

## ORDINANCE NO. 34-09

### TO AMEND CERTAIN PORTIONS OF THE UNIFIED ZONING ORDINANCE OF TIPPECANOE COUNTY, INDIANA, DESIGNATING THE TIME WHEN THE SAME SHALL TAKE EFFECT.

BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF WEST LAFAYETTE, INDIANA, THAT ORDINANCE NO. 32-97 IS HEREBY AMENDED AS FOLLOWS:

**Section 1:** Change **UZO Section 1-10-2 Words and Terms Defined**, by adding the following two definitions and by amending the definition of “REPETITIVE LOSS” to read as follows:

**NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929** as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

**NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)** as adopted in 1993 is a vertical control datum used as a reference for establishing varying elevations within the floodplain.

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

**Section 2:** Add the following **Section 2-26-17 (g)** to Chapter 2:

**2-26-17 (g)** The degree of flood protection required by this ordinance 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 ordinance does not create any liability on the part of Tippecanoe, Lafayette, West Lafayette, Battle Ground, Clarks Hill, Dayton, the Indiana Department of Natural Resources, or the State of Indiana, for any flood damage that results from reliance on this ordinance or any administrative decision made lawfully hereunder.

**Section 3:** Add the following **Section 5-1-11** to Chapter 5:

## 5-1-11 IMPROVEMENTS WITHIN AN FP ZONE:

- (a) Lands to Which This Section Applies: This section shall apply to all FP **zones** within unincorporated Tippecanoe County, the Cities of Lafayette and West Lafayette, and the Towns of Battle Ground, Clarks Hill, and Dayton, Indiana.
- (b) Compliance: No structure shall hereafter be located, extended, converted, or structurally altered within an FP **zone** without full compliance with the terms of this ordinance and all other applicable regulations. No land or stream within an FP **zone** shall hereafter be altered without full compliance with the terms of this ordinance and all other applicable regulations.
- (c) Establishment of Floodplain Development Permit: A Floodplain Development Permit shall be required in conformance with the provisions of this section prior to the commencement of any **development** activities in any FP **zone**.
- (d) Abrogation and Greater Restrictions: This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this section and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- (e) Discrepancies between Map and Actual Ground Elevations:
  - (1) In cases where there is a discrepancy between the mapped FP **zone**, the **FIRM**, and the actual ground elevations, the elevation provided on the **FIRM** shall govern.
  - (2) If the elevation of the site in question is below the **regulatory flood** elevation, that site shall be included in the FP **zone** and regulated accordingly.
  - (3) If the natural grade elevation of the site in question is above the **regulatory flood** elevation, that site shall be considered outside the FP **zone** and the regulations of this section shall not apply.
- (f) Administration:
  - (1) Designation of Administrator: The **APC Executive Director** shall administer and implement the provisions of this section and is herein referred to as the Floodplain Administrator.
  - (2) Permit Procedures: Application for a Floodplain Development Permit shall be made to the Floodplain Administrator on forms furnished by him or her prior to any **development** activities, and may include, but not be limited to, the following plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, earthen fill, drainage facilities, and the location of the foregoing. Specifically the following information is required:
    - (A) Application stage:
      - (i) A description of the proposed **development**,

- (ii) Location of the proposed **development** sufficient to accurately locate property and **structures** in relation to existing **roads** and **watercourses**;
  - (iii) A legal description of the property;
  - (iv) A **site plan** showing the location of all existing and proposed **development** and all existing and proposed land grades;
  - (v) **Lowest floor elevation** of all proposed **structures**. Elevation should be in **NAVD 88** or **NGVD**; and
  - (vi) Description of the extent to which any **watercourse** will be altered or related as a result of proposed **development**.
- (B) Construction stage: Upon placement of the lowest floor, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the **NAVD 88** elevation of the **lowest floor elevation**, as built and an **elevation certificate**. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by the same. Any work undertaken prior to submission of the certification and the **elevation certificate** shall be at the permit holder's risk. The Floodplain Administrator shall review the **lowest floor elevation** survey data submitted. The permit holder shall correct deficiencies detected by such review before any further work is allowed to proceed. The failure to submit such certification and the **elevation certificate** or the failure to make all corrections required by the Flood Plain Administrator shall be cause for the issuance of a stop work order.
- (3) Duties and Responsibilities of the Floodplain Administrator: The Floodplain Administrator and/or designated staff is hereby authorized and directed to enforce the provisions of this section. The Floodplain Administrator and/or designated staff are further authorized to render interpretations of this ordinance, which are consistent with its spirit and purpose. The duties and responsibilities of the Floodplain Administrator shall include, but are not limited to:
- (A) Review all Floodplain Development Permits to assure that the requirements of this ordinance have been satisfied.
  - (B) With the **Administrative Officer**, inspect and inventory damaged **structures** in FP **zones** and complete determinations with respect to **substantially damaged structures**.
  - (C) Ensure that all necessary construction authorizations have been granted by the Indiana Department of Natural Resources, and maintain a record of such authorizations.

- (D) Ensure that all necessary federal and state permits have been received prior to issuance of the Floodplain Development Permit, and maintain a record of all such authorizations.
- (E) Maintain for public inspection and furnish upon request Floodplain Development Permit documents, damaged structure inventories, substantial damage determinations, regulatory flood data, SFHA maps, Letters of Map Amendment (LOMA), Letters of Map Revision (LOMR), copies of DNR permits and floodplain analysis and regulatory assessments (letters of recommendation), federal permit documents, and “as-built” elevation data for all buildings elevated pursuant to this section.
- (F) Utilize all Letters of Map Revision (LOMR) or Physical Map Revisions (PMR) issued by FEMA for the currently effective SFHA maps of the community.
- (G) Verify the actual lowest floor elevation (including basement) of all elevated **residences**.
- (H) Review certified plans and specifications for compliance.
- (I) Stop Work Orders:
  - (i) Upon notice from the Floodplain Administrator, work on any **building, structure** or premises that is being done contrary to the provisions of this section shall immediately cease.
  - (ii) Such notice shall be in writing and shall be given to the owner of the property, or to his or her agent, or to the person doing the work, and shall state the conditions under which work may be resumed.
- (J) Revocation of Permits:
  - (i) The Floodplain Administrator may revoke a Floodplain Development Permit, issued by the Floodplain Administrator under the provisions of the ordinance, in cases where there has been any false statement or misrepresentation as to any material fact in the application or plans on which the Floodplain Development Permit was based.
  - (ii) The Floodplain Administrator may revoke a Floodplain Development Permit upon determination by the Floodplain Administrator that the construction, erection, alteration, repair, moving, demolition, installation, or replacement of the **structure** for which the Floodplain Development Permit was issued is in violation of, or not in conformity with, the provisions of this ordinance.

(g) Elevation of Existing Structures

- (1) Elevation Standards: Until January 1, 2013, in all FP **zones** any existing **residence** (excluding **mobile homes**) that has been **substantially damaged** or suffered **repetitive loss** may be elevated such that the **lowest floor elevation** is at or above the **flood protection grade**.

A registered professional engineer or architect shall certify that the elevation of the **residence** has been designed so that the elevation of the **residence** and attendant utility facilities below the **flood protection grade** are watertight and capable of resisting the effects of the **regulatory flood** and meets all of the criteria required by this section. The elevation design shall take into account flood velocities, duration, rate of rise, hydrostatic pressures, and impacts from debris or ice. Such certification shall be provided to the Flood Plain Administrator as set forth in this section. Should solid perimeter walls be used to elevate a **residence**, such enclosed area shall be designed to preclude living space, and the design shall meet the following minimum criteria:

- (A) provide for a minimum of two openings having a total net area of not less than one square inch for every one square foot of enclosed area;
  - (B) provide that all openings shall be located entirely below the **flood protection grade**;
  - (C) provide that the bottom of all openings shall be either:
    - (i) no more than one foot above the exterior grade immediately beneath each opening, or
    - (ii) no more than one foot above foundation's interior grade in structures where the interior grade is higher than the exterior grade;
  - (D) provide that openings may be equipped with screens, louvers, valves, or other coverings or devices provided that such coverings or devices permit the automatic flow of floodwaters in both directions;
  - (E) provide that the interior portion of such enclosed area shall not be partitioned or finished into separate rooms;
  - (F) provide that the interior grade of such enclosed area shall be at an elevation at or higher than the exterior grade; and
  - (G) provide that an adequate drainage system must be installed to remove floodwaters from the interior area within a reasonable period of time after a flood event.
- (2) Additional Standards: All designs must also include the following additional minimum criteria:
- (A) The means of elevation shall be anchored to prevent flotation, collapse or lateral movement of the **residence**;

- (B) The means of elevation shall be constructed with materials and utility equipment resistant to flood damage below the **flood protection grade**;
  - (C) The means of elevation shall be constructed by methods and practices that minimize flood damage;
  - (D) Electrical, heating, ventilation, plumbing, air conditioning equipment, utility meters, and other service facilities shall be located at or above the **flood protection grade** or designed so as to prevent water from entering or accumulating within the components below the **flood protection grade**. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the **flood protection grade**;
  - (E) Replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
  - (F) Replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system; and
  - (G) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
  - (H) Where the **lowest floor elevation** is 6 or more feet above the highest adjacent grade, a deed restriction irrevocable by the owner and enforceable by the **APC** prohibiting the conversion of the area below the **lowest floor elevation** to a use contrary to the originally approved design shall be recorded as a condition of issuance of the final **certificate of compliance**.
- (3) Additional Standards for Identified **Regulatory Floodways**: Areas designated as **regulatory floodways** are extremely hazardous areas due to the velocity of floodwaters, which carry debris, potential projectiles, and have erosion potential. If the site is in an identified **regulatory floodway**, the Floodplain Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Indiana Department of Natural Resources and apply for a permit for construction in a **regulatory floodway**. Under the provisions of *I.C. 14-28-1*, a permit for construction in a **regulatory floodway** from the Indiana Department of Natural Resources is required prior to the issuance of a local improvement location permit for any excavation, deposit, construction, or obstruction activity located in the **regulatory floodway**. This includes land preparation activities, such as filling, grading, clearing, paving, etc., undertaken before the actual start of construction of any **structure**.

No action shall be taken by the Floodplain Administrator until a permit has been issued by the Indiana Department of Natural

Resources granting approval for construction in the **regulatory floodway**. Once a permit for construction in a **regulatory floodway** has been issued by the Indiana Department of Natural Resources, the Floodplain Administrator may issue a Floodplain Development Permit, provided the provisions contained in this section have otherwise been met. The Floodplain Development Permit cannot be less restrictive than the permit for construction in a **regulatory floodway** issued by the Indiana Department of Natural Resources.

No **development** shall be allowed which acting alone or in combination with existing or future **development**, will increase the **regulatory flood** more than 0.14 of one foot.

- (4) Additional Standards for Identified **Floodway Fringe**: If the site is located in an identified **floodway fringe**, then the Floodplain Administrator may issue a Floodplain Development Permit provided all provisions contained in this section have been met and further provided that the **lowest floor elevation** of the elevated **residence** shall be at or above the **flood protection grade**.
- (5) Additional Standards for Special Flood Hazard Areas Without Established Base Flood Elevation and/or **Floodway** or **Floodway Fringe**:
- (A) Drainage area upstream of the site is greater than one square mile:

If the site is in an identified **special flood hazard area** where the limits of the **floodway** and the **floodway fringe** have not yet been determined, and the drainage area upstream of the site is greater than one square mile, the Floodplain Administrator shall require the applicant to forward the application, along with all pertinent plans and specifications, to the Indiana Department of Natural Resources for review and comment.

No action shall be taken by the Floodplain Administrator until either a permit for construction in a **floodway** or a floodplain analysis/regulatory assessment citing the 100 year flood elevation and the recommended **flood protection grade** has been received from the Indiana Department of Natural Resources.

Once the Floodplain Administrator has received the proper permit for construction in a **floodway** or floodplain analysis/regulatory assessment approving the proposed

**development**, a Floodplain Development Permit may be issued provided the conditions of the Floodplain Development Permit are not less restrictive than the conditions received from the Indiana Department of Natural Resources and the provisions contained in this section have been met.

- (B) Drainage area upstream of the site is less than one square mile:

If the site is in an identified floodplain where the limits of the **floodway** and the **floodway fringe** have not yet been determined and the drainage area upstream of the site is less than one square mile, the Floodplain Administrator shall require the applicant to provide an engineering analysis showing the limits of the floodplain and 100 year flood elevation for the site.

Upon receipt, the Floodplain Administrator may issue a Floodplain Development Permit, provided the provisions contained in this section have been met.

- (C) The total cumulative effect of the proposed **development**, when combined with all other existing and anticipated development, will not increase the **regulatory flood** more than 0.14 of one foot and will not increase flood damages or potential flood damages.
- (6) Additional Standards for Flood Prone Areas: All **development** in known flood prone areas not identified on FEMA maps, or where no FEMA published map is available, shall meet general standards as required by this section.

This ordinance shall be in full force and effect from and after its passage.

INTRODUCED ON FIRST READING ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 2009.

THE

# Area Plan Commission

of TIPPECANOE COUNTY

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LAFAYETTE, INDIANA 47901-1209

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SALLIE DELL FAHEY  
EXECUTIVE DIRECTOR

November 19, 2009  
Ref. No.: 09-357

West Lafayette Common Council  
609 W. Navajo Street  
West Lafayette IN 47906

## CERTIFICATION

RE: **AMENDMENT #63—CHANGES TO THE FLOOD PLAIN  
ZONE:**

To amend the Unified Zoning Ordinance to allow substantially damaged single-family residences to raise the elevation of their buildings during a three year period of time, ending January 1, 2013.

Dear Council:

As Secretary to the Area Plan Commission of Tippecanoe County, I do hereby certify that at a public hearing held on November 18, 2009, the Area Plan Commission of Tippecanoe County voted 12 yes - 0 no on the motion to approve the enclosed amendment to the Unified Zoning Ordinance. Therefore, the Area Plan Commission of Tippecanoe County recommends to the West Lafayette Common Council that the proposed zoning ordinance amendment be approved.

Sincerely,



Sallie Dell Fahey  
Executive Director

SDF/lmu

Enclosure: Staff Report and Ordinance

RECEIVED

NOV 30 2009

CLERK - TREASURER

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**UNIFIED ZONING ORDINANCE AMENDMENT #63  
ELEVATION OF PROPERTIES IN FLOOD PLAIN**

**STAFF REPORT  
November 12, 2009**

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**Unified Zoning Ordinance Amendment #63  
ELEVATION OF PROPERTIES IN FLOOD PLAIN**

**Staff Report  
November 12, 2009**

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**HISTORY OF FLOODPLAIN IN TIPPECANOE COUNTY**

Since 1965, the year the first Unified Zoning Ordinance was adopted in Tippecanoe County, floodplains have been a distinct zoning district. The FP zone prohibits dwellings and other enclosed and roofed buildings. Any dwelling that pre-dates the 1965 UZO is legally non-conforming and is subject to the rules governing non-conforming uses and buildings in the floodplain. This method of floodplain stewardship has ensured that no new dwellings have been legally constructed in the 100-year floodplain and non-conforming homes eventually come down when they are substantially damaged. Our regulations significantly mitigate risk to persons and property, reducing over time the number of homes and other buildings located in our floodplains.

In 2008 the Indiana legislature amended the Indiana Code. The change permits reconstruction of a house in the floodway that was substantially damaged by any means (not just flooding) provided it can be elevated more than 2' above the regulatory flood (flood protection grade), and meet other construction criteria.

**ELEVATION OF DAMAGED STRUCTURES:**

In the spring of 2009 Commissioner David Byers recommended that the Ordinance Committee amend the ordinance to be in line with the changes made to the state ordinance. The idea was to allow reconstruction of substantially damaged or repetitive loss homes in the Flood Plain Zone if the homes can be raised to flood protection grade.

This ordinance amendment will only be in effect until January 2013. It will allow structures that lie within the Flood Plain to be raised to flood protection grade if they have been substantially damaged by any means or have been repetitively damaged in flood events and can meet the requirements of the DNR and FEMA.

Several steps have led to the creation of this amendment:

1. April 2009: Discussion started at Ordinance Committee to revise Flood Plain regulations at the request of David Byers;
2. October 7, 2009: Approval by Ordinance Committee;
3. October 15, 2009: Unofficial approval by IDNR division of water.

**STAFF RECOMMENDATION:**

Approval