

Section 1100 FLOOD HAZARD OVERLAY FH

1101 Purpose: It is the purpose of this ordinance to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- .1 To protect human life and health;
- .2 To minimize expenditure of public money and costly flood control projects;
- .3 To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- .4 To minimize prolonged business interruptions;
- .5 To minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- .6 To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- .7 To ensure that potential buyers are notified that property is in an area of special flood hazard; and,
- .8 To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

1102 Definitions:

- .1 "AREA OF SPECIAL FLOOD OVERLAY" means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.
- .2 "BASE FLOOD" means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letters A or V.
- .3 "BASE FLOOD ELEVATION (BFE)" means the water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation is depicted on the FIRM to the nearest foot and in the FIS to the nearest 0.1 foot.
- .4 "BASEMENT" means the portion of a structure with its floor sub grade (below ground level) on all sides. *[Add. Ordinance 2010-6, eff. 11.26.10.]*
- .5 "BELOW-GRADE CRAWLSPACE" means an enclosed area below the base flood elevation in which the interior grade is not more than two feet below the lowest adjacent exterior grade and the height, measured from the interior grade

of the crawlspace to the top of the crawlspace foundation, does not exceed 4 feet at any point. *[Add. Ordinance 2010-6, eff. 11.26.10.]*

- .6 “BUILDING CODES” means the combined specialty codes adopted under ORS 446.062, 446.185, 447.020 (2), 455.020 (2), 455.496, 455.610, 455.680, 460.085, 460.360, 479.730 (1) or 480.545, but does not include regulations adopted by the State Fire Marshal pursuant to ORS chapter 476 or ORS 479.015 to 479.200 and 479.210 to 479.220. *[Add. Ordinance 2010-6, eff. 11.26.10.]*
- .7 “DEVELOPMENT” means any man-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 located within the area of special flood hazard. *[Amd by Ordinance No. 2008 - 3, eff. July 9, 2008.]*
- .8 “FLOOD OR “FLOODING” means a general and temporary condition of partial or complete inundation of normally dry land areas from:
 - (a) The overflow of inland or tidal waters, and/or
 - (b) The unusual and rapid accumulation of runoff of surface waters from any source.
- .9 “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.
- .10 “FLOOD INSURANCE STUDY” means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.
- .11 “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.
- .12 “HISTORIC STRUCTURE” means a structure that is:
 - (a) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or to a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - (c) Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior, or

- (d) Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 - i. By an approved state program as determined by the Secretary of the Interior, or;
 - ii. Directly by the Secretary of the Interior in states without approved programs.

[Add. Ordinance 2010-6, eff. 11.26.10.]

.13 "LOWEST FLOOR" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a structure's lowest floor provided that the enclosed area is built and maintained in accordance with the applicable design requirements of the Building Code. [modified for clarity 2010] *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

.14 "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. For flood plain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, and other similar vehicles.

.15 "NEW CONSTRUCTION" means structures for which the "start of construction" commenced after August 23, 1977 and includes subsequent substantial improvements to the structure. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

.16 "PRIMARY ZONE" means the underlying zone upon which the Flood Hazard Overlay Zone is superimposed.

.17 "RECREATIONAL VEHICLE" means a vehicle that is:

- (a) Built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towed by a light duty truck, and;
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

[Add. Ordinance 2010-6, eff. 11.26.10.]

.18 "START OF CONSTRUCTION" includes substantial improvement, and means the date the building 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

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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 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 the alteration affects the external dimensions of a building. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

.19 "STRUCTURE" means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

.20 "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 its market value before the damage occurred. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

.21 "SUBSTANTIAL IMPROVEMENT" means reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The market value of the structure should be:

(a) The appraised real market value of the structure prior to the start of the initial repair or improvement, or

(b) In the case of damage, the appraised real market value of the structure prior to the damage occurring. The term does not include either:

i. A 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

ii. Alteration of an Historic Structure, provided that the alteration will not preclude the structure's continued designation as an Historic Structure.

[Add. Ordinance 2010-6, eff. 11.26.10.]

.22 "VIOLATION" means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance is presumed to be in violation until such time as that documentation is provided.

[Add. Ordinance 2010-6, eff. 11.26.10.]

1103 Application:

- .1 This zone shall apply to all areas of special flood hazards within the jurisdiction of Columbia County.

1104 Basis for Special Flood Hazard Areas

- .1 The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Columbia County, Oregon and Incorporated areas", dated November 26, 2010, with accompanying Flood Insurance maps is hereby adopted by reference and declared to be part of this ordinance. The Flood Insurance Study is on file at the Columbia County Department of Land Development Services office, County Courthouse, St. Helens, Oregon. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

1105 Development Permit

- .1 A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 1104. The permit shall be for all structures allowed by the underlying zone, including manufactured homes, as set forth in the "Definitions", and for all development including fill and other activities, also set forth in the "Definitions". The following exceptions apply for the storage of equipment or materials:
 - A. any temporary storage within any zoning district, and
 - B. permanent storage connected with residential use located out of the floodway.

[Amd Ordinance 2008 - 3, eff 07.09.08.]

1106 Administration

- .1 The Land Development Services Administrator, or his designee, is appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.
- .2 Duties of the Administrator shall include, but not be limited to, reviewing all development permits to determine:
 - A. That the permit requirements of this ordinance have been satisfied.
 - B. That all necessary permits have been obtained from those Federal, State, or local government agencies from which prior approval is required.
 - C. If the proposed development is located in the floodway, assure that the encroachment provisions of Section 1110) are met.
- .3 When base flood elevation data has not been provided in accordance with Section 1104, Basis for Special Flood Hazard Areas, the Administrator 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 Sections 1109 Specific Standards, and 1110 Floodways.

Where base flood elevation data is provided through the Flood Insurance Study or required as in Section 1106.3, the Administrator will obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basements and crawlspaces) of all new or substantially improved structures, and whether or not the structure contains a basement.

- .4 For all new or substantially improved floodproofed structures, the Administrator will:
 - A. Verify and record the actual elevation (in relation to mean sea level), and
 - B. Maintain the floodproofing certifications required in Section 1109.2.A(3).
- .5 The Administrator will maintain for public inspection all records pertaining to the provisions of this ordinance.
- .6 For alteration of water courses the Administrator shall:
 - A. Notify adjacent communities and the Department of Land Conservation and Development prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
 - B. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

1107 Interpretation, Appeals and Variances

- .1 The Administrator shall make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions).
- .2 The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 60.6 of the rules and regulations of the National Flood Insurance Program (44 CFR 59-76).
- .3 Variances to the standards of flood hazard areas shall be administered according to Section 1504 of this Ordinance and shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59-76).

[Amd. Ordinance 2010-6, eff. 11.26.10.]

1108 General Standards

.1 Anchoring

- A. All new construction and substantial improvement shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

- B. All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas").

.2 Construction Materials and Methods

- A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

- B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

- C. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

.3 Utilities

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

- B. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,

- C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with the administrative rules of the Oregon Department of Environmental Quality.
[Amd. Ordinance 2010-6, eff. 11.26.10.]

.4 Subdivision Proposals:

- A. All subdivision proposals shall be consistent with the need to minimize flood damage;

- B. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and,

D. 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).

.5 Building Permit Review

A. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 1106.3), Applications for building 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 uses of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

1109 Specific Standards

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Sections 1104 or 1106.3, 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 a minimum of one (1) foot above the base flood elevation. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*

B. 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 flood waters. 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:

(1) 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.

(2) The bottom of all openings shall be no higher than one foot above grade.

(3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

.2 Nonresidential Construction

A. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- (1) be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- (2) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (3) 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 1106.5.
- (4) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in 1109.1.B.
- (5) 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 constructed to the base flood level will be rated as one foot below that level).

[Amd Ordinance 2008 - 3, eff 07.0908].

.3 Manufactured Homes

- A. All manufactured homes to be placed or substantially improved within zones A1-30, AH, and AE shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is a minimum of one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of subsection 1108.1.B.

.4 Recreational Vehicles

Recreational vehicles placed on sites are required to either:

- (i) Be on the site for fewer than 180 consecutive days
- (ii) Be 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; or
- (iii) Meet the requirements of 3(A) above and the elevation and anchoring requirements for manufactured homes.

[Add. Ordinance 2010-6, eff. 11.26.10.]

1110 Floodways

- .1 Located within areas of special flood hazard established in Section 1104 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and 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 or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
 - B. If Section 1110.1A. is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Sections 1108 through 1111.

1111 Standards for Shallow Flooding Areas (AO Zones)

- .1 Shallow flooding areas appear on FIRM's as AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:
 - A. New construction and substantial improvements of residential structures within AO zones shall have the lowest floor (including basement) elevated or floodproofed to at least one foot above the depth number specified on the FIRM, or at least 3 feet above highest adjacent grade when no depth number is specified. *[Amd. Ordinance 2010-6, eff. 11.26.10.]*
 - B. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (1) have the lowest floor (including basement) elevated 2 feet above the highest adjacent grade of the building site, to or above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - (2) together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in Section 1109.2.A(3).
[Amd. Ordinance 2010-6, eff. 11.26.10.]
 - C. Require adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures.

1112 Standards for Areas Where Elevations are Determined (AE Zones)

In areas within Zones A1-30 and AE on the community FIRM with a Base Flood Elevation but where no regulatory floodway has been designated, new construction, substantial improvements, or other development (including fill) shall be prohibited, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other and anticipated development, will not increase the water elevation of the base flood more than one foot at any point within the community.

[Add. Ordinance 2010-6, eff. 11.26.10.]