

ORDINANCE NO. 2016-XX

**ORDINANCE REPEALING ORDINANCE NUMBER 2005-17 AND DELETING
FOREST GROVE CODE SECTION 5.800 TO 5.860 AREAS OF SPECIAL FLOOD
HAZARD IN ITS ENTIRETY; AND AMENDING FOREST GROVE DEVELOPMENT
CODE ARTICLES 2, 5, 8 AND 12 TO ADOPT NEW FLOOD DAMAGE PREVENTION
REGULATIONS AND DEFINITIONS
FILE NO. 311-16-000133-PLNG**

WHEREAS, Oregon Constitution Article XI Section 2 delegates the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, 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 to:

1. Protect human life and health;
2. Minimize expenditure of public money and costly flood control projects;
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. Minimize prolonged business interruptions;
5. 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. 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. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
8. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions; and

WHEREAS, in order to accomplish its purposes, this ordinance includes methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
4. Controlling filling, grading, dredging, and other development which may increase flood damage;
5. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas;
6. Coordinating and supplementing the provisions of the state building code with local land use and development ordinances; and

WHEREAS, the flood hazard areas of Forest Grove are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and

impairment of the tax base, all of which adversely affect the public health, safety, and general welfare; and

WHEREAS, these flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss; and

WHEREAS, the City mailed by first class mail notice required under Measure 56 to affected property owners on July 25, 2016; and

WHEREAS, the Planning Commission held a public hearing on the proposed amendments on August 15, 2016; and

WHEREAS, the Planning Commission adopted Planning Commission Findings and Decision Number 2016-XX recommending approval of the proposed amendments; and

WHEREAS, the City Council held a duly-noticed public hearing on the proposed ordinance on September 12, 2016 and continued the hearing on September 26, 2016.

NOW THEREFORE, THE CITY OF FOREST GROVE ORDAINS AS FOLLOWS:

Section 1: The City Council hereby adopts the Planning Commission's Findings and Decision Number 2016-XX dated August 16, 2016 as shown on Exhibit A.

Section 2: The City Council of the City of Forest Grove hereby repeals Ordinance Number 2005-17.

Section 3: The City Council of the City of Forest Grove hereby deletes City Code Chapter 5, Sections 5.800 to 5.860 in its entirety as shown on Exhibit B.

Section 4: The City Council of the City of Forest Grove hereby adopts the text amendments to the Development Code, Articles 2, 5, 8 and 12 as shown on Exhibit C.

Section 5: This ordinance is effective 30 days following its enactment by the City Council.

PRESENTED AND PASSED the first reading this 12th day of September, 2016.

PASSED the second reading this 26th day of September, 2016.

Anna D. Ruggles, City Recorder

APPROVED by the Mayor this 26th day of September, 2016.

Peter B. Truax, Mayor

EXHIBIT A

PLANNING COMMISSION DECISION AND FINDINGS

NUMBER 2016-XX

EXHIBIT B

FOREST GROVE CODE SECTION 5.800 – 5.860

AREAS OF SPECIAL FLOOD HAZARD

EXHIBIT B

AREAS OF SPECIAL FLOOD HAZARD

~~5.800~~ Statement of Purpose.

~~It is the purpose of sections 5.800 to 5.860 of this code 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 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;~~
- ~~(5) To ensure that those who propose development in the areas of special flood hazard assume responsibility for their actions.~~

~~5.805~~ Definitions.

~~Area of special flood hazard. The land in the flood plain within the city of Forest Grove subject to a one percent or greater chance of flooding in any given year. This is commonly referred to as the "100 year floodplain."~~

~~Basement. Any area of the building having its floor subgrade, below ground level, on all sides.~~

~~Base flood. The flood having a one percent chance of being equalled or exceeded in any given year.~~

~~Development. Any man-made change to improved or unimproved real estate, including but not limited to structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.~~

~~Elevated Building. For insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.~~

~~Flood or Flooding. 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). 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(FIS). 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. 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 by more than one foot.~~

~~Lowest Floor. 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.~~

~~Manufactured Home. 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."~~

~~Recreational Vehicle. 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.~~

~~Substantial Damage. 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.~~

~~Substantial Improvement. 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 does not, however, include 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.~~

~~5 .810 — Lands to Which This Code Applies. This code applies to all areas of special flood hazard within the jurisdiction of the city.~~

~~5.815 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 Flood Insurance Study for the City of Forest Grove," dated September 15, 1981, with accompanying Flood Insurance Rate Maps, is hereby adopted by reference and declared to be a part of this code. The Flood Insurance Study is on file at the Administrative offices of the city.~~

~~5.820 Compliance.~~

~~No structure or land shall be under development, constructed, located, extended, converted, or altered without full compliance with the terms of this code and other applicable regulations.~~

~~5.825 Abrogation and Greater Restrictions.~~

~~This code is not intended to repeal, abrogate, or impair any existing easement, covenants, or deed restrictions. However, where this code and an easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.~~

~~5.830 Designation of the City Engineer, or Designee.~~

~~The City Engineer, or his/her designee, is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.~~

~~5.835 Review of Applications for Permits and Approvals.~~

~~In reviewing applications for permits or approvals required by the city for development in any area of special flood hazard, including, but not limited to site plan approvals and subdivision approvals, the city engineer shall:~~

- ~~(1) Review all development permits to determine that the requirements of this code have been satisfied.~~
- ~~(2) Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local government 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 provisions of Section 5.850 are met.~~
- ~~(4) Obtain and record the actual (i.e., as-built) 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 structures contain a basement.~~
- ~~(5) For all new or substantially improved non-residential structures that are floodproofed instead of elevated, obtain and record the actual elevation in relation to mean sea level to which the structures were floodproofed. Maintain for public inspection all records pertaining to the provisions of this code.~~
- ~~(6) Maintain for public inspection all records pertaining to the provisions of this code, including elevation and floodproofing certifications.~~
- ~~(7) Notify adjacent communities and the Oregon Department of Land Conservation and Development prior to any alteration or relocation of a watercourse and submit evidence of notification to the Federal Insurance Administration.~~

- ~~(8) Require that maintenance be provided within the altered or relocated portion of the watercourse and submit evidence of such notification to the Federal Insurance Administration so that the flood carrying capacity is not diminished.~~
- ~~(9) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.~~
- ~~(10) 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). 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).~~
- ~~(11) Obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, as criteria for requiring that new construction, substantial improvements, or other development meet the standards of sections 5.840 and 5.845.~~

~~5.840 General Standards.~~

~~In all areas of special flood hazard, the following standards apply:~~

- ~~(1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.~~
- ~~(2) 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" guidebook for additional techniques).~~
- ~~(3) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.~~
- ~~(4) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.~~
- ~~(5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.~~
- ~~(6) 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.~~
- ~~(7) No on-site waste disposal systems shall be allowed.~~
- ~~(8) All subdivision proposals shall be consistent with the need to minimize flood damage.~~
- ~~(9) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.~~
- ~~(10) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.~~
- ~~(11) Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be elevated [designed and/] or located so as to prevent water from entering or accumulating within the components during conditions of flooding.~~

~~5.845 Specific Standards.~~

~~In all areas of special flood hazards where base flood elevation data has been provided the requirements of Section 5.846 to 5.849 shall be met.~~

~~5.846 Residential Construction~~

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

~~(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 be either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:~~

~~(i) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.~~

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

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

~~5.847 Nonresidential Construction~~

~~New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated at or 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 City's Engineer.~~

~~(4) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in 5.841(1);~~

~~(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 the base flood level will be rated as one foot below.~~

~~5.848 Manufactured Homes~~

~~(1) All manufactured homes to be placed or substantially improved on sites:~~

~~(i) Outside of a manufactured home park or subdivision,~~

~~(ii) In a new manufactured home park or subdivision,~~

~~(iii) In an expansion to an existing manufactured home park or subdivision, or~~

~~(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood; shall be elevated on a permanent foundation such that the lowest floor~~

~~of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.~~

- ~~(2) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within the City's FIRM that are not subject to the above manufactured home provisions be elevated so that either:~~
- ~~(i) The lowest floor of the manufactured home is elevated one foot above the base flood elevation, or~~
 - ~~(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.~~

~~5.849 Recreational Vehicles~~

~~Recreational vehicles placed in special flood hazard areas 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 5.848 above and the elevation and anchoring requirements for manufactured homes.~~

~~5.850 Floodways:~~

~~Located within areas of special flood hazard established in section 5.815 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 provision shall apply:~~

~~Prohibit encroachments, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating that encroachment will not result in any increase in flood levels during the occurrence of the base flood discharge; provided, however, that under no condition shall any fill be permitted within a floodway.~~

~~5.860 Violations and Penalties:~~

~~No structure or land shall be constructed, located, extended, converted, or altered without full compliance with the terms of sections 5.800 to 5.855 of this code and other applicable regulations. Violations of the provisions of this code by failure to comply with any of its requirements shall constitute a misdemeanor. Any person who violates this code or fails to comply with any of its requirements shall, upon conviction, be fined not more than \$1,000 for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing contained in this code shall prevent the city from taking other lawful action as necessary to prevent or remedy any violation.~~

EXHIBIT C

FOREST GROVE DEVELOPMENT CODE AMENDMENTS

ARTICLE 2 SECTION 10.2.700 VARIANCES

ARTICLE 5 SECTION 10.5.010 NATURAL RESOURCE AREAS

ARTICLE 8 SECTION 10.8.310 HAZARDS AND RESOURCES

ARTICLE 12 SECTION 10.12.210 USE CATEGORIES & DEFINITIONS

VARIANCE

10.2.700 PURPOSE

The variance procedure is intended to allow modification of specific standards contained in the Development Code. Requests to modify a yard setback, height or lot coverage standard by 20% or less are processed as Adjustments. The variance procedure is used when an applicant is requesting modification of more than 20% of a yard setback, height, or lot coverage standard, or modification of a standard not qualified for an Adjustment under Section 10.2.100. Requests for variances from the Floodplains and Flood Management Areas provisions of Section 10.8.315 shall be considered pursuant to Section 10.8.330 Variance Procedure.

NATURAL RESOURCE AREAS

10.5.005 INTENT

10.5.010 INFORMATION REQUIRED

- B. For the entire subject property (natural resource area and non-natural resource area), applicants must submit a scale map of the property that includes:
1. Location of all natural resource areas on the property;
 2. Outline of any existing disturbance area, including the location of existing adjacent streets and paved areas, utilities, culverts, storm water management facilities, or bridges;
 3. Location of any wetlands or water bodies on the property, including a delineation of the sensitive lands and vegetative corridors consistent with Clean Water Services Design and Construction Standards;
 4. Location of 100-year floodplain and floodway boundary as defined by Section 5.805 and determined by Section 5.815 of the Municipal Code Section 10.8.315(B) Basis for Establishing Areas of Special Flood Hazard; and
 5. Topography shown by contour lines of 2-foot intervals for slopes less than 15% and by 10-foot intervals for slopes 15% or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed.

HAZARDS AND RESOURCES

10.8.310 HAZARD AREAS

- A. Information and studies for hazards shall be provided as follows:
1. For development sites partially or totally within Flood Management Areas or areas of special flood hazard as determined by ~~Chapter 5.800 et. seq. of the Municipal Code~~ Section 10.8.315(B), there shall be provided a study prepared by an engineer certified by the State of Oregon to provide hydraulic, flood plain elevation and any other necessary analysis to meet the requirements of ~~Chapter 5.800 et. seq. of the Municipal Code~~ Section 10.8.325(D), as determined by the City Engineer. ~~The analysis shall address the analysis required by Section 5.835~~

~~and demonstrate that applicable standards pursuant to Sections 5.840 to 5.850 have been met.~~

10.8.310B. (Hazard Studies Required)

10.8.310C. (Hazard Avoidance Measures)

~~10.8.310D.~~ FLOODPLAINS AND FLOOD MANAGEMENT AREAS

10.8.315

- ~~1. In addition to compliance with the requirements of Municipal Code Section 5.800, et. seq. pertaining to areas of special flood hazard, the standards of this section shall apply. In the event of any conflict, the most restrictive requirement shall prevail.~~
- ~~2. Limited balanced cut and fill may be allowed within Flood Management Areas provided that the following conditions will be met:~~
 - ~~a. The proposed fill will not have a serious tendency to change the direction, velocity, or elevation of future flood waters so as to compound flood hazards;~~
 - ~~b. The proposed fill will not seriously harm the natural ecosystems of the immediate and downstream areas; and~~
 - ~~c. Evidence is submitted that permits have been obtained from the appropriate Regional, State and Federal agencies; and~~
 - ~~d. Any required buffer has been reserved; and~~
 - ~~e. No fill shall be proposed within a flood way.~~
- ~~3. Land below the elevation of the base flood shall be placed in open space or parking lot and landscaped areas if within the developed portion of the site.~~
- ~~4. All new development, additions or other substantial improvements to be constructed within the Flood Management Area shall comply to the following requirements:~~
 - ~~a. Have the lowest floor elevation, including basements, elevated one foot above the base flood elevation;~~
 - ~~b. Be anchored to prevent flotation, collapse or lateral movement of the structure;~~
 - ~~c. Electrical, heating, ventilation, plumbing and air conditional 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;~~
 - ~~d. All trash enclosures and other facilities that are separate from buildings shall be adequately anchored so as not to be moved by flood waters. These facilities shall be designed either to be watertight or allow conveyance of flood waters provided that structural components are capable of resisting hydrostatic and hydrodynamic loads;~~
 - ~~e. All new and replacement water supply and sanitary sewer systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge of effluent from the sewage system into flood waters; and~~
 - ~~f. All other applicable public utilities and facilities shall be designed to minimize damage from flooding.~~

- ~~2. Hazardous materials not properly managed or contained, as defined by the Department of Environmental Quality, are prohibited within Flood Management Areas.~~
- ~~3. The degree of flood protection required by this code is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can occur on rare occasions. Flood heights may be increased by man-made or natural causes. This code does not imply that land outside Flood Management Areas or uses permitted within such areas will be free from flooding or flood damages. This code shall not create a liability on the part of the City of Forest Grove, any officer or employee thereof, or the Federal Insurance Administration, for flood damages that result from reliance on this code or any administrative decision lawfully made hereunder.~~

A. LANDS TO WHICH THIS CODE APPLIES

This code applies to all areas of special flood hazard within the jurisdiction of the City of Forest Grove.

B. BASIS FOR ESTABLISHING 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 Flood Insurance Study for Washington County and Incorporated Areas” dated November 4, 2016, with accompanying Flood Insurance Rate Maps (FIRM) are hereby adopted by reference and declared to be a part of this code. The Flood Insurance Study is on file at the Forest Grove Engineering Department. The best available information for flood hazard area identification as outlined in Section 10.8.325(C) shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under Section 10.8.325(C).

C. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this code is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This code does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This code shall not create liability on the part of the City of Forest Grove, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this code or any administrative decision lawfully made hereunder.

10.8.320 ESTABLISHMENT OF DEVELOPMENT PERMIT

- A. Development Permit Required. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 10.8.315(B). 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.
- B. Application for Development Permit. Application for a development permit shall be made on forms furnished by the Engineering Department and may include but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:
1. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
 2. Elevation in relation to mean sea level of floodproofing in any structure;
 3. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 10.8.335(B)(3); and
 4. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

10.8.325 DESIGNATION, DUTIES AND RESPONSIBILITIES OF THE CITY ENGINEER

- A. The City Engineer is hereby appointed to administer and implement this code by granting or denying development permit applications in accordance with its provisions.
- B. The duties of the City Engineer shall include, but not be limited to:
1. Reviewing all development permits to determine that the permit requirements of this code have been satisfied.
 2. Reviewing 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. Reviewing all development permits to determine if the proposed development is located in the floodway. If located in the floodway, ensure that the encroachment provisions of Section 10.8.345 are met.
 4. Providing the base flood elevation as has been determined in accordance with Section 10.8.315(B) Basis for Establishing Areas of Special Flood Hazard to the Building Official, along with any freeboard requirements established in Section 10.8.335(B) Specific Standards.
- C. Use of Other Base Flood Data in "A" Zones. When base flood elevation data has not been provided in accordance with Section 10.8.315(B) Basis for Establishing the Areas of Special Flood Hazard, the City Engineer 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 10.8.335(B) Specific Standards and 10.8.345 Floodways.

D. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 10.8.325, the City Engineer shall obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basements and below-grade crawlspaces) of all new or substantially improved structures, and whether or not the structure contains a basement.
2. For all new or substantially improved floodproofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 10.8.325, the City Engineer shall:
 - a. Verify and record the actual elevation (in relation to mean seal level), and
 - b. Maintain the floodproofing certifications required in Section 10.8.320(B)(3).
 - c. Maintain for public inspection all records pertaining to the provisions of this code.

E. Alteration of Watercourses.

1. Development shall not diminish the flood-carrying capacity of a watercourse. If any watercourse will be altered or relocated as a result of the proposed development, the applicant shall submit certification by a registered professional engineer that the flood-carrying capacity of the watercourse will not be diminished.
2. The City Engineer shall:
 - a. Notify adjacent communities, the Department of Land Conservation and Development and other appropriate state and federal agencies, 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.
3. Applicants shall obtain a Conditional Letter of Map Revision (CLOMR) from FEMA before any encroachment, including fill, new construction, substantial improvement, or other development, in the regulatory floodway is permitted. The applicant shall be responsible for preparing technical data to support the CLOR application any paying any processing or application fees to FEMA.

F. Requirement to Submit New Technical Data.

1. The City Engineer shall:

- a. Notify FEMA within six months of project completion when an applicant had obtained a Conditional Letter of Map Revision (CLOMR) from FEMA, or when development altered a watercourse, modified floodplain boundaries, or modified Base Flood Elevations. This notification shall be provided as a Letter of Map Revision (LOMR).
- b. Be under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, until the applicant demonstrates that the project will or has met the requirements of this code and all applicable State and Federal laws.

2. The applicant shall be responsible for preparing technical data to support the LOMR application and paying any processing or application fees to FEMA.

G. Non-Conversion of Enclosed Areas Below the Lowest Floor. To ensure that enclosed areas below the lowest floor continue to be used solely for parking vehicles, limited storage, or access to the building and not be finished for use as human habitation/recreation/bathrooms, etc., the City Engineer shall:

1. Determine which applicants for new construction and/or substantial improvements have fully-enclosed areas below the lowest floor that are 5 feet or higher;
2. Require such applicants to enter in a “Non-Conversion Deed Declaration for Construction within Flood Hazard Areas” or equivalent. The deed declaration shall be recorded with Washington County and shall be in a form acceptable to the City Engineer.

H. Interpretation of FIRM Boundaries. The City Engineer 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). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 10.8.330.

10.8.330 VARIANCE PROCEDURE

- A. Appeal Board. The Planning Commission shall hear and decide appeals and requests for variances from the requirements of this code. The Planning Commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the City of Forest Grove in the enforcement or administration of this code.
- B. Any affected party may appeal the decision of the Planning Commission to the City Council, as provided in Section 10.1.640.
- C. In passing upon such applications, the Planning Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this code, and:
1. The danger that materials may be swept onto other lands to the injury of others;
 2. The danger to life and property due to flooding or erosion damage;
 3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 4. The importance of the services provided by the proposed facility to the community;
 5. The necessity to the facility of a waterfront location, where applicable;
 6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 7. The compatibility of the proposed use with existing and anticipated development;
 8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
 10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- D. Upon consideration of the factors of Section 10.8.330(C) and the purposes of this code, the Planning Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this code.
- E. The City Engineer shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

F. Conditions for Variances.

1. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (1-11) in Section 10.8.330(C) have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.
2. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the Statewide Inventory of Historic Properties, without regard to the procedures set forth in this section.
3. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 10.8.330(C), or conflict with existing local laws or codes.
6. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece or 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 neighbor-hoods. As such, variances from the flood elevations should be quite rare.
7. 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, complies with all other variance criteria except Section 10.8.330(F)(1), and otherwise complies with Section 10.8.335(A)(1)-(3) of the General Standards.
8. Any applicant to whom a variance is granted shall be given written 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 lowest floor elevation.

10.8.335 PROVISIONS FOR FLOOD HAZARD REDUCTION

A. GENERAL STANDARDS. In all areas of special flood hazards, the following standards are required:

1. Anchoring.

- a. All new construction and substantial improvements 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 (Refer to FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

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 Oregon Department of Environmental Quality.

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 or eliminate 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. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 10.8.325(C)), 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 use 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.

B. SPECIFIC STANDARDS. In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) as set forth in Section 10.8.315(B) Basis for Establishing the Areas of Special Flood Hazard, or Section 10.8.325(C) Use of Other Base Flood Data in "A" Zones, 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 foot above the base flood elevation.
- 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 floodwaters. Designs for meeting this requirement must be either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
- c. 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.
- d. The bottom of all openings shall be no higher than one foot above grade.
- e. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

2. Manufactured Dwellings.

- a. Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with Section 10.8.335(A)(1)(b) above.
- b. The bottom of the longitudinal chassis frame beam in A zones, shall be at or above BFE;
- c. The manufactured dwelling shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Refer to FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques); and
- d. Electrical crossover connections shall be a minimum of 12 inches above BFE.

3. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated at or above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 10.8.320(B)(3);
- d. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 10.8.335(B)(1)(b);
- e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one foot below.
- f. Applicants shall supply a Maintenance Plan for the entire structure to include but not limited to: exterior envelope of structure; all penetrations to the exterior of the structure; all shields, gates, barriers, or components designed to provide floodproofing protection to the structure; all seals or gaskets for shields, gates, barriers, or components; and, the location of all shields, gates, barriers, and components as well as all associated hardware, and any materials or specialized tools necessary to seal the structure.
- g. Applicants shall supply an Emergency Action Plan (EAP) for the installation and sealing of the structure prior to a flooding event that clearly identifies what triggers the EAP and who is responsible for enacting the EAP.

4. Recreational Vehicles. Recreational vehicles placed on sites are required to:
- a. Be on the site for fewer than 180 consecutive days, and
 - b. 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
 - c. Meet the requirements of Section 10.8.335(B)(2) above and the elevation and anchoring requirements for manufactured homes.
5. Accessory Structures. Relief from elevation or floodproofing as required in Section 10.8.335(B)(1) or 10.8.335(B)(3) above may be granted for accessory structures that are:
- a. less than 200 square feet and do not exceed one story;
 - b. not temperature controlled;
 - c. not used for human habitation and are used solely for parking of vehicles or storage of items having low damage potential when submerged; not used to store toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed in compliance with this code or stored at least one foot above Base Flood Elevation;
 - d. located and constructed to have low damage potential;
 - e. constructed with materials resistant to flood damage;
 - f. anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;
 - g. constructed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for complying with this requirement must be certified by a licensed professional engineer or architect or:
 - i. 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;
 - ii. 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;
 - iii. the 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;
 - iv. be constructed with electrical and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.
6. Below-Grade Crawl Spaces. Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01 *Crawlspace Construction for Buildings Located in Special Flood Hazard Areas*:

- a. 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 through the required openings stated in Subsection (b) below. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (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.
- b. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one (1) foot above the lowest adjacent exterior grade.
- c. 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.
- d. 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.
- e. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.
- f. 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 four (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.
- g. 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.
- h. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used. For more detailed information refer to FEMA Technical Bulletin 11-01.

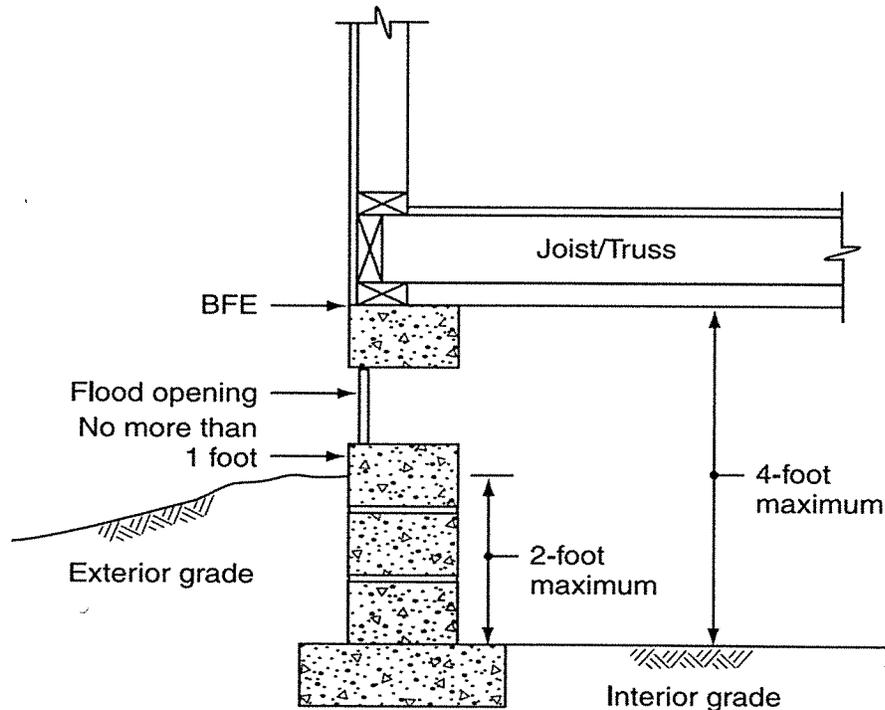


Figure 5-1: Limitations on Below-Grade Crawlspace
Residential Structures must be elevated a minimum of one foot
above the Base Flood Elevation (BFE)

10.8.340 BEFORE REGULATORY FLOODWAY

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

10.8.345 FLOODWAYS

Located within areas of special flood hazard established in Section 10.8.315(B) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- A. Except as provided in paragraph (C) below, prohibit encroachments, including fill, new construction, 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 Section 10.8.345(A) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 10.8.335 Provisions for Flood Hazard Reduction.
- 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); and
 2. A qualified professional (a Registered Professional Engineer; or staff of NRCS; the county; 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 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. Temporary structures placed in the floodway: Relief from no-rise evaluation, elevation or dry flood-proofing standards may be granted for a non-residential structure placed during the dry season (June – October) and for a period of less than 90 days. A plan for the removal of the temporary structure after the dry season or when a flood event threatens shall be provided. The plan shall include disconnecting and protecting from water infiltration and damage all utilities servicing the temporary structure.
- E. Temporary storage of goods and materials, not including hazardous materials, is allowed in the floodway for a period of less than 90 days within the dry season (June – October).

10.8.350 CRITICAL FACILITY

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above BFE or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

10.8.355 ENVIRONMENTAL PRACTICE

ARTICLE 12 USE CATEGORIES & DEFINITIONS

- 10.12.200 MEANING OF WORDS GENERALLY
10.12.205 MEANING OF COMMON WORDS
10.12.210 MEANING OF SPECIFIC WORDS AND TERMS

As used in this Code, the following words and phrases shall mean:

- B1. Basement. ~~Any floor level below the first story in a building, except that a floor level in a building having only one (1) floor level shall be classified as a basement unless such floor level qualifies as a first story as defined in this section.~~ Any area of the building having its floor subgrade (below ground level) on all sides.
- D7. Development. 1) ~~A building or mining operation;~~ 2) a material change in the use or appearance of a structure or land; Any man-made change to improved or unimproved estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or material located within the area of special flood hazard; or 3) 2) division of land into two or more parcels, including partitions and subdivisions as provided in Oregon Revised Statutes Chapter 92.
- F1. Flood-Related Definitions:
- a. Area of Special Flood Hazard - The land in the floodplain within a community subject to a 1% or greater chance of flooding in any given year. Designation on maps always includes the letter "A".
- a.b Base Flood - The flood having a 1% chance of being equaled or exceeded in any given year. Also referred to as the "one-hundred-year flood." Designation on maps always includes the letter "A".
- c. Below-Grade Crawl Space - 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.
- d. Conditional Letter of Map Revision (CLOMR) – A letter from FEMA commenting on whether a proposed project, if built as proposed, would meet the minimum NFIP standards or proposed hydrology changes.
- e. Critical Facility - A facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

- f. Elevated Building - For insurance purposes, a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.
- g. Flood or Flooding – A general and temporary condition of partial or complete inundation of normally dry land areas from:
- (1) The overflow of inland waters and/or
 - (2) The unusual and rapid accumulation of runoff of surface waters from any source.

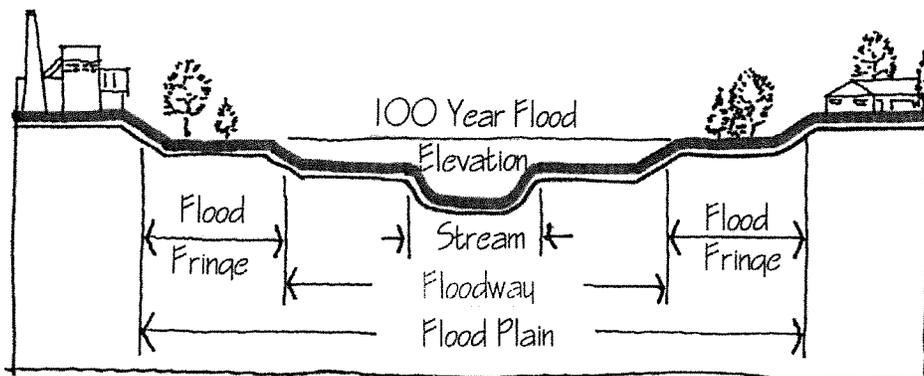
e.h. Floodplain -

- d.i. Floodway - ~~The normal stream or drainage channel and that adjoining area of the natural floodplain needed to convey the waters, including the zero-foot rise floodway area defined by the U.S. Corps of Engineers. Floodways must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation.~~

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.

- e.j. Floodway Fringe - The area of the floodplain lying outside of the floodway.

Figure 12-1: Flood-Related Terms



- k. Flood Insurance Rate Map (FIRM) - 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.
- l. Flood Insurance Study - 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.
- m. Flood Management Area (FMA) –

- n. Highest Adjacent Grade – The highest natural elevation of the ground surface prior to construction, adjacent to the proposed wall of a structure.
- o. Letter of Map Change (LOMC) – An official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps (FIRM) and/or Flood Insurance Studies (FIS). LOMCs are issued in the following categories:
1. Letter of Map Amendment – An amendment to the Flood Insurance Rate Maps based on technical data showing that an existing structure or parcel of land that has not been elevated by fill (natural grade) was inadvertently included in the special flood hazard area because of an area of naturally high ground above the base flood.
 2. Letter of Map Revision (LOMR) -
 - i. LOMR-F (Letter of Map Revision Based on Fill) – A letter from FEMA stating that an existing structure or parcel of land that has been elevated by fill would not be inundated by the base flood.
 - ii. A LOMR revises the current FIRM and/or FIS to show changes to the floodplains, floodways or flood elevations. LOMRs are generally based on manmade alterations that affected the hydrologic or hydraulic characteristics of a flooding source and thus result in modification to the existing regulatory floodway, the effective Base Flood Elevation, of the Special Flood Hazard Area. It is recommended a conditional letter of map revision be approved by FEMA prior to issuing a permit to start a project if the project has a potential to affect the special flood hazard area (see Conditional Letter of Map Revision).
- p. Lowest Floor - 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 Section 10.5.640(B)(1)(b).
- N3. New Construction. Structures for which the “start of construction” commenced on or after the effective date of this ordinance.
- N4. Nonconforming.
- S9. Structure. A walled and roofed building including a gas or liquid storage tank that is principally above ground.
- S10. Substantial Damage. 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% of the market value of the structure before the damage occurred.
- S11. Substantial Improvement.

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V1. Variance. A grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

V2. Vehicular Parking Space.

W1. Water Dependent. A structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

W2. Water Quality Sensitive Areas.

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