

Chapter 17.84

SENSITIVE LANDS--FLOODING

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17.84.010 Purpose. A. It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flooding. In general, the city's flood hazard chapter is designed:

1. To protect human life and health;
2. To minimize expenditures 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.

B. The city seeks to minimize or mitigate flood hazards by:

1. Implementing FEMA floodplain requirements for participation in the National Flood Insurance Program;
2. Prohibiting all encroachments in floodways (including parking lots) unless they conform to Chapter 17.84.180;
3. Establishing a general development permit process

to ensure compliance with FEMA regulations;

4. Establishing specific requirements for construction or substantial improvements in the floodway fringe and Zone AO;

5. Requiring planning commission review and approval of proposals to store, place or stockpile buoyant or hazardous materials in special flood hazard areas;

6. Advocating the construction of cluster developments in special flood hazard areas over other types of development;

7. Prohibiting filling in floodways and regulating filling in floodway fringe areas to conform to Section 17.84.170 of this

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title. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A (part), 1995))

17.84.015 Definitions. For the purposes of this chapter, the following definitions apply:

"Accessory structures" includes sheds or small detached garages (Note Section 17.84.140(I).)

"Applicant" refers to a person, organization, or agency applying for a development permit.

"Area of special flood hazard (SFHA)" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation of maps always includes the letter "A" (e.g., A, AE, AO). Federally regulated lending institutions require the purchase of flood insurance for residential and some nonresidential structures in these zones.

"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. Map designation always includes the letter "A" (e.g., A, AE, AO).

"Base flood elevation (BFE)" means the elevation of the base flood.

"Buoyant material" means a material which displaces a weight of water equal to its own weight; capable of floating.

"Development" means any manmade 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.

"Development permit" refers to a document or building permit authorizing an applicant to commence construction/development activities in a special flood hazard area.

"Federal Emergency Management Agency (FEMA)" means the federal agency charged with implementing the National Flood Insurance Program. FEMA provides Flood Insurance Rate Maps with the accompanying Flood Insurance Study to the city of Scappoose.

"Fill" means the placement of any material on the land for the purpose of increasing its elevation in relation to that which exists. Fill materials include but are not limited to the following: soil, rock, concrete, etc.

"Flood" means a general and temporary condition of partial or complete inundation of normally dry land areas 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 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 and the water surface elevation of the base flood.

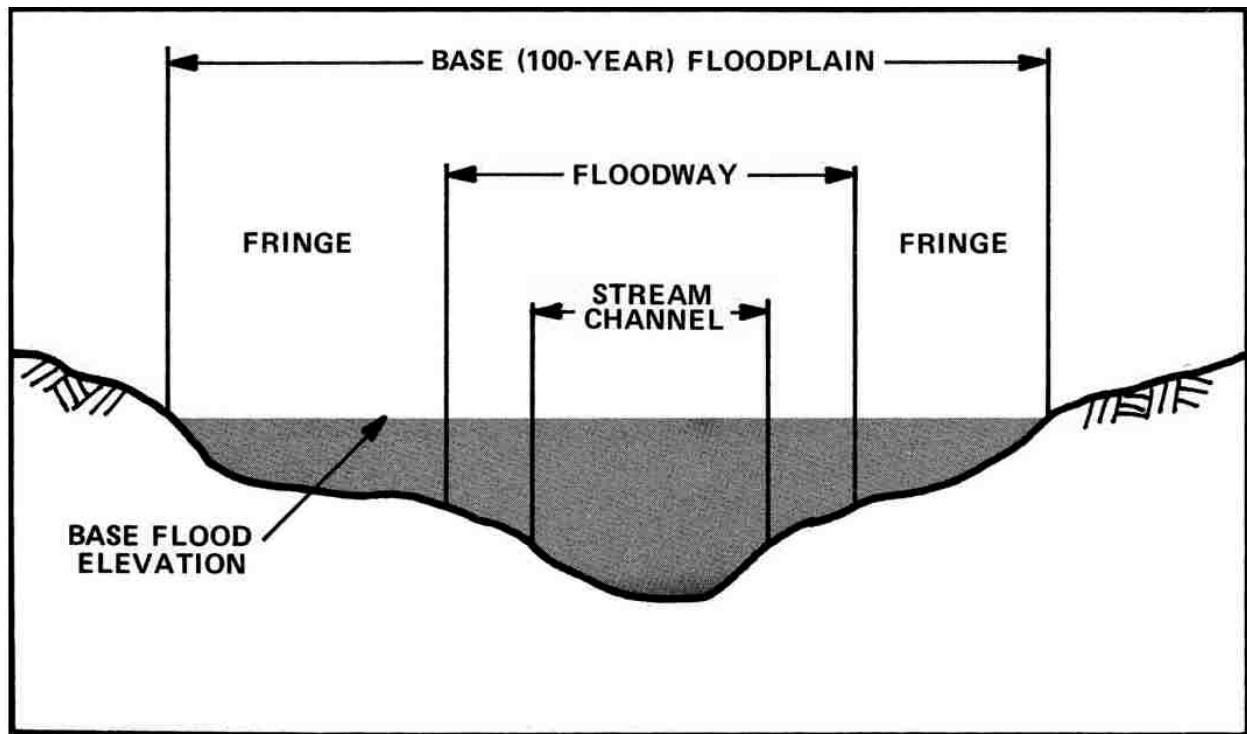
"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without increasing the water surface elevation more than one foot. Once established, nothing can be placed in the

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floodway that would cause any rise in base flood elevations. The city generally prohibits encroachments on designated floodways. (Section 17.84.180, Floodways). Floodways are depicted on the flood relationships diagram set out below.

Floodplain Relationships Diagram



"Floodway fringe" refers to those areas outside the floodway but within the one hundred-year floodplain. Note floodway relationships diagram set out above.

"Hazardous material" refers to a combustible, flammable, corrosive, explosive, toxic or radioactive substance which is potentially harmful to humans and the environment.

"Lowest floor" means the lowest portion of the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking 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 chapter found at Section 17.84.140.

"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 attached to the required utilities. The term "manufactured home" does not include a

"recreational vehicle." All manufactured homes in a SFHA shall be anchored to a permanent foundation pursuant to Section 17.84.140.

"New construction" means structures for which the "start of construction" commenced on or after the effective date of this chapter.

"Permanent foundation" means an approved structural support

system that is capable of resisting flood forces. A building anchored to a permanent foundation is required to resist flotation,

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collapse, and lateral movement produced by a one hundred-year flood. A permanent foundation may include reinforced piers or block walls, posts, concrete walls, properly compacted fill or other systems of equivalent strength. Dry stacked concrete blocks do not constitute a reinforced pier.

"Public works projects" refers to projects that are necessary to enhance or maintain general public welfare. Such projects may include, but are not limited to, flood control structures, public buildings, city infrastructures, utilities, parks and projects associated with resource protection.

"SFHA." See "Special flood hazard area."

"Recreational Vehicle" means a vehicle which 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 towable 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.

"Special flood hazard area (SFHA)" refers to areas that are subject to a one hundred-year flood. They are depicted on Flood Insurance Rate Maps by the letter "A." In Scappoose, this would include Zone A, AE and AO. See "Zone designations."

"Special land use permit" refers to a document authorizing an applicant to store or stockpile buoyant or hazardous materials in a special flood hazard area. Requires planning commission approval.

"Start of construction" includes substantial improvement, and means the date the development permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within one hundred eighty 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 or 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.

"Structure" is a term that, for floodplain management purposes, means a walled and roofed building. The term also includes manufactured homes, and gas and liquid storage tanks that are principally above ground.

"Substantial improvement" means any repair, rehabilitation, addition, reconstruction or other improvement of a structure, that includes the cumulative value of all building permits, and the cost of which equals or exceeds twenty-five percent of the market value of the structure either before the improvement or repair is started, or 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. This term does not, however, include

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either: (1) 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 (2) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places, provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Zone designations:

1. Zone A (lacking a base flood elevation) is depicted on FEMA Flood Insurance Rate Maps. It represents areas subject to a one hundred-year flood event but for which no base flood elevations have been determined. This does not, however, remove a builder's responsibility for obtaining base flood elevations. Sections 17.84.050(C) and 17.84.140(D)(4) are applicable in Zone A.

2. Zone AE (base flood elevation provided) is depicted on FEMA Flood Insurance Rate Maps. It represents areas subject to a one hundred-year flood event. Base flood elevations appear on the map.

3. Zone AO represents areas of shallow flooding on FEMA Flood Insurance Rate Maps. Depths vary between one and three feet and are shown on the map. The nature of Zone AO makes it a special case for which special standards are required. (Note Section 17.84.190.)

4. Zone X (shaded) appears on Flood Insurance Rate Maps. The shaded Zone X represents areas subject to a one hundred-year flood event but where depths are less than one foot or the drainage area is less than one square mile. Shaded Zone X in the vicinity of Scappoose is also associated with areas

protected by dikes or levees from a one hundred-year flood. This chapter does not regulate development activities in shaded Zone X. (Ord. 815 §1, 2011; Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A (part),1995)

17.84.030 General provisions. A. This chapter shall apply to all special flood hazard areas (Zones A, AE, AO) within the jurisdiction of the city.

B. 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," effective November 26, 2010, with accompanying Flood Insurance Rate Maps, is adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at the Planning Department.

C. All new construction and substantial improvements shall be constructed with materials and utilize equipment resistant to flood damage.

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

E. 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.

F. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system in accordance with the state of Oregon Building Codes and Plumbing Code.

G. All new construction, all manufactured homes and substantial improvements shall be anchored to prevent flotation, collapse and lateral movement of the structure.

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H. New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A (part),1995)

17.84.040 Permitted Uses. A. The following uses shall be permitted in special flood hazard areas and shall not require a permit under this chapter:

1. Agricultural uses which do not meet the definition of "development";

2. Removal of poison oak, tansy ragwort, blackberry or other noxious vegetation; and

3. Fences outside the floodway with sufficient openings so as not to impede, retard, or change the direction of

the flow of water or catch or collect debris carried by such water. All other fences shall require applicable development permits.

B. The following uses shall be permitted in special flood hazard areas and shall require a development permit under this Chapter in addition to any applicable federal, state or county permits:

1. Residential zones: A single-family detached dwelling or a single-family manufactured home and their accessory uses on lots greater than 20,000 square feet where a structure is to be placed within an area regulated by this Chapter;

2. Commercial and Industrial zones: Permitted uses of the underlying zone and their accessory uses on lots greater than 20,000 square feet where a structure is to be placed within an area regulated by this Chapter;

3. Installation, reconstruction or improvement of underground utilities or roadway improvements including sidewalks, curbs, streetlights and driveway aprons;

4. Minimal ground disturbance(s) but no landform alterations;

5. Substantial improvements to existing structures;

6. Community recreation uses such as bicycle and pedestrian paths or athletic fields or parks;

7. Public and private conservation areas for water, soil, open space, forest and wildlife resources; and

8. Public works projects.

C. A development permit shall be obtained before construction or development begins within any area of special flood hazard or drainageway unless specifically allowed in subsection A of this section. The permit shall apply to all structures including manufactured homes. (Ord. 813, 2010; Ord. 809, 2010; Ord. 740 §19, 2004; Ord. 636 §1 (part), 1996; Ord. 634 §1 Exh. A.(part), 1995)

17.84.050 Administration. A. The planner is appointed to administer and implement this chapter by granting or denying development permit applications in accordance with Chapter 17.162.

B. Duties of the planner shall include, but not be limited to:

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied;

2. Review all development permits to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required;

3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section

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17.84.180 are met;

4. Review all applications for a development permit to determine if the proposed project is located in the floodway fringe. If located in the floodway fringe, assure the special standards requirements are met (Section 17.84.200).

C. When base flood elevation data has not been provided in accordance with Section 17.84.030, the applicant shall supply such data. In this instance, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness 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.

D. The recipient of a development permit shall provide certification from a registered engineer, or surveyor that buildings are elevated or flood-proofed according to standards set forth in Section 17.84.140. Appropriate certification forms will be provided by the city.

E. A development permit shall not be issued for construction in Zone AE or Zone AO within the Scappoose Creek floodway fringe until the application satisfies the requirements set forth in Section 17.84.200.

F. Applicants receiving a development permit to construct or substantially improve a residential or nonresidential structure in Zones A or AE shall comply with applicable standards in Sections 17.84.140, and 17.84.200.

G. Applicants receiving a development permit to construct or substantially improve a residential or nonresidential structure in Zone AO shall comply with applicable standards in Section 17.84.140, 17.84.190 and 17.84.200.

H. A special land use permit, requiring planning commission approval, shall be obtained prior to storing or stockpiling buoyant or hazardous materials in a special flood hazard area. (See Section 17.84.210.) (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.060 Approval process. A. The applicant for a development permit shall be the recorded owner of the property or an agent authorized in writing by the owner.

B. The planner and public works director shall review all development permit applications to determine that all necessary permits are obtained from those federal, state, or local governmental agencies from which prior approval is also required.

C. The planner shall apply the standards set forth in this chapter when reviewing an application for a development permit. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.070 Maintenance of records.

A. When base flood elevation data is provided through the Flood Insurance Study or required as in Section 17.84.050(C), the applicant shall provide certification of the actual 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. For all new or substantially improved floodproofed structures, the applicant shall submit a Floodproofing Certificate by a registered surveyor verifying and recording the actual elevation (in relation to mean sea level) prior to construction and the actual

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elevation (in relation to mean sea level) to which the structure was floodproofed.

C. The planner shall maintain the floodproofing certifications required in this chapter.

D. The planner shall maintain for public inspection all other records pertaining to the provisions in this chapter. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.120 Alteration of water courses. A. The planner shall notify adjacent communities and the State Department of Land Conservation and Development prior to any alteration or relocation of a water course, and submit evidence of such notification to the Federal Insurance Administration.

B. The planner shall require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.130 Interpretation of FIRM boundaries. The planner shall make interpretation, where needed, as to exact location of the boundaries of the areas of special flood hazard (for example, where there appears to be conflict between a mapped boundary and actual field conditions). 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). (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.140 Standards. In Zone A, Zone AE, and Zone AO, the following standards are required:

A. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse and lateral

movement of the structure.

2. All manufactured homes shall likewise be anchored to prevent flotation, collapse and 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" guidebook for additional techniques).

B. Construction Materials and Methods.

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

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

3. 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 condition of flooding.

C. Utilities.

1. All new and replacement water supply systems shall be designed to eliminate infiltration of floodwaters into the system.

2. New and replacement water supply systems shall be

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designed to eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

3. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding, consistent with Oregon Department of Environmental Quality standards.

D. 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, the applicant shall provide such information.

E. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to one foot or more above base flood elevation. 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 shall either be certified by a registered professional engineer or shall meet or exceed the following minimum criteria:

1. A minimum of two openings with a net area of not less than two square inches 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 floodwaters; and
4. Screening, fencing or otherwise obstructing open areas between pillars on pile or pillar foundations shall be prohibited.

F. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level one foot or more above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

1. Be floodproofed one foot or more above the base flood elevation. The structure shall be watertight below the base flood elevation 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 17.84.070(C).
4. Nonresidential structures that are elevated, not floodproofed, shall meet the same standards for space below the lowest floor as described in subsection E of this section.
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 floodproofed to one foot above the base flood elevation will be rated as if floodproofed to the base flood level).

G. Manufactured Homes. All manufactured homes to be placed or substantially improved in Areas of special flood hazard shall be placed on a permanent foundation such that the

bottom of the longitudinal chassis frame beam is at or above base flood elevation. The permanent foundation shall be resistive to flood velocities and may include concrete slabs, stem walls, and piers that are firmly embedded in the ground. Manufactured homes may be placed on reinforced (not dry-stacked) concrete blocks providing the home is firmly anchored to the ground pursuant to this section. If placed on a stem wall, the structure shall meet the same standards for space below the lowest floor as described in subsection E of this section and the anchoring requirements of Section 17.84.140(A). Electrical crossover connections shall be a minimum of one foot above base flood elevation.

H. Recreational Vehicles. A recreational vehicle placed on site is required to either:

1. Be on the site for fewer than 180 consecutive days;
2. Be fully licensed and ready for highway use, on its 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 subsection G above and the elevation and anchoring requirements for manufactured homes.

I. Accessory Structures. Accessory structures such as sheds, small detached garages, etc., to be located in Zone A, Zone AO, or Zone AE may be exempt from elevation provided the following conditions are met:

1. Accessory structures cannot be more than two hundred square feet in area and cannot be subject to state of Oregon Building Codes;
2. Accessory structures shall not be used for human habitation;
3. Accessory structures shall be designed to have low flood potential;
4. Accessory structures shall be constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters;
5. Accessory structures shall be firmly anchored to prevent flotation, collapse, and lateral movement which may result in damage to other structures;
6. The portions below the Base Flood Elevation shall be constructed with flood-resistant materials;
7. The structures shall be designed to equalize hydrostatic forces on exterior walls by allowing the automatic entry and exit of flood waters. Designs for complying with this requirement shall be certified by a licensed professional engineer or architect or:
 - a. provide a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - b. the bottom of all openings shall be no higher than one foot above the higher of the exterior or interior grade or floor immediately below the opening;

c. openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions without manual intervention;

8. Mechanical, electrical, heating, and utility equipment shall be elevated or floodproofed to or above the Base Flood Elevation;

9. The structures are limited to parking and/or limited storage; and

10. If the structures are located in the floodway, they shall meet the requirements of Section 17.84.180. (Ord. 815 §2, 2011; Ord. 813, 2010; Ord. 809, 2010; Ord. 636 §1 (part), 1996; Ord. 634 §1 Exh. A.(part), 1995)

17.84.170 Regulations pertaining to fill. A. No filling operations of any kind shall be allowed in the floodway.

B. No fill in floodway fringe areas shall be allowed unless the net effect of excavation and filling operations (on-site) constitutes no positive change in fill volume. An application for fill in the floodway fringe shall require implementation of special permit requirements of the development permit (see Section 17.84.200).

C. Fill shall be allowed under city fill permit procedures in shaded Zone X and shall not be regulated by this Chapter.

D. No structure shall be built nor any excavation grading, nor filling shall be done within the one hundred-year flood plain without first meeting the requirements of this chapter regulating construction, alteration, repair and moving of buildings. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.180 Floodways. A. Floodways are established in special flood hazard areas (SFHA) to transport the waters of a one hundred-year flood out of the community as quickly as possible. Encroachments on the floodway generally produce a rise in base flood elevations and contribute to other hydraulic problems. Accordingly, the city prohibits encroachments, including fill, new construction, parking, substantial improvements, and other development unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. If subsection A above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this chapter.

C. Projects for stream habitat restoration may be permitted in the floodway provided:

1. The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP-2007-1023) or Department of Army, Portland District Nationwide Regional Permit NWP 5, 13, 27, or 37; and,

2. A qualified professional (a Registered Professional Engineer or staff of NRCS, the City, or fisheries, natural resources, or water resources agencies) has provided a feasibility analysis and certification that the project was designed to keep any rise in 100-year flood levels as close to zero as practically possible given the goals of the project; and,

3. No structures would be impacted by a potential rise in

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flood elevation; and,

4. An agreement to monitor the project, correct problems, and ensure that flood carrying capacity remains unchanged is included as part of the local approval.

D. New installations of manufactured dwellings in floodways are prohibited. Manufactured dwellings may only be located in floodways according to one of the following conditions:

1. If the manufactured dwelling already exists in the floodway, the placement was permitted at the time of the original installation, and the continued use is not a threat to life, health, property, or the general welfare of the public; or

2. A new manufactured dwelling is replacing an existing manufactured dwelling whose original placement was permitted at the time of installation and the replacement home will not be a threat to life, health, property, or the general welfare of the public and it meets the following criteria:

a. As required by 44 CFR Chapter 1, Subpart 60.3(d)(3), it must be demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the manufactured dwelling and any accessory buildings, accessory structures, or any property improvements (encroachments) will not result in any increase in flood levels during the occurrence of the base flood discharge;

b. The replacement manufactured dwelling shall have the bottom of the longitudinal chassis frame beam at or above the base flood elevation;

c. The replacement manufactured dwelling is placed and secured to a foundation support system designed by an Oregon professional engineer or architect and approved by the City; and

d. The replacement manufactured dwelling, its foundation supports, and any accessory buildings, accessory structures, or property improvements (encroachments) do not displace water to the degree that it causes a rise in the water level or diverts water in a manner that causes erosion or damage

to other properties. (Ord. 815 §3, 2011; Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.190 Special standards for Zone AO.

A. Zone AO is depicted on Flood Insurance Rate Maps (FIRMS). The zone coincides with areas subject to a one hundred-year flood where depths vary between one and three feet. Zone AO is associated with areas where sheet flow is most evident; i.e., where there is no clear channel. Flood depths appear on the FIRM.

B. Proposed construction in Zone AO shall comply with the General Standards provided in Section 17.84.140, excepting areas specifically covered in this section.

C. New construction and substantial improvements of residential structures in Zone AO shall:

1. Have the lowest floor, including basement, elevated above the highest adjacent grade of the building site a minimum of

one foot above the flood depth number specified on the FIRM (at least two feet if no depth number is specified);

2. Have adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

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D. New construction and substantial improvements of non-residential structures in Zone AO shall:

1. Have the lowest floor, including basement, elevated above the highest adjacent grade of the building site a minimum of one foot above flood depth number specified on the FIRM at least two feet if no depth number is specified); or together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below is watertight; walls shall be substantially impermeable to the passage of water and structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If floodproofing method is used, compliance shall be certified by a registered professional engineer. Such certifications shall be provided to the official as set forth in Section 17.84.070(C).

2. Have adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.200 Special regulations for development in the Scappoose Creek floodway fringe (Zones A, AE, and AO). A. Proposed development or substantial improvement in the Scappoose Creek floodway fringe shall conform with applicable general and specific standards in Section 17.84.140, and special standards in Zone AO (Sections 17.84.190 and 17.84.200);

B. In addition to the application requirements for the specific proposal, the development application shall contain a registered professional engineer's certification that the proposed project will not cause a rise in base flood elevation during a one hundred-year event as it exists on the current FIRM Flood Insurance Rate Map or create additions that would be detrimental to adjacent or neighboring properties. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.210 Storage, placement or stockpiling buoyant or hazardous materials in flood hazard areas (Zones A, AE, and AO).

A. The transportation of buoyant or hazardous materials (Note: see Section 17.84.015, Definitions) from rising floodwaters contributes to the community's flood hazard. Accordingly, a permit shall be obtained from the planning commission prior to storage, placement or stockpiling in a flood hazard zone (A, AE, AO). The application shall be processed according to Chapter 17.162.

1. In determining whether or not a permit will be granted to store, place or stockpile buoyant or hazardous materials in a flood hazard area, the planning commission shall consider the following:

- a. The nature of the materials (e.g., buoyancy, toxicity, flammability);
 - b. The danger that materials may be swept onto other properties or structures with resulting injury or damage;
 - c. The necessity of locating the materials on the particular site, especially in terms of public benefit;
 - d. The ability of emergency vehicles to reach the site in times of flooding;
 - e. The availability of alternative locations which are less susceptible to flooding;
 - f. The applicant's plan for hazard mitigation;
 - g. The requirements of development, including
- Section 17.84.200.

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B. The placement, storage or stockpiling of buoyant or hazardous materials in a floodway is prohibited unless it is associated with a short-term public works project. The planning commission must consider the flood potential and establish a time in which the materials must be removed. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.220 Variances to flood damage prevention. A. A variance is a departure or grant of relief from the strict letter of the flood damage prevention chapter. It is designed for those situations where a proposed action is in keeping with the purpose of the

chapter but there are practical difficulties in meeting strict chapter standards. The conditions for granting variances are stringent. When dealing with a flood hazard there is little margin for error.

B. All flood hazard variances are deemed to be a major variance as defined in Chapter 17.134 and shall be so administered and appealed.

C. The planner shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency (FEMA) upon request.

D. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section.

E. Variances shall not be issued within a designated floodway.

F. Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. A determination that failure to grant the variance would result in exceptional hardship to the applicant that outweighs the risk associated with the variance; and
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense; create nuisances; cause fraud or a victimization of the public.

G. Variances as interpreted in the National Flood Insurance Program are based on the General Zoning Law Principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.

H. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry floodproofing, where it can be determined that such action will have low damage potential and complies with all other variance criteria.

I. Any applicant to whom a variance is granted shall be given notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.230 Expiration of approval--Standards for extension of time. A. Approval of a development permit shall be void under any of the following circumstances:

1. Substantial construction of the approved plan has not been completed within a one-year period; or

2. Construction on the site is a departure from the approved plan; or

3. If the start of construction, repair, reconstruction, placement or other improvement is not within 180 days of the permit date (see "start of construction" under 17.84.015 Definitions).

B. The planner may, upon written request by the applicant, grant an extension of the start of construction for 180 days, provided that:

1. No changes are made on the original plan as approved by the approval authority;

2. The applicant can show intent of initiating construction of the site within the extension period; and

3. There have been no changes to the applicable comprehensive plan policies, provisions of this title, Flood Insurance Study, or FIRMS on which the approval was based.

C. Notice of the decision shall be provided to the applicant. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

17.84.250 Application submission requirements. A. All applications shall be made on forms provided by the planner and shall be accompanied by:

1. A registered professional engineer's certification that the proposed project will not cause a rise in base flood elevation during a one hundred-year event as it exists on the current FIRM Flood Insurance Rate Map or create additions that would be detrimental to adjacent or neighboring properties;

2. One reproducible copy of the development plan(s) and necessary data or narrative which explains how the development conforms to the standards. Sheet size for the development plan(s) and required drawings shall not exceed eighteen inches by twenty-four inches and the scale for all development plans shall be an engineering scale;

3. A list of the names and addresses of all who are property owners of record within two hundred feet of the site.

B. The development plan and narrative may be combined on one map and shall include the following information:

1. Existing site conditions including vicinity map showing the location of the property in relation to adjacent properties and including parcel boundaries, dimensions and gross area;

2. The location, dimensions and names of all existing and platted streets and other public ways, railroad tracks and crossings, and easements on adjacent property and on the site and proposed streets or other public ways, easements on the site;

3. The location, dimensions and setback distances of all existing structures, improvements, utility and drainage

facilities on adjoining properties and existing structures, water, sewer, improvements, utility and drainage facilities to remain on the site; and proposed structures, water, sewer, improvements, utility and drainage facilities on the site;

4. Contour lines at two-foot intervals for slopes from zero to ten percent and five-foot intervals from slopes over ten percent;

5. The drainage patterns and drainage courses on the site and on adjacent lands;

6. Potential natural hazard areas including:

a. Floodplain areas,

b. Areas having a high seasonal water table within zero to twenty-four inches of the surface for three or more weeks of the

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year,

c. Unstable ground (areas subject to slumping, earth slides or movement). Where the site is subject to landslides or other potential hazard, a soils and engineering geologic study based on the proposed project may be required which shows the area can be made suitable for the proposed development,

d. Areas having a severe soil erosion potential, and

e. Areas having severe weak foundation soils;

7. The location of trees having a six-inch caliper at four feet. Only those trees that will be affected by the proposed development need to be sited accurately. Where the site is heavily wooded, an aerial photograph at the same scale as the site analysis may be required;

8. Identification information, including the name and address of the owner, developer, and project designer, and the scale and north arrow;

9. A grading and drainage plan at the same scale as the site conditions and including the following:

a. The location and extent to which grading will take place indicating general contour lines, slope ratios, and slope stabilization proposals,

b. A statement from a registered engineer supported by factual data that all drainage facilities are designed in conformance A.P.W.A standards and as reviewed and approved by the public works director. (Ord. 813, 2010; Ord. 809, 2010; Ord. 634 §1 Exh. A.(part), 1995)

