**CPMC 8.24 Flood Damage Prevention**

8.24.010 Statutory Authorization

The State of Oregon has in ORS 197.175 delegated the responsibility to local governmental units to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city ordains and sets out the provisions of this chapter.

8.24.030 Statement of Purpose

J. Participate in and maintain eligibility for flood insurance and disaster relief.

8.24.050 Definitions

“Area of shallow flooding” means a designated AO or AH zone on the flood insurance rate map (FIRM) with base flood depths ranging from one to three feet, and/or where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. AO zones are characterized as having sheet flow, and AH zones indicate ponding. For both AO and AH zones, adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

“Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AH, A1-30, AE, A99, AR. Also known as the special flood hazard area (SFHA).

“Base flood elevation (BFE)” means the water surface elevation to which floodwater is anticipated to rise during the base flood. The BFE is depicted on the flood insurance rate map (FIRM) to the nearest foot and in the flood insurance study (FIS) to the nearest tenth of a foot.

“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 and materials located within the area of special flood hazard. Exemptions to the definition of development, for the purpose of administering this chapter, include:

1. Signs, markers, aids, etc., placed by a public agency to serve the public provided the encroachment in the special flood hazard area is no larger than a standard utility pole; and

2. Residential gardens; provided, that they do not result in unauthorized, substantial alteration of topography; and provided, that gardening methods do not include the use or application of pesticides, herbicides, fertilizers or other toxic materials.

“Floodway” or “regulatory floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

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

“Highest Adjacent Grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

“Reasonably safe from flooding” means development is designed and built to be safe from flooding based on consideration of current flood elevation studies, historical data, high water marks and other reliable data known to the community. In unnumbered A zones where flood elevation information is not available and cannot be obtained by practical means, reasonably safe from flooding means that the lowest floor is at least two feet above Highest Adjacent Grade.

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8.24.060 Lands to which this chapter applies

A. Applicability. This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city. All development within special flood hazard areas is subject to the terms of this chapter and other applicable regulations. Nothing in this chapter is intended to allow uses or structures that are otherwise prohibited by the zoning regulations or specialty codes.

B. Community Boundary Alterations. The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community’s boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the the community has assumed or relinquished floodplain management regulatory authority.

8.24.200 Development in Regulatory Floodways

E. Temporary encroachments in the regulatory floodway for the purposes of capital improvement projects, including bridges and culverts, may be permitted if the encroachment results in an increase in flood levels during the occurrence of the base flood discharge, provided that a Conditional Letter of Map Revisions (CLOMR) is applied for and approved by the Federal Insurance Administrator, and the requirements for such revision as established under Volume 44 of the Code of Federal Regulations, section 65.12 are fulfilled. Temporary encroachments shall comply with all other applicable flood hazard reduction provisions of this chapter and may be permitted when:

1. The project is limited as to duration with the days and dates that the structure or other development will be in the regulatory floodway, as specified in the floodplain development permit;

2. Accessory structures (i.e., construction trailers) are restricted from the regulatory floodway;

3. The project limits placement of equipment and material in the regulatory floodway to that which is absolutely necessary for the purposes of the project. Justification that demonstrates compliance with this requirement will be documented by the applicant in the required floodplain development permit application submittal documentation;

4. The applicant identifies any insurable structures affected by temporary changes to the area of special flood hazard or BFE and notifies owners of any increased risk of flooding. Documentation demonstrating compliance with this provision shall be provided to the city as part of the floodplain development application; and

5. The project applicant is provided with written notification that they may be liable for any flood damages resulting from the temporary encroachment.

F. 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);

2. The project does not result in a potential rise in the flood elevation;

3.. A Conditional Letter of Map Amendment (CLOMR) is applied for and approved by the Federal Insurance Administrator for any rise in the base flood levels, and the requirements for such revision as established under Volume 44 of the Code of Federal Regulations, section 65.12 are fulfilled; 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 floodplain development approval

8.24.250 Floodplain Development Standards for Construction

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, air-conditioning, duct systems, and equipment and other service facilities shall be elevated at least one foot above the BFE and/or designed or located to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilation, plumbing, air conditioning, duct systems, and other equipment and services that are replaced as part of a substantial improvement shall meet all requirements of this section.

C. Structures Located in Multiple or Partial Flood Zones.

In coordination with the State of Oregon Specialty Codes:

1. When a structure is located in multiple flood zones on the community’s Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.

2. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

G. Manufactured Dwellings. In addition to subsections A and B of this section, new, replacement and substantially improved manufactured dwellings are subject to the following standards:

1. Manufactured dwellings shall be elevated on a permanent foundation, such that the lowest floor of the manufactured home is elevated a minimum of eighteen inches above the BFE or depth number specified on the FIRM; or if no base depth is specified in an area of shallow flooding (flood zones AO and AH), shall be elevated at least two feet above the highest adjacent grade;

2. Manufactured dwellings supported on solid foundation walls with enclosed areas below the BFE are prohibited unless the foundation walls are designed to automatically equalize hydrostatic forces by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must be certified by a registered professional engineer or architect, or meet or exceed the minimum criteria set forth in subsections (E)(2)(a)(i) through (iii) of this section;

3. The bottom of the longitudinal chassis frame beam in A zones shall be at least twelve inches above the BFE;

4. 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; and

5. Electrical crossover connections shall be a minimum of twelve inches above the BFE.

Refer to FEMA’s Manufactured Home Installation in Flood Hazard Areas guidebook for additional information

I. Recreational Vehicles. In all areas of Special Flood Hazard, Recreational Vehicles that are an allowed use or structure under the zoning ordinance must either:

1. Be placed on the site for fewer than one hundred eighty consecutive days;

2. Be fully licensed and ready for highway use; be on its wheels or jacking system; be 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 H of this section, Manufactured Dwellings, and including the elevation and anchoring requirements.

J. Accessory Structures. Relief from the elevation or dry floodproofing requirements for residential and non-residential structures in Riverine (Non-Coastal) flood zones may be granted for an accessory structure that meets the following standards:

1. In compliance with State of Oregon Specialty Codes, accessory structures on properties that are zoned residential are limited to one-story structures less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed accessory structure will be located more than 20 feet from all property lines. Accessory structures on properties that are zoned as non-residential are limited in size to 120 square feet.

2. Be located and constructed to minimize flood damage;

3. Be designed so as to not impede flow of flood waters under base flood conditions;

4.. Be prohibited in the regulatory floodway;

5. It shall not be used for human habitation and may be used solely for parking of vehicles or storage of items having low damage potential when submerged;

6.. Toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall not be stored in an accessory structure unless confined in a tank installed in compliance with this chapter;

7. Be constructed of flood resistant materials;

8. Be firmly anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;

8. Have electrical service and/or mechanical equipment elevated or flood-proofed a minimum of one foot above the BFE as set forth in subsection (B)(3) of this section; and

9. Be designed 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 meet the minimum design criteria set forth in subsections (E)(2)(a)(i) through (iii) of this section.

8.24.270 Interpretations and Variances

B. Variances. Exceptions to the standards and criteria of this chapter shall be made in writing to the floodplain administrator on the form provided by the city and include, at a minimum, the same information required for a floodplain development permit, a written explanation for the basis of the variance request and any necessary documentation to show the variance is warranted and meets the criteria established in subsection (B)(2) of this section.

1. Procedural Requirements. Variances shall be subject to the procedural requirements set forth in Section 17.05.400 for a Type III (quasi-judicial) review procedure.

2. Variance Criteria. The city shall approve, approve with conditions, or deny an application for a variance based on the following criteria:

e. Variances may be issued for a functionally dependent use; provided, that the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

3. Variance Notification. Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance and that such construction below the Base Flood Elevation increases risks to life and property. Such notification and a record of all variance actions, including justification shall be maintained in accordance with Section \_\_\_\_\_.