

COPY

ORDINANCE NO. 142 -06

**AN ORDINANCE RELATING TO FLOOD DAMAGE  
PREVENTION; AMENDING ORDINANCE NO. 109-89;  
AND ESTABLISHING AN EFFECTIVE DATE**

**WHEREAS**, the Board of County Commissioners of Wahkiakum County, Washington, does find and declare that it is necessary for the protection and preservation of the public peace, health, safety, and general welfare in regard to control of the floodplain within Wahkiakum County, that certain rules, regulations, laws and conditions be established under the police power of the County, and pursuant to the laws of the United States of America and of the State of Washington; and

**WHEREAS**, on the 9<sup>th</sup> day of May, 1989, the Board of County Commissioners did adopt Ordinance No. 109-89, which Ordinance established a comprehensive flood damage prevention and flood plain management program, which program established the County's eligibility to participate in the National Flood Insurance Program; and

**WHEREAS**, since 1989, changes have occurred in the federal regulations governing the National Flood Insurance Program; and

**WHEREAS**, to maintain the County's eligibility to participate in the National Flood Insurance Program, the County is required to make certain amendments to Ordinance No. 109-89; and

**WHEREAS**, Wahkiakum County desires to continue eligibility in the National Flood Insurance Program;

**NOW, THEREFORE:**

**IT IS HEREBY ORDAINED BY THE BOARD OF WAHKIAKUM COUNTY COMMISSIONERS**, as follows:

**Section 1.** Section 2 of Ordinance No. 109-89 and Section 86.16.200 of the Revised Code of Wahkiakum County are each amended to read as follows:

**“Definitions:**

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

**Accessory Structures:** Any structure whose use is supplemental to the primary land use or structure, including but not limited to utility pads, pumphouses, santi-cans, storage sheds, etc.

**Administrator:** means the Wahkiakum County Public Works Director or his/her designee.

**Appeal:** means a request for a review of the administrator's interpretation of any provision of this Ordinance or a request for a variance.

**Area of Shallow Flooding:** means a designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). AO zones have base flood depths that range from one to three feet above the natural ground; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. **AO is characterized as sheet flow; AH indicates ponding, and is shown with standard base flood elevations.**

**Area of Special Flood Hazard:** means the land in the flood plain within a community subject to a one percent or greater change of flooding in any given year. **Designation on maps always includes the letters A or V. Commonly referred to as the “100-year flood” or “base flood” area.**

**Base Flood:** The flood having a 1% chance of being equaled or exceeded in any given year (also referred to as the “100-year flood”). Designated on Flood Insurance Rate Maps by the letters A or V.

**Basement:** means any area of the building having its floor sub-grade (below ground level) on all sides.

**Best Available Information:** means in the absence of official flood insurance rate map data, communities can use data from federal, state or other sources provided this data has either been generated using technically defensible methods or is based on reasonable historical analysis and experience.

**Board:** means Board of County Commissioners of Wahkiakum County.

**Breakaway Wall:** means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

**Coastal High Hazard Area:** means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1-30, VE or V.

**Critical Facility:** means a facility for which even a slight change of flooding might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire, and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous wastes.

**Cumulative Substantial Damage:** means flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

**Designation Floodway:** means the regulatory floodway which has been delineated on the flood insurance rate map (FIRM) or the flood boundary/floodway maps (FBRM) of a community’s flood insurance study and is included in this Ordinance.

**Development:** means any human-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

**Elevation Certificate:** means the official form (FEMA Form 81-31) used to track development, provide elevation information necessary to ensure compliance with community floodplain management ordinances, and determine the proper insurance premium rate with Section B completed by Community Officials.

**Elevated Building:** means for insurance purposes, a non-basement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

**Existing Manufactured Home Park or Subdivision:** means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

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

**Flood or Flooding:** means a general and temporary condition of partial or complete inundation of normally dry land area from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

**Flood Damage Potential:** means the potential for damage to development located within the flood control zone from floodwaters or debris contained within floodwaters and/or the damage caused by the displacement of development located within the floodplain.

**Flood Insurance Rate Map (FIRM):** means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

**Flood Insurance Study:** means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map (FBFM), and the water surface elevation of the base flood.

**Floodway:** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

**Increased Cost of Compliance:** A flood insurance claim payment up to \$30,000 directly to a property owner for the cost to comply with floodplain management regulations after a direct physical loss caused by a flood. Eligibility for an ICC claim can be through a single instance of "substantial damage" or as a result of a "cumulative substantial damage." (more information can be found in FEMA ICC Manual 301).

**Lowest Floor:** means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Ordinance found at Section 5.2-1(2) (i.e. provided there are adequate flood ventilation openings).

**Manufactured Home:** means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

**Manufactured Home Park or Subdivision:** means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

**New Construction:** means structures for which the “start of construction” commenced on or after the effective date of this Ordinance.

**New Manufactured Home Park or Subdivision:** means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

**Person:** means an individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, or any agency of the state or local governmental unit however designated.

**Recreational Vehicle:** means a vehicle,

- 1) Built on a single chassis;
- 2) 400 square feet or less when measured at the largest horizontal projection;
- 3) Designated 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.

**Start of Construction:** includes substantial improvement, and means the date any permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. 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 a basement, footings, piers, or foundation 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 part of the main structure. For a substantial improvement the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**Substantial Damage:** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Structure:** A walled and roofed building, including a gas or liquid storage tank that is principally above ground.

**Substantial Improvement:** means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent 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, before the damage occurred. For the 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 can exclude:

- 1) Any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications **which have been previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions**, or
- 2) Any alternation of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

**Subdivision:** means a division of land into four or more lots, tracts, parcels, sites or divisions where any one of the lots, tracts, parcels, sites or divisions is less than five (5) acres in size and shall include all re-subdivisions of land. The term shall also include all short subdivisions, as defined by County Ordinance.

**Time Computation:** For the purposes of this Ordinance, the time within which an act is to be done shall be computed by excluding the first day, and including the last, unless the last day is a legal holiday as defined in RCW 1.16.050 or Sunday, and then it is also excluded.

**Variance:** means a grant of relief from the requirements of this Ordinance that permits construction in a manner which would otherwise be prohibited by this Ordinance.

**Water Dependent:** means a structure for commerce or industry that cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.”

**Section 2:** Section 3.3-2 of Ordinance No. 109-89 and Section 86.16.302 of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Basis For Establishing The Areas of Special Flood Hazard:**

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Preliminary Flood Insurance Study (FIS)” dated September 28, 1990, together with Flood Insurance Rate Maps (FIRM) dated September 28, 1990, are hereby adopted by reference and declared to be a part of this Ordinance. The Flood Insurance Study and maps are on file at the Public Works Department, Building Section, located at 64 Main Street, Cathlamet, Washington 98612.”

**Section 3:** Section 4.4-1-1 of Ordinance No. 109-89 and Section 86.16.401(A) of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Development Permit Required:**

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. The permit shall be for all structures including manufactured homes, as set forth in the “**Definitions**”, and for all development including fill and other activities, also as set forth in the “**Definitions**”. A development permit will be issued as required by law. In cases where the structure is exempt from either a building or shorelines permit, a development permit may be included within the shorelines exemption letter if used. Permit fees shall be charged as periodically established by Resolution of the Board of County Commissioners.”

**Section 4:** Section 5.1-3 of Ordinance No. 109-89 and Section 86.16.501(C) of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Utilities:**

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems;

2. Water wells shall be located on high ground that is not in the floodway;
3. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
4. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.”

**Section 5.** Section 5.1-4(4) of Ordinance No. 109-89 and Section 86.16.501(D) of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Subdivision Proposals:**

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage;
4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).”

**Section 6.** Section 5.1-5 of Ordinance No. 109-89 and Section 86.16.501(E) of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Review of Building Permits/Shoreline Permits:**

Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 4.3-2), applications for building permits/shoreline permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.”

**Section 7.** Section 5.2-1 of Ordinance No. 109-89 and Section 86.16.502(A) of the Revised Code of Wahkiakum County are each hereby amended to read as follows:

**“Residential Construction:**

1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation (BFE).

*Note: Minimum FEMA standards require the lowest floor to be elevated “to or above” the BFE; however, adding an additional foot of freeboard increases safety and can reduce insurance premiums by as much as 30%. Adopting additional freeboard is strongly encouraged by FEMA.*

2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. 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 exist of floodwaters.

*Note: Foundation vent standards required by the IBC/IRC outside the floodplain do not meet this standard and are often inadvertently permitted. Insurance rates reflect an "all or nothing" standard, meaning, partially ventilated crawlspaces may be subject to an additional loading fee of 20-25% attached to the annual insurance premium.*

3. NFIP requirements for all Crawlspace Construction. Crawlspaces are commonly used as a method of elevating buildings in SFHAs to or above the BFE. General NFIP requirements that apply to all crawlspaces that have enclosed areas or floors below the BFE shall be following:

i) 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. Hydrostatic loads and the effects of buoyancy can usually be addressed though the required openings discussed in the next subsection. Because of hydrodynamic loads, crawlspace construction is not recommended in areas with flood velocities greater than 5 feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

ii) The crawlspace is an enclosed area below the BFE and, as such, must have openings that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than 1 foot above the lowest adjacent exterior grade. For guidance on flood openings, see FEMA Technical Bulletin 1-93, Openings in Foundation Walls.

iii) Crawlspace construction is not permitted in V zones. Open pile or column foundations that withstand storm surge and wave forces are required in V zones.

iv) Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE. Insulation is not a flood-resistant material. When insulation becomes saturated with floodwater, the additional weight often pulls it away from the joists and flooring. Ductwork or other utility systems located below the insulation may also pull away from their supports. See the section Flood-Resistant Materials, on page 8 of FEMA Technical Bulletin No. FEMA 467-1. For more detailed guidance on flood-resistant materials see Technical Bulletin 2-93, Flood-Resistant Materials Requirements.

v) Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters. For further guidance on the placement of building utility systems in crawlspaces, see FEMA 348, Protecting Building Utilities From Flood Damage.

vi) The interior grade of a crawlspace below the BFE must not be more than 2 feet below the lowest adjacent exterior grade (LAG).

vii) The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas (see the section

Guidance for Pre-Engineered Crawlspace, on page 7 of the FEMA Technical Bulletin, No. FEMA 467-1). This limitation will also prevent these crawlspaces from being converted into habitable spaces.

viii) 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. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means.

ix) The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used.”

**Section 8.** Section 5.2-4 of Ordinance No. 109-89 and Section 86.16.502(D) of the Revised Code of Wahkiakum County are each amended to read as follows:

#### **“Manufactured Homes**

1. All manufactured homes in the floodplain to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.”

**Section 9.** A NEW SECTION (Section 5.2-7), to read as follows, is hereby added to Ordinance No. 109-89:

#### **“Recreational Vehicles**

Recreational vehicles placed on sites are required to either:

1. Be on the site for fewer than 180 consecutive days, (or)
2. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
3. Meet the requirements of Section 5.2.-4 above and the elevation and anchoring requirements for manufactured homes.”

**Section 10.** Section 5.3 of Ordinance No. 109-89 and Section 86.16.503 of the Revised Code of Wahkiakum County are each amended to read as follows:

“Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, potential projectiles, and increase erosion potential, the following provisions apply:

a) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

b) Construction or reconstruction of residential structures is prohibited within designated floodways, except for (i) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and (ii) repairs, reconstruction or improvements to a structure, the

cost of which does not exceed 50 percent of the market value of the structure either, (A) before the repair, or reconstruction is started, or (B) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50 percent.

c) If subsections 5.3(a) and (b) are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 5, Provisions For Flood Hazard Reduction.

d) The cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot at any point. This paragraph is applicable when base flood elevations have been provided but floodways have not.”

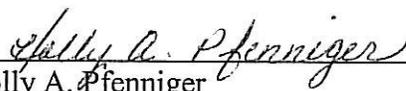
**Section 11.                      Validity**

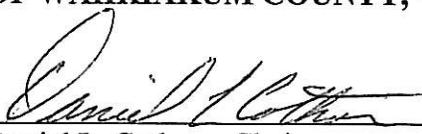
- 11.1 Should any section, clause, or provision of this Ordinance be declared invalid, the same shall not affect the validity of this Ordinance as a whole or any part thereof other than the part so declared invalid.
- 11.2 This Ordinance shall be in full force and effect from and after the 1<sup>st</sup> day of February, 2006.
- 11.3 This Ordinance shall be codified in the Revised Code of Wahkiakum County within Chapter 86.16.
- 11.4 The Ordinance sections amended under this Ordinance are amended upon the effective date of this Ordinance, except with respect to rights and duties which matured, taxes, assessments, or penalties which were incurred, and proceedings which were begun prior to February 1, 2006.

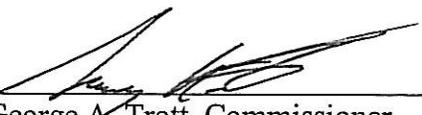
**DULY PASSED AND ADOPTED FOLLOWING PUBLIC HEARING HEREON** this 24<sup>th</sup> day of January, 2006.

**BOARD OF COUNTY COMMISSIONERS  
OF WAHKIAKUM COUNTY, WASHINGTON**

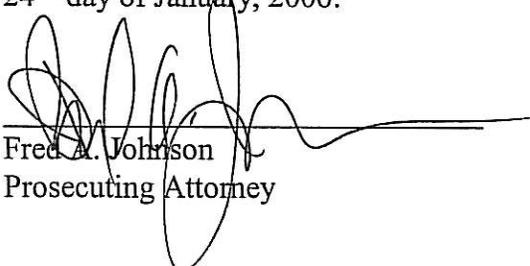
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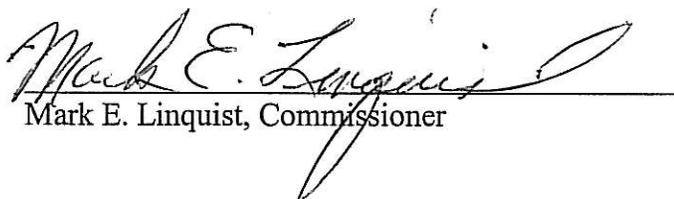
  
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Holly A. Pfenniger  
Clerk of the Board

  
\_\_\_\_\_  
Daniel L. Cothren, Chairman

  
\_\_\_\_\_  
George A. Trott, Commissioner

**APPROVED AS TO FORM** this 24<sup>th</sup> day of January, 2006:

  
\_\_\_\_\_  
Fred A. Johnson  
Prosecuting Attorney

  
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Mark E. Linquist, Commissioner