

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE BUILDING AND CONSTRUCTION CODE (TITLE 14 TCC) TO CHANGE CHAPTER 14.38 DEVELOPMENT IN FLOOD HAZARD AREAS TO ENSURE COMPLIANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM 44 CFR 60.3, AND FOR OTHER MATTERS PROPERLY RELATED THERETO.

WHEREAS, Ordinance No. 15905 was adopted on June 16, 2020 pursuant to RCW 36.70A.390 by the Board of Thurston County Commissioners (Board) to establish interim development regulations for development in floodplains to ensure Thurston County remained in compliance with the National Flood Insurance Program; and

WHEREAS, Thurston County received necessary changes from the Washington State Department of Ecology to Chapter 14.38 TCC Development in Flood Hazard Areas that were due by June 19, 2020; and

WHEREAS, Thurston County worked with the Department of Ecology on proposed amendments to Chapter 14.38 TCC prior to the adoption of Ordinance No. 15905; and

WHEREAS, Ordinance No. 15905 was subject to a duly noticed public hearing on August 4, 2020 and expires on January 30, 2021; and

WHEREAS, Thurston County must adopt final regulations by the expiration of Ordinance No. 15905 to remain in compliance with the National Flood Insurance Program; and

WHEREAS, the final regulations proposed by this ordinance are the same as the interim regulations adopted by Ordinance No. 15905; and

WHEREAS, Thurston County (County) participates in the in the federal National Flood Insurance Program and is required to adopt floodplain management measures that satisfy 44 Code of Federal Regulations (CFR) Section 60.3 of the National Flood Insurance Program; and

WHEREAS, Thurston County obtained a “Class 2” rating in the Community Ratings System due to its flood protection and flood outreach measures in 2020; and

WHEREAS, a Class 2 rating in the Community Rating System provides Thurston County residents who need flood insurance through the National Flood Insurance Program a forty percent (40%) reduction in their flood insurance costs for homes inside the Special Flood Hazard Area, and a ten percent (10%) reduction outside of the Special Flood Hazard Area; and

WHEREAS, flood insurance is required for homes and certain buildings in Special Flood Hazard Area to obtain financing with a federally backed mortgage; and

WHEREAS, the County has flood protection regulations in Development in Flood Hazard Areas (Chapter 14.38 TCC) and the Thurston County Critical Areas Ordinance to help ensure new and rebuilt structures and residents in the county may be better protected from future flood events; and

WHEREAS, amendments are proposed to Development in Flood Hazard Areas (Chapter 14.38 TCC) which are necessary to ensure the County continues to meet the requirements of the National Flood Insurance Program established in 44 CFR Section 60.3 of the National Flood Insurance Regulations; and

WHEREAS, as part of this update from time to time, amendments may be required to update Thurston County's flood plain development regulations in Chapter 14.38 TCC and the Thurston County Critical Areas Ordinance; and

WHEREAS, one of the requirements is that Thurston County adopt the most recently available flood elevation data provided by the Federal Emergency Management Agency (FEMA); and

WHEREAS, Thurston County includes provisions in Chapter 14.38 TCC automatically adopts the most recently available data provided by FEMA without requiring action by the Board of County Commissioners; and

WHEREAS, pursuant to RCW 86.16.041, Thurston County must submit to the Washington State Department of Ecology any new floodplain management ordinance or amendment to any existing floodplain management ordinance following adoption;

WHEREAS, the ordinance shall not take effect until thirty (30) days from filing with the Department of Ecology unless the Department of Ecology disapproves such ordinance within thirty (30) days of filing; and

WHEREAS, the Board believes the amendments are necessary for the preservation of the public health, safety, and general welfare of Thurston County residents.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF THURSTON COUNTY, AS FOLLOWS:

SECTION 1. AMENDMENT. The Buildings and Construction Code (Title 14 TCC), Development in Floodplains (Chapter 14.38 TCC) is hereby amended as shown in Attachment A.

SECTION 2. CORRECTIONS. Upon approval of the Prosecuting Attorney's Office, the Clerk of the Board, or designee, is authorized to make any necessary corrections to any section, subsection, sentence, clause, phrase or other portion of this Ordinance and Chapter 14.38 of the Thurston County Code for scribes or clerical errors, references, ordinance numbering, section/subsection numbers, and any reference thereto.

SECTION 3. INTERIM ORDINANCE REPEALED. Interim ordinance No. 15905, which enacted temporary regulations on development in floodplains shall be repealed on the effective date of this ordinance.

SECTION 4. SEVERABILITY. If any section, subsection, sentence, clause, phrase or other portion of this Ordinance or its application to any person is, for any reason, declared invalid, illegal or unconstitutional in whole or in part by any court or agency of competent jurisdiction, said decision shall not affect the validity of the remaining portions hereof.

SECTION 5. EFFECTIVE DATE. This Ordinance shall take effect *40 calendar days after adoption unless disapproved by the Department of Ecology pursuant to RCW 86.16.041.*

ADOPTED: _____

ATTEST:

BOARD OF COUNTY COMMISSIONERS
Thurston County, Washington

Clerk of the Board

Chair

APPROVED AS TO FORM:

JON TUNHEIM
PROSECUTING ATTORNEY

Vice-Chair

Travis Burns
Deputy Prosecuting Attorney

Commissioner

I. Section 14.38.020 shall be amended as follows:

14.38.020 - Definitions.

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2.5 “Alteration of Watercourse” means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

3. "Area of shallow flooding" means an AO, AR/AO or AR/AH (or VO), or AH Zone on the flood insurance rate map (FIRM) with a one percent or greater annual chance of flooding. The base flood depths ~~for AO and AH~~ shall range from an average depth of one to three feet and have the following characteristics:

- a. Be above natural ground;
- b. Be where a clearly defined channel does not exist;
- c. Located where the path of flooding is unpredictable and indeterminate; and
- d. Velocity flow may be evident.

~~AO~~ Such flooding is characterized by sheet flow. ~~AH indicates~~ or ponding and is shown with standard base flood elevations. Also referred to as the sheet flow area.

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14. "Flood" or "flooding" means:

A. A general and temporary condition of partial or complete inundation of normally dry land areas from:

- ~~a~~1. The overflow of inland or tidal waters; and/or
- ~~b~~2. The unusual and rapid accumulating of runoff of surface waters from any source; and/or
3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

B The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

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15.5“Flood Elevation Study” means an examination evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS).

16. "Flood insurance study" means the official report provided by FEMA that includes flood profiles, and the water surface elevation of the base flood.

16.5 "Floodplain or Flood Prone Area" means any land area susceptible to being inundated by water from any source. See "Flood" of "Flooding."

16.6 "Flood proofing" means any combination of structural and nonstructural additions, changes or adjustments to structures meeting the requirements of this chapter which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that are designed to meet the requirements of this chapter that have the structural integrity and design to be impervious to flood water below the county's adopted freeboard requirement.

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19.5 "Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

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20.5 "Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

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26.5 "Mean sea level" means for the purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

27. "New construction" means ~~structures for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.~~ for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial Flood Insurance Rate Map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures and for floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of this ordinance codified in this chapter and includes any subsequent improvements to such structures.

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II. Section 14.38.030 shall be amended as follows:

14.38.030 - General provisions.

A. Applicability. This chapter shall apply to:

1. All special flood hazard areas (SFHA) within Thurston County as identified on flood insurance rate maps dated October 16, 2012, and any revisions thereto, prepared by FEMA, supplemented by a scientific and engineering report entitled "Flood Insurance Study for Thurston County, Washington and Incorporated Areas, dated October 16, 2012, and any revisions thereto which may hereafter be made by FEMA; and

2. Areas identified as hazardous by the Thurston County High Ground Water Flood Hazard Areas Resource Map, and
3. Areas identified as hazardous by the best available information for flood hazard area identification as outlined in Section 14.38.040(D)(2) which shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under Section 14.38.040(D)(2), and
4. Areas included within the highest known flood of record,
5. If there is more than one base elevation listed, the highest elevation shall be utilized.

The maps, information and report are on file at the Thurston County ~~department~~ Community Planning and Economic Development department Building Development Center located at 2000 Lakeridge Drive SW, Olympia, WA.

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III. Section 14.38.040 shall be amended as follows:

14.38.040. - Administration.

- A. Administrative Official. It shall be the duty of the building official, or designee, to administer and implement this chapter.

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C. Application Information.

1. Application shall be made on forms furnished by the county and may include, but not be limited to: site plans in duplicate drawn to scale specified by the county showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials and drainage facilities.
2. A professional engineer or registered surveyor may be required to document site elevations or other information.
3. The following information is required on all applications:
 - a. Elevation in relation to mean sea level of the lowest floor (including basement) of all structures recorded on a current elevation certificate (FEMA Form 81-31);
 - b. Elevation in relation to mean sea level to which any structure has been floodproofed;
 - c. Certification by a registered professional engineer or architect that the floodproofing criteria in Section 14.38.050(B)(2) have been met;
 - d. Description of the extent to which any water course will be altered or relocated as a result of proposed development.
4. The building official may require that certain tests and other analytical studies be made prior to approval of construction or development proposals. The developer shall pay for or reimburse the county for the costs incurred in the conduct of such tests or studies and for the costs incurred by the county to engage technical consultants for review and interpretation of data and findings submitted by or on behalf of the developer.
5. Where development is proposed in a floodway, an engineering analysis indication no rise of the Base Flood Elevation.

D. Duties and Responsibilities of the Building Official.

1. Permit Review.

- a. Review all permit applications, conferring with the county engineer, environmental review officer, and other county personnel as may be appropriate, to determine that the requirements of this chapter have been satisfied;
- b. Review all permits applications to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required.

2. Use of Other Base Flood Data. When base flood elevation data has not been provided by FEMA as noted in Section 14.38.030(A), the building official shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source in order to administer Section 14.38.050.

3. Interpretation. The building official shall make interpretations where needed, as to the exact location of the boundaries of the special flood hazard areas as shown in the flood insurance rate maps (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions).

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5. Information to be Obtained and Maintained—Other Reports.

- a. Where base flood elevation data is provided through the flood insurance study, FIRM, or required as in Section 14.38.040(D)(2), obtain and record on an elevation certificate (use current FEMA approved form Form 81-31) the actual finished construction elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
- b. Non-residential only. For all new or substantially improved floodproofed non-residential structures:
 - i. Verify and record the actual elevation to which the structure was floodproofed (in relation to current reference datum); and
 - ii. Maintain the floodproofing certifications required in the project applications and Section 14.38.040(C)(3)(c).
- c. Obtain and maintain documentation of the elevation of the bottom of the lowest horizontal structural member in V or VE zones.
- d. Certification required by Section 14.38.050(E).
- e. Records of all variance actions, including how they meet approval criteria in Section 14.38.060.
- f. Improvement and damage calculations for permits issued under this chapter.
- g. Maintain for public inspection records pertaining to the provisions of this ordinance as required by current federal or state law.

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IV. Section 14.38.050 shall be amended as follows:

14.38.050 - Standards.

A. In all areas of special flood hazard, the following standards are required:

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6. Review of Building Permits. Where base flood elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source (Section 14.38.040(D)(2)), a Base Flood Elevation shall be established using FEMA approved techniques. Applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding, reflects the established base flood elevation and freeboard requirements, and complies with all applicable sections of Chapter 14.38. Review of flood permits can include but is not limited to the use of historical data, high water marks, and photographs of past flooding when this information is available.

B. In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 14.38.030(A) or Section 14.38.040(D)(2) the following provisions are required:

1. Residential Construction.

- a. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to above the required freeboard (add two feet to the base flood elevation), or the highest known recorded flood elevation, whichever is greater.
- b. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or if used solely for parking such as an attached garage, additional building access, or limited storage (and it is not a basement), each fully enclosed area shall be independently designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Any qualifying area will require a non-conversion agreement. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - i. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - ii. The bottom of all openings shall be no higher than one foot above grade.
 - iii. Openings may be equipped with screens, louvers, or other coverings or devices; provided that, they permit the automatic entry and exit of floodwaters.
- c. Below grade crawl spaces will not be considered basements if the following conditions are met:
 - i. The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade.
 - ii. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the floor joist must not exceed four feet at any point.

- iii. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event.
- iv. The velocity of floodwater at the site should not exceed five feet per second.
- v. Equipment, mechanical items, electrical items, and ductwork must be elevated above the required freeboard (placed above the BFE).
- d. New construction and substantial improvement of any residential structure in a V, V1-30, or VE zone shall meet the requirements in 14.38.050(D) TCC.
- e. New construction located in an AO Zone, the structure shall meet the requirements in Standards for Shallow Flooding Areas (AO Zones) in 14.38.050(C) TCC.

Buildings that have below-grade crawlspaces may have higher flood insurance premiums than buildings that have the interior elevation at or above the lowest adjacent exterior grade. For additional information refer to FEMA Technical Bulletin 11-01.

- 4. Nonresidential Construction. New construction, additions or substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of two feet above the base flood elevation or the highest known recorded flood elevation, or elevated as required by ASCE 24, whichever is greater; or, together with utilities and sanitary facilities, shall:
 - a. Be dry floodproofed (watertight) to two foot above the base flood elevation, or the highest known recorded flood elevation, whichever is greater. The structure shall be made watertight with walls substantially impermeable to the passage of water or dry floodproofed to the elevation required by ASCE 24, whichever is greater. The use of flood proofing for nonresidential development within the SFHA will require that a certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed project will result in zero rise in flood levels during the occurrence of the base flood discharge or event. The certification must include all calculations;
 - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
 - c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 14.38.040(D)(5)(b);
 - d. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 14.38.050(B)(1);
 - e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed one foot above the base flood elevation will be

rated as one foot below that level). Floodproofing the building an additional foot will reduce insurance premiums significantly. A floodproofing certificate (FEMA Form 81.65) must submit to the flood plain manager for approval;

- f. Construction of new critical facilities shall be located outside the limits of the floodway, the special flood hazard area, and areas identified as within the 0.2 percent annual-chance-flood (five-hundred-year floodplain). See TCC Section 24.20.080.
- g. New construction located in an AO Zone, the structure shall meet the requirements in Standards for Shallow Flooding Areas (AO Zones) in 14.38.050(C) TCC.
- h. New construction located in a V, V1-30 or VE Zone shall meet the requirements Coastal High Hazards 14.38.050(D) TCC.

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- 5. **Manufactured Homes.** All manufactured homes to be placed or substantially improved within special flood hazard areas shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is two feet above the base flood elevation and be securely anchored to prevent flotation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, the use of either over the top ties or to the use of frame ties that are connected to ground anchors. See FEMA P-85 for detailed guidance on protecting manufactured homes from floods.
- 6. **Recreational Vehicles.** Recreational vehicles placed on site within a special flood hazard area are required to be:
 - a. On the site for no more that the number of days allowed pursuant to TCC Section 20.31.020 and 24.20.65, and
 - b. Fully licensed and ready for highway use, 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.

Recreational vehicles are not for use as permanent dwellings. Also see TCC Section 20.34.020 and Section 24.20.065.

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- F. **Zone AE without Floodways.** In areas with BFEs (but a regulatory floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community

~~When a regulatory floodway has not been designated, applicants for new construction, substantial improvements or other development (including fill) shall reasonably utilize the best available information from a federal, state, or other sources to demonstrate that the cumulative effect of the proposed development, when combined with all other existing and proposed development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.~~

~~A registered professional engineer shall provide certification demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed development would not result in any increase of more than one foot in flood levels in the SFHA during the occurrence of the base flood discharge. The calculations shall be included with the certification.~~

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H. Agricultural Flood Sanctuaries. Elevated areas for the purpose of creating a flood sanctuary for livestock and agricultural field equipment are allowed in conjunction with an agricultural use where such use is allowed. Agricultural flood sanctuaries shall be sized appropriately for the expected number of livestock and/or field equipment and be elevated above the county's freeboard. Proposals for agricultural flood sanctuaries shall meet all procedural and substantive requirements of this chapter.

V. Section 14.38.070 shall be amended as follows:

14.38.070 - Violations.

- A. Violation of the provisions of this chapter or failure to comply with any of the requirements shall constitute a misdemeanor and shall be punishable by a fine of not more than one thousand dollars or by imprisonment for not more than ninety days, or by both such fine and imprisonment. Each day such violation continues shall be considered a separate, distinct offense.
- B. Any person who commits, participates in, assists, or maintains such violation may be found guilty of a separate offense and suffer the penalties set forth in subsection A of this section.
- C. In addition to the penalties set forth in subsections A and B of this section, any violation of the provisions of this chapter is declared to be a public nuisance and may be abated through proceedings for injunctive or other relief in superior court or other court of competent jurisdiction.
- D. No structure or land shall be hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations.