

CHAPTER IX:

FLOODPLAIN CONTROL

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IX.I FLOODPLAIN CONTROL

A. STATUTORY AUTHORIZATION

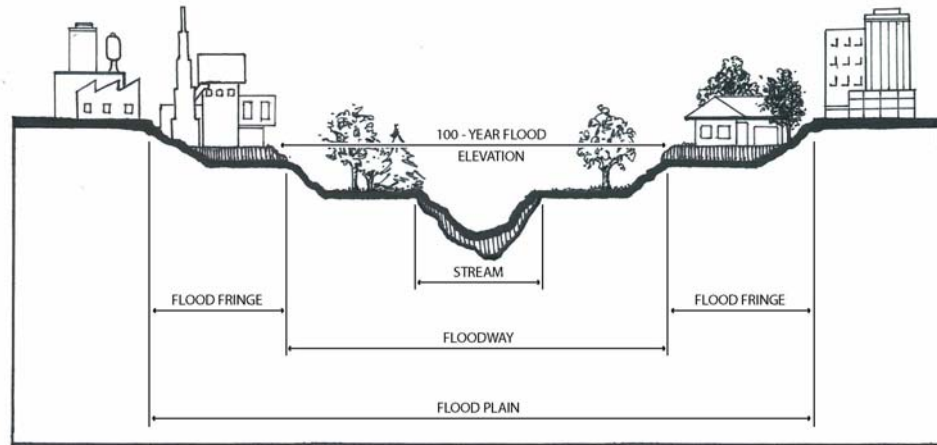
Under the Indiana home rule statute and local planning and zoning statute (IC 36-1-3 and IC 36-7-4, As Amended, respectively), the Indiana Legislature has granted the power to local units of government to control land use within their jurisdictions in order to accomplish the following.

B. PURPOSE

1. The purpose of this Chapter is to:
 - a. Guide development in the flood hazard areas within the unincorporated areas of Vigo County, the City of Terre Haute, the Town of Riley, the Town of Seelyville, and the Town of West Terre Haute in order to reduce the potential for loss of life and property;
 - b. Reduce the potential for health and safety hazards; and
 - c. To reduce the potential for extraordinary public expenditures for flood protection and relief.
2. Under the authority granted to local units of government to control land use within their jurisdiction, which includes taking into account the effects of flooding, the Board of Commissioners of Vigo County, the Common Council of the City of Terre Haute, the West Terre Haute Town Council, the Riley Town Council, and the Seelyville Town Council hereby adopt the following flood control regulations in order to accomplish the following:
 - a. To prevent unwise developments from increasing flood or drainage hazards to others;
 - b. To protect new buildings and major improvements to buildings from flood damage;
 - c. To protect human life and health from the hazards of flooding;
 - d. To lessen the burden on the taxpayer for flood control projects, repairs to flood- damaged public facilities and utilities, and flood rescue and relief operations;
 - e. To maintain property values and a stable tax base by minimizing the potential for creating flood blighted areas; and

- f. To make federally subsidized flood insurance available for structures and their contents within the City of Terre Haute by fulfilling the requirements of the National Flood Insurance Programs.

Figure IX-1: Flood Geography



Source: HNTB Corporation

C. ADMINISTRATIVE DUTIES

The Director of the Vigo Area Planning Department shall implement this Chapter within the jurisdictions of unincorporated Vigo County, the Town of West Terre Haute, the Town of Riley, and the Town of Seelyville, and hereafter be referred to as the Director. The City of Terre Haute Zoning Administrator shall implement this Chapter within the jurisdiction of the City of Terre Haute and hereafter be referred to as the Zoning Administrator. The Director and Zoning Administrator are appointed to review all department and subdivision proposals to insure compliance with this Chapter, including but not limited to the following duties:

1. Ensure that all development activities within Special Flood Hazard Areas (SFHAs) meet the requirements of this Chapter.
2. Provide information and assistance to citizens upon request about permit procedures and floodplain construction techniques.
3. Ensure that construction authorization has been granted by the Indiana Natural Resources Commission for all development projects subject to Section IX.I.F, and maintain a record of such authorization (either copy of actual permit or letter of recommendation).
4. Maintain a record of the “as-built” elevation of the top of the lowest floor (including the basement) of all new and/or substantially improved buildings constructed in the SFHA. Inspect before, during and after construction.

5. Maintain a record of the engineer's certificate and the "as-built" floodproofed elevation of all buildings.
6. Cooperate with state and federal floodplain management agencies to improve base flood and floodway data and to improve the administration of this Ordinance. Submit reports as required for the National Flood Insurance Program.
7. Maintain for public inspection and furnish upon request regulatory flood data, SFHA maps, Letters of Map Amendment (LOMA), copies of DNR permits and letters of recommendation, federal permit documents, and "as-built" elevation and floodproofing data for all buildings constructed subject to this Ordinance.
8. Notify adjacent communities and the State Coordinating Officer prior to any alteration or relocation of a watercourse, and submit copies of such notifications to FEMA.

D. REGULATORY FLOOD ELEVATION

This Chapter's protection standard is the regulatory flood. The best available regulatory flood data is listed below. Whenever a party disagrees with the best available data, the party submitting the detailed engineering study needs to replace existing data with better data and submit it to the Department of Natural Resources for review and approval.

1. The regulatory flood elevation and floodway limits for the SFHAs of all rivers and creeks identified in the Flood Insurance Study for the City of Terre Haute shall be as delineated on the 100 year flood profiles in the Flood Insurance Study of the City of Terre Haute dated June 1, 1981 and the corresponding (FBFM) dated December 1, 1981 prepared by the Federal Emergency Management Agency.
2. The regulatory flood elevation for each SFHA 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 Terre Haute.
3. The regulatory Flood Elevation for each of the remaining SFHAs delineated as an "A Zone" on the Flood Insurance Rate Map of City of Terre Haute shall be according to the best data available as provided by the Department of Natural Resources.
4. The regulatory flood elevation and floodway limits for the SFHAs of unincorporated Vigo County, the Town of West Terre Haute, the Town of Riley and the Town of Seelyville shall be as delineated on the 100 year flood profiles in the Flood Insurance Study of Vigo County, dated May 2, 1983, and the corresponding FBFM, dated November 2, 1983, prepared by the Federal Emergency Management Agency.

E. BUILDING PERMIT

No person, firm, corporation, or government body not exempted by state law shall commence any “development” in the SFHA without first obtaining an Improvement Location Permit from the Director or the Zoning Administrator, as applicable. The Director or Zoning Administrator shall not issue an Improvement Location Permit if the proposed “development” does not meet the requirements of this Chapter.

1. The application for an Improvement Location Permit shall be accompanied by the following:
 - a. A description of the proposed development;
 - b. Location of the proposed development sufficient to accurately locate property and structures in relation to existing roads and streams;
 - c. A legal description of the property site;
 - d. A site development plan showing existing and proposed development locations and existing and proposed land grades; and
 - e. Elevation of the top of the lowest floor (including basement) of all proposed development. Elevation should be in National Geodetic Vertical Datum of 1929 (NGVD) or North American Vertical Datum (NAVD). In either case, the conversion formula should be included.
2. Upon receipt of an application or request for an Improvement Location Permit, the Director or Zoning Administrator shall determine if the site is located within an identified floodway, floodway fringe or within the floodplain where the limits of the floodway have not yet been determined.
 - a. If the site is in an identified floodway, the Director or Zoning Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Department of Natural Resources and apply for a permit for construction in a floodway.
 - i. Under the provisions of IC 14-28-1, a permit from the Natural Resources Commission is required prior to the issuance of an Improvement Location Permit for any excavation, deposit, construction or obstruction activity located in the floodway. This includes land preparation activities such as filling, grading, clearing, paving, etc., undertaken before the actual start of construction of the building.
 - ii. No action shall be taken by the Director or Zoning Administrator until a permit has been issued by the Natural Resources Commission granting approval for construction in

the floodway. Once a permit has been issued by the Natural Resources Commission, the Director or Zoning Administrator may issue the Improvement Location Permit, provided the provisions contained in Sections IX.I.F and IX.I.G have been met. The Improvement Location Permit cannot be less restrictive than the permit issued by the Natural Resources Commission.

- b. If the site is located in an identified floodway fringe, then the Director or Zoning Administrator may issue the Improvement Location Permit provided the provisions of this Chapter have been met. The key provision is that the top of the lowest floor of any new or substantially improved structure shall be at or above the Flood Protection Grade (FPG).
- c. If the site is an identified floodplain where the limits of the floodway and floodway fringe have not yet been determined (shown as Zone A on the Flood Insurance Rate Map), and the drainage area upstream of the site is greater than one (1) square mile, the Director or Zoning Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Department of Natural Resources for review and comment.
 - i. No action shall be taken by the Director or Zoning Administrator until either a permit for construction in the floodway or a letter of recommendation citing the 100 year flood elevation and the recommended Flood Protection Grade has been received from the Department of Natural Resources.
 - ii. Once the Director or Zoning Administrator has received the proper permit or letter of recommendation approving the proposed development, an Improvement Location Permit may be issued provided the conditions of the Improvement Location Permit are not less restrictive than the conditions received from Natural Resources and the provisions contained in Sections IX.I.F and IX.I.G have been met.
- d. If the site is in an identified floodplain where the limits of the floodway and floodway fringe have not yet been determined and the drainage area upstream of the site is less than one (1) square mile, the Director or Zoning Administrator shall require the applicant to provide an engineering analysis showing the limits of the floodway, floodway fringe and 100 year elevation for the site.

Upon receipt of the engineering analysis, the Director or Zoning Administrator may issue the local Improvement Location Permit, provided the provisions of this Chapter have been met.

F. PREVENTING INCREASED DAMAGES

No development in the SFHA shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health and safety. Within the floodway identified on the Flood Boundary and Floodway Map or the Flood Insurance Rate Map, the following standards shall apply:

1. No development shall be allowed which acting alone or in combination with existing or future development, will cause any increase in the elevation of the regulatory flood; and
2. For all projects involving channel modifications or fill (including levees), Vigo County or the City of Terre Haute, as applicable, shall submit the data and request that the Federal Emergency Management Agency revise the regulatory flood data.
3. Within all SFHAs identified as A Zones (no 100 year flood elevation and/or floodway/floodway fringe delineation has been provided) the following standard shall apply:

The total cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the regulatory flood elevation more than one-tenth (0.1) of one foot and will not increase flood damage or potential flood damages.

4. Public Health Standards in all SFHAs.
 - a. No development in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, flammable liquids, pollutants, or other hazardous or toxic materials below the Flood Protection Grade (FPG), unless such materials are stored in a floodproofed storage tank or building constructed according to the requirements of this Chapter.
 - b. New and replacement sanitary sewer lines and on-site waste disposal systems may be permitted providing all manholes or other above ground openings are located above the FPG, or those which are located below the FPG are watertight.

G. PROTECTING BUILDINGS

In addition to the damage prevention requirements of this Chapter, all buildings to be located in the SFHA shall be protected from flood damage below the FPG.

1. This building protection requirement applies to the following situations:
 - a. Construction or placement of any new building having a floor area greater than four hundred (400) square feet;
 - b. An existing (previously unaltered) building, the cost of which equals or exceeds fifty percent (50%) of the value of the pre-altered building excluding the value of the land;
 - c. Structural alterations made to any previously altered building;
 - d. Reconstruction or repairs made to a damaged building that are valued at or more than fifty percent (50%) of the market value of the building (excluding the value of the land) before damage occurred;
 - e. Installing a manufactured home on a new site or a new manufactured home on an existing site. This Chapter does not apply to returning the existing manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage; and
 - f. Installing a travel trailer or recreational vehicle on a site for more than one hundred eighty (180) days.
2. This building protection requirement may be met by one of the following methods. The Director or Zoning Administrator, as applicable, shall maintain a record of compliance with these building protection standards as required in this Chapter.
 - a. A residential or nonresidential building may be constructed on a permanent land fill in accordance with the following:
 - i. The fill shall be placed in layers no greater than one foot (1') deep before compacting to ninety-five percent (95%) of the maximum density obtainable with the Standard Proctor Test method.
 - ii. The fill should extend at least ten feet (10') beyond the foundation of the building before sloping below the FPG.
 - iii. The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap, or bulk heading. If

vegetative cover is used, the slopes shall be no steeper than three (3) horizontal to one (1) vertical.

- iv. The fill shall not adversely affect the flow of surface drainage from or onto the neighboring properties.
 - v. The top of the lowest floor including basements, (see definition of Floor, Lowest in Chapter 2 entitled “Definitions”) shall be set at or above the FPG.
- b. A residential or nonresidential building may be elevated in accordance with the following:
- i. The building or improvements shall be elevated on posts, piers, columns, extended walls, or other types of similar foundation provided.
 - (1) Walls of any enclosure below the elevated floor shall be designed to automatically equalize hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, through providing a minimum of two (2) openings (in addition to doorways and windows) having a total area of one (1) square foot for every two (2) square feet of enclosed area subject to flooding. The bottom of all such openings shall be no higher than one (1) foot above grade.
 - (2) Any enclosure below the elevated floor is used for storage of vehicles and building access.
 - ii. The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as buoyancy, current, waves, ice, and floating debris.
 - iii. All areas below the FPG shall be constructed of materials resistant to flood damage. The top of the lowest floor (including basement) and all electrical, heating, ventilating, plumbing and air conditioning equipment and utility meters shall be located at or above FPG. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the FPG.
- c. Manufactured homes and recreational vehicles to be installed or substantially improved on a site for more than one hundred eighty (180) days must meet one of the following anchoring requirements:

- i. The manufactured home shall be elevated on a permanent foundation such that the lowest floor shall be at or above the FPG and securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. This requirement applies to all manufactured homes to be placed on a site:
 - (1) Outside a manufactured home park or subdivision;
 - (2) In a new manufactured home park or subdivision;
 - (3) In an expansion to an existing manufactured home park or subdivision; or
 - (4) In an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as a result of a flood.
- ii. This requirement applies to all manufactured homes to be placed on a site in an existing manufactured home park or subdivision that has not been substantially damaged by a flood. The manufactured home shall be elevated so that the lowest floor of the manufactured home chassis is supported by reinforced piers or other foundation elements that are no less than thirty six inches (36”) in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- d. Recreational vehicles placed on a site shall either:
 - i. Be on the site for less than one hundred eighty (180) consecutive days;
 - ii. Be fully licensed and ready for highway use (defined as being on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or
 - iii. Meet the requirements of “manufactured homes.”
- e. A non-residential building may be floodproofed to the FPG (in lieu of elevating) if done in accordance with the following:
 - i. A Registered Professional Engineer shall certify that building has been designated so that below FPG, the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The building

design shall take into account flood velocities, duration, rate of rise, hydrostatic pressures, and impacts from debris or ice.

- ii. Floodproofing measures shall be operable without human intervention and without an outside source of electricity.

H. OTHER DEVELOPMENT REQUIREMENTS

1. The Director or Zoning Administrator, as applicable, shall review all proposed subdivisions to determine whether the subdivision lies in a flood hazard area as defined by this Chapter. If the Director or Zoning Administrator finds the subdivision to be so located, the Director or Zoning Administrator shall forward plans and materials to the Indiana Department of Natural Resources for review and comment. The Director or Zoning Administrator shall require appropriate changes and modifications in order to assure that:
 - a. It is consistent with the need to minimize flood damages;
 - b. All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
 - c. Adequate drainage is provided so as to reduce exposure to flood hazards; and
 - d. Onsite waste disposal systems, if provided, will be so located and designed to avoid impairment of them or contamination from them during the occurrence of the regulatory flood.
2. Developers shall record the 100 year flood elevation on all subdivision plats containing lands (identified elsewhere by this Chapter) within the flood hazard area prior to submitting the plats for approval by the Area Plan Commission of Vigo County.
3. All owners of manufactured home parks or subdivisions located within the SFHA identified as Zone A on the community's FHBM or FIRM shall develop an evacuation plan for those lots located in the SFHA and file it with the Area Planning Department for Vigo County and have it filed with and approved by the appropriate community emergency management authorities.

I. DISCLAIMER OF LIABILITY

The degree of flood protection required by this Chapter 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 on rare occasions. Therefore, this Chapter does not create any liability on the part of the community, the Department of Natural Resources, or the State of Indiana, for any flood damage that results from reliance on this Chapter or any administrative decision made lawfully thereunder.

J. ABROGATION AND GREATER RESTRICTIONS

This Chapter repeals and replaces other ordinances adopted by the Board of Commissioners of Vigo County and the Common Council of the City of Terre Haute to fulfill the requirements of the National Flood Insurance program, including the Flood Damage Prevention Ordinance. However, this Chapter does not repeal the original resolution or ordinance adopted to achieve eligibility in the Program. Nor does this Chapter repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where this Chapter and other ordinances, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall take precedence. In addition, the Board of Commissioners of Vigo County and the Common Council of the City of Terre Haute shall assure that all National Flood Insurance Program regulations and laws (310 IAC 6-1-1, IC 14-28-1 and IC 14-28-3) are met.

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