localized runoff.

(Ord. 14-79, passed 10-16-79)

### **§ 155.03 GENERAL REQUIREMENTS FOR STORM WATER MANAGEMENT FOR DEVELOPERS.**

- (A). All developments undertaken as outlined in this chapter shall be done in such a way as to insure that storm water falling on a given site shall be absorbed or retained onsite to the extent that after development the rate of water leaving the site shall not be significantly different than if the site had remained undeveloped.
- (B). A developer shall not be permitted to disturb the land in such a manner as to create significant water related damages to other landowners in the vicinity by having point discharge creating erosion across land or placing obstructions where floodpeak increases. If the point discharge is high enough to produce erosion, other measures shall be taken to dissipate the flow.
- (C). Where it can be demonstrated by the developer that a higher storm water release rate will not be contrary to the purpose and intent of this chapter and where such proposed release rate will not adversely affect properties in the downstream portion of the watershed, the Flood Safety Officer may permit such release to be used as deemed appropriate.

(Ord. 14-79, passed 10-16-79) [Penalty, see § 10.99](#)

### **§ 155.04 EXCESS STORM WATER PASSAGES.**

- (A). An excess storm water passage shall be provided for all storm water areas. Such passage shall have the capacity to convey through the proposed development the excess storm water. The capacity for a passage shall be such that it will be able to transport the peak rate of runoff from a 100-year return frequency storm.
- (B). There shall be no buildings or structures constructed within excess storm passages, however, parking lots, playgrounds and park areas, which shall not impair or endanger the water holding capability of a development shall be considered compatible uses.
- (C). Appropriate land planning shall be undertaken to preserve the existing natural drainage of a proposed development as part of the excess storm water passage.
- (D). Open channels shall be protected from erosion by appropriate vegetative cover, lining, or other treatment and earthen channel side slopes shall be no steeper than two to one. Open channels with lining shall have a maximum gradient on side slopes of 67% and channel side slopes steeper than 67% shall be designed as structural retaining walls.

(Ord. 14-79, passed 10-16-79) [Penalty, see § 10.99](#)

### **§ 155.05 RUNOFF AND STORAGE CAPACITY.**

The volume of required storm water storage and runoff shall be calculated on the basis of the runoff from a 100-year frequency storm with a three-hour duration. The calculations can be

made in accordance with the instantaneous runoff factor method, the rational method, or other methods that may be deemed appropriate by the Flood Safety Officer.

(Ord. 14-79, passed 10-16-79)

#### **§ 155.06 STORM WATER STORAGE AREAS.**

- (A). Storage areas shall be designed to the satisfaction of the Flood Safety Officer and if possible to provide secondary purposes for recreation, open spaces, parking lot, or other types of use that will not be adversely affected by intermittent flooding.
- (B). All storm water storage areas must be designed to contain and safely pass storm water runoff. The combined capacity of these storage areas shall be sufficient to contain the storm from the development. The retention facility must be designed for periodic maintenance and energy dissipators shall be provided at points necessary. The combination of storage of the water from a 100-year storm and the design release rate shall not result in a storage duration in excess of 72 hours.
- (C). The ponding of storm water runoff shall not exceed a depth of one foot on a pedestrian mall area or 1-1/2 feet maximum in parking lots. Where these areas are used for ponding, the maximum depth should occur in the most remote and least used areas.
- (D). The drainage and grading design shall be prepared to insure that in a 100-year storm the depth of water runoff in any street, alley, or pedestrian mall will not exceed the level of the first floor of any building.
- (E). For a 100-year storm, the ponding of surface water on local, collector, and arterial streets must not exceed a depth of 18 inches at the gutter; water exceeding this shall be designed to overflow into an excess storm water passage. The maximum velocity of water in the deepest part of the gutter shall be ten feet per second and paved gutters shall have a minimum grade of 0.5%.
- (F). Overflow for each storm water storage area shall be provided in the event a storm in excess of the design capacity occurs. Such overflow shall be constructed to function without specific attention and shall become part of the excess storm water passage.
- (G). Where rooftop storage of excess storm water is provided, the building shall be provided with adequate structural design to insure that roof failure does not occur. Overflow areas shall be provided so that the weight of stored storm water will not exceed the structural capacity of the roof.
- (H). For wet pond storage areas when calculating the storage capacity, only the volume available to store excess storm water shall be considered.

Permanent water storage does not constitute control of excess storm runoff.

(Ord. 14-79, passed 10-16-79) [Penalty, see § 10.99](#)

#### **§ 155.07 SINKHOLES, SUBTERRANEAN WATER CHANNELS.**

- (A) The use of sinkholes or subterranean water channels for direct drainage of excess storm water shall not be permitted although they may be used to drain a storm water storage area. The introduction of any foreign matter or the filling, clogging, or interfering with the natural drainage capabilities of the sinkholes shall not be permitted.
- (B) Any person, firm, or corporation proposing alterations, improvements, or other disturbance of any sinkholes or known subterranean water channel must submit plans to the Flood Safety Officer showing that the alterations, improvements, or disturbance would not interfere with

the drainage capability. Also included in the plans erosion control methods must be shown for any activities which might create erosion or sedimentation.

- (C) Sinkholes shall not be altered or covered in any way which would negatively affect the drainage capabilities of the sinkhole. Development within the 100-year floodplain of a sinkhole shall not be permitted.

(Ord. 14-79, passed 10-16-79) [Penalty, see § 10.99](#)

#### **§ 155.08 APPLICATION REQUIRED; FEE.**

- (A) An application is required to be submitted to the Flood Safety Officer or should he so designate the plans examiner, prior to subdivision approval or issuance of a building permit for each of the following proposed improvements within the city limits. The chapter shall apply to:
  - (1) Residential development of two acres or more; commercial, industrial, institutional, govern-mental, utility, or other development or redevelopment comprising a gross aggregate of one acre or more. This gross aggregate shall include streets and other dedicated lands;
  - (2) Development, new construction, and substantial improvements including the placement of prefabricated buildings, mobile homes, apartment complexes and shopping centers, or any other residential developments under two acres or commercial, industrial, institutional, governmental, or utility developments under one acre which, because of unusual circumstances, impose particular hazards to life safety or property;
  - (3) Subdivision proposals and other proposed new developments;
  - (4) Proposals to alter or relocate a watercourse, deposit, or remove any material within a water-course, plant or remove any vegeta-tion, or alter any embankment within a watercourse. (This requirement shall be in addition to any review of the state); and
  - (5) Any development meeting the conditions listed in division (A)(4) above which do not have a valid building permit as of the effective date of this chapter shall be regulated under the terms of this chapter.
- (B). Plans, specifications, and all calculations for the control of storm runoff as required by this chapter shall be provided.
- (C). Required maintenance for retention basins or other structures shall be permanently provided by the developer with responsibility becoming that of the private landowner after complete development, subject to inspection of the Flood Safety Officer. Every retention basin or structure shall be legally defined on both deed and plat and the maintenance entity shall be specified.
- (D). The applicant is required to dedicate easements along those drainageways necessary for adequate watershed drainage, maintenance, and operations.
- (E). Each application must be on a form furnished by the city, submitted in at least three copies and each be accompanied by a map to determine location of the proposed sites. At least one copy of the application, map, and other attachments are to be retained for city files by the Flood Safety Officer.
- (F). An application for a permit for proposed improvements within the city must also be accompanied by a fee as set forth by City Council, and specifications and plans of such nature and detail that will enable the Flood Safety Officer to determine that the proposed improvements meet this chapter.
- (G). When it has been determined that the applicant has sufficiently met the requirements, permits will be issued for proposed improvements to be carried out. If a definite

determination cannot be made, the Flood Safety Officer may request additional information be supplied by the applicant, or may request the city or its authorized agent prepare an additional set of specifications and plans adequate to derive a determination.

(Ord. 14-79, passed 10-16-79; Am. Ord. 17-80, passed 12-16-80)

#### **§ 155.09 VARIANCES.**

The Hopkinsville-Christian County Planning Commission upon application to the Flood Safety Officer, may grant variances to the applicant, from the regulations specified in this chapter. The applicant must specify hardships to result in following the prescribed regulations. The Flood Safety Officer, in conjunction with the City Engineer, must examine and decide the validity of the proposed hardships. This request is then submitted to the Hopkinsville-Christian County Planning Commission by the Flood Safety Officer and City Engineer along with a recommendation about granting the variance.

- (A) The variance will be granted only upon showing that there is good and sufficient cause. Financial hardship to the property owners shall not constitute proper or appropriate grounds for a variance under this chapter.
- (B) A record of all variance actions shall be maintained by the Flood Safety Officer including the justification for issuance.
- (C) 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 this section.

(Ord. 14-79, passed 10-16-79; Am. Ord. 17-80, passed 12-16-80)

#### **§ 155.99 FLOOD SAFETY OFFICER TO ENFORCE.**

- (A) The Flood Safety Officer shall have the authority to establish necessary administrative and certification procedures to insure the intent and purpose of this chapter is carried out.
- (B) The Flood Safety Officer has the authority to issue stop work orders to any development, construction or other improvement which does not meet the requirements provided in this chapter.
- (C) The provisions of this chapter may be enforced by the Code of Ordinance Enforcement Board established in Ordinance 24-2002, or in the alternative, by the Christian County District Court as a misdemeanor and/or violation through the powers delegated to the Flood Safety Officer. The decision on where the ordinance will be enforced shall be at the City's discretion. However, nothing contained in Ordinance 24-2002 shall be construed or interpreted to limit those powers delegated to the Flood Safety Officer. Likewise, nothing contained in this chapter shall be construed or interpreted to limit those powers delegated to a Code Enforcement Officer as created in Ordinance 24-2002. Further, the Flood Safety Officer may also become certified as a Code Enforcement Officer.
- (D) Any person violating any of the provisions of this chapter or failing to comply with any of its requirements, including violations of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute an offense under this chapter and shall result in a fine. The first offense shall result in a fine of not greater than \$300. A second offense shall result in a fine of not greater than \$500. All other offenses shall result in a fine of not greater than \$600. Each day that a violation continues shall constitute a separate offense.

- (E) An appeal of the final decision of the Flood Safety Officer may be made to the Hopkinsville-Christian County Planning Commission within 30 days following notification, unless enforcement has occurred directly through the Code of Ordinance Enforcement Board, which provides an appeal process to the Christian County District Court.

(Ord. 14-79, passed 10-16-79; Am. Ord. 32-2002, passed 12-17-02)

Cross-reference:

[Flood Safety Officer to administer this chapter as well as the Flood Safety and Protection regulations,](#)  
[see § 151.05](#)