

Flood Hazard Area

Reedsport Code of Ordinances: Title 10 Land Usage: Chapter 10.76 Special Provisions and Regulations: 10.76.010 Flood Hazard Area

The State of Oregon has in ORS 197.175 delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Reedsport does ordain as follows:

A. The flood hazard areas of City of Reedsport are subject to periodic inundation which may result 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.

B. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately flood proofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

A. Purpose. To promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in flood hazard 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, 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 flood hazard so as to minimize future flood blight areas;
7. Notify potential buyers that property is in an area of special flood hazard;
8. Notify those who occupy the areas of special flood hazard that they assume responsibility for their actions.

In order to accomplish its purposes, this section 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 which 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

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

“Appeal” Means a request for a review of the interpretation of any provision of this ordinance or a request for a variance.

"Area of shallow flooding" means a designated AO or AH zone on a community's flood insurance rate map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized as sheet flow and AH indicates ponding.

"Area of special flood hazard" means the land in the floodplain within a community subject to a one (1) 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. “Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard”.

"Base flood" means the flood having a one (1) percent chance of being equaled or exceeded in any given year. Also referred to as "100-year flood."

“Base flood elevation” (BFE): The elevation to which floodwater is anticipated to rise during the base flood.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Below-grade crawl space" means an enclosed area below the base flood elevation in which the interior grade is not more than two (2) 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 four (4) feet at any point.

"Critical facility" means facilities 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.

"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.

"Flood" or "flooding" means:

1. A general and temporary condition of partial or complete inundation of normally dry land areas from:

a. The overflow of inland or tidal waters

b. The unusual and rapid accumulation of runoff of surface waters from any source.

c. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

"Flood elevation study" An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

"Flood insurance rate map (FIRM)" means the official map of a community, on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

"Flood insurance study" (FIS) See "Flood elevation study".

"Flood proofing" Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

"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. Also referred to as "Regulatory Floodway".

"Functionally water dependent use" A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.

"Habitable floor" means any floor usable for living purposes which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "habitable floor."

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic structure" Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior

"Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or floor resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this chapter.

"Manufactured dwelling" 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 dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

"Manufactured dwelling park or subdivision" means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured dwelling lots for rent or sale.

"Mean sea level" For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

"New construction" means structures for which the "start of construction" commenced on or after the effective date of the ordinance, adopted by the City of Reedsport, codified in this chapter and includes any subsequent improvements to such structures.

"New mobile home/manufactured dwelling park" or "mobile home/manufactured dwelling subdivision": A parcel (or contiguous parcels) of land divided into two (2) or more mobile/manufactured dwelling lots for rent or sale for which the construction of facilities for servicing the lot (including at a minimum the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets) is completed on or after the effective date of this ordinance codified in this chapter.

"Recreational vehicle" means a vehicle which is:

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

"Special Flood Hazard Area" (SFHA) See "area of special flood hazard".

"Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured dwelling on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation

of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include excavation for a basement, footings, piers, or foundations 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.

"State building code" means the combined specialty codes adopted by the State of Oregon.

"Structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured dwelling.

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

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed.

The 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 "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure".

"Variance" means a grant of relief by the City of Reedsport from the terms of a floodplain management regulation.

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

C. General Provisions.

1. Lands to Which this Division Applies. This section shall apply to all areas of special flood hazard areas within the jurisdiction of the City of Reedsport.

2. 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 Douglas County, Oregon, and Incorporated Areas" dated March 23, 2021, with accompanying flood insurance rate maps are hereby adopted by reference and declared to be a part of this chapter. The flood insurance study and FIRM panels are on file at Reedsport City Hall, 451 Winchester Avenue, Reedsport, Oregon.

3. Pursuant to the requirement established in ORS 455 that the City of Reedsport administers and enforces the State of Oregon Specialty Codes, the City of Reedsport does hereby acknowledge that the Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in Special Flood Hazard Areas (SFHA). Therefore, this ordinance is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.

4. All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.

5. Penalties for Violation. No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this division and other applicable regulations. Failure to comply (including violations of conditions and safeguards established in connection with conditions) shall constitute a violation subject to Section 10.04.110 Violations – Penalties. Nothing herein contained shall prevent the City of Reedsport from taking such other lawful action as is necessary to prevent or remedy any violation.

6. Abrogation and Greater Restrictions. This section is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this section, division and other ordinance, state building code, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

7. Interpretation. In the interpretation and application of this division all provisions shall be:

- a. Considered as minimum requirements;
- b. Liberally construed in favor of the governing body;
- c. Deemed neither to limit nor repeal any other powers granted under state statutes and rules including the state building code.

8. Warning and Disclaimer of Liability. The degree of flood protection required by this section is considered reasonable for regularity purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This section 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 section shall not create liability on the part of city of Reedsport, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this section or any administrative decision lawfully made thereunder.

D. Administration.

1. Commencement of Development. A permit shall be obtained before construction or development begins within any area laterally (horizontally) within the special flood hazard area established in subsection (C)(2) The development permit shall be required for all structures including manufactured dwellings, as defined in the 10.76.010(B), and for all other development including fill and other development activities, also as set forth in the Section 10.76.010(B).

Application for a permit shall be made on forms furnished by the City of Reedsport 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 for the foregoing. Specifically, the following information is required:

- a. In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures; in accordance with the requirements of section D.6;
- b. Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed;
- c. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in this section;
- d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- e. Base Flood Elevation data for subdivision proposals or other development when required per sections (D)(3) and (E)(1)(e).
- f. Substantial improvement calculation for any improvement, addition, reconstruction, renovation, or rehabilitation of an existing structure.
- g. The amount and location of any fill or excavation activities proposed.

2. Floodplain Administrator. The City Planner and/or Building Inspector are hereby appointed to administer, implement, and enforce this section by granting or denying development permit applications in accordance with its provisions.

3. Duties and Responsibilities of the Floodplain Administrator. Duties of the Floodplain Administrator shall include, but are not limited to:

- a. Review all development permits to determine that the permit requirements of this division have been satisfied;
- b. 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;
- c. 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 this section are met.
- d. Review all development permits to determine if the proposed development is located in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available then ensure compliance with the provisions of subsection (D)(5); and
- e. Provide to building officials the Base Flood Elevation (BFE) applicable to any building requiring a development permit.
- f. Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined in subsection (B).
- g. Review all development permits to determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in subsection (D)(8).
- h. Review all development permits to determine if the proposed development activity includes the placement of fill or excavation.

4. 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 community has assumed or relinquished floodplain management regulatory authority.

5. Use of Other Base Flood Data. When base flood data has not been provided in accordance with sub section (C)(2), the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer subsections (E)(2)(a), (E)(2)(b) and (D). For subdivision proposals or other development proposals Base Flood Elevation data shall be generated for all proposals of 50 lots

or 5 acres, whichever is the lesser.

Base Flood Elevations shall be generated for all development proposals in compliance with Oregon Specialty Codes, with the exception of development proposals located within a riverine Zone A. Development proposals located within a riverine Zone A shall 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 the lowest floor at least two (2) feet above grade in these zones may result in higher insurance rates.

6. Information to be Obtained and Maintained. The Floodplain Administrator shall:

- a. Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of sections (D) are adhered to.
- b. Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain an Elevation Certificate (EC) recording the actual elevation (in relation to mean sea level) of the lowest floor (including basement), all attendant utilities in place, and the location and height of all flood openings.
- c. For all new or substantially improved floodproofed structures obtain an As-built Elevation Certificate (EC) recording the actual elevation (in relation to mean sea level) of the lowest floor (including basement), all attendant utilities, and the location and height of all flood openings, prior to the final inspection, and:
 - i. Verify and record the elevation (in relation to mean sea level),
 - ii. Maintain the floodproofing certifications required in this section.
- d. Record and maintain all variance actions, including justification for their issuance;
- e. Obtain and maintain all hydrologic and hydraulic analyses performed as required under [cite appropriate sub section of code.]
- f. Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under (D)(7).
- g. Maintain for public inspection all records pertaining to the provisions of this division.

7. The Floodplain Administrator shall conduct Substantial Improvement (SI) (as defined in section B) reviews for all structural development proposal applications and maintain record of SI calculations within permit files in accordance with section (D)(3)(a). Conduct Substantial Damage (SD) (as defined in section (B)) assessments when structures are damaged due to a natural hazard event or other causes. Make SD determinations whenever structures within the special flood hazard area (as established in section (C)(2) are damaged to the extent that 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.

8. Alteration of Watercourses. The Community Development Planner shall:

a. Notify adjacent communities and the Department of Land Conservation and Development, Department of State Lands, 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 as a Letter of Map Revision (LOMR) along with either:

i. A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or

ii. Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

b. Require that the flood carry capacity within the altered or relocated portion of said watercourse is maintained. Require that maintenance is provided within the altered or relocated portion of said watercourse to ensure that the flood carrying capacity is not diminished. Require compliance with sections (D)(8)(a) and (D)(8)(c).

c. Require that the applicant shall notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA, or when development altered a watercourse, modified floodplain boundaries, or modified Base Flood Elevations (BFE). This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

9. Interpretation of Flood Insurance Rate Map. The Floodplain Administrator shall make interpretations where needed as to exact locations of the boundaries of the areas of special flood hazards. (For example, if there appears to be a conflict between a mapped boundary and actual field conditions.)

E. Provisions for Flood Hazard Reduction.

1. General Standards. In all areas of special flood hazards, the following standards are required:

a. Anchoring.

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

ii. New or substantially improved manufactured dwellings 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 (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques),

and;

b. Construction Materials and Methods.

- i. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- ii. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- iii. Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall be elevated above the base flood elevation or shall be designed and installed 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, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities, if replaced as part of a substantial improvement, shall meet all the requirements of this section.

c. Utilities.

- i. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- ii. 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.
- iii. 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 standards.

d. Tanks

- i. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood.
- ii. Above-ground tanks shall be installed at or above the base flood elevation or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

e. Subdivision Proposals.

- i. All subdivision proposals shall be consistent with the need to minimize flood damage.
- ii. All subdivision proposals shall have public utilities and facilities such as sewer, electrical and water systems located and constructed to minimize flood damage.

iii. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

iv. All subdivision proposals of 50 lots or 5 acres whichever is the lesser shall include Base Flood Elevation data in compliance with sections (D)(3) and (D)(5).

f. Structures that Straddle Flood Zone Boundaries.

i. 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.

ii. When a structure is partially located in a Special Flood Hazard Area (SFHA), the entire structure shall meet the requirements for new construction and substantial improvements.

2. Specific Standards. In all areas of special flood hazards where base flood elevation data has been provided as set forth in subsection (C)(2) or (C)(4), the following provisions are required in addition to the General Standards:

a. Flood Openings. Enclosed areas below the Base Flood Elevation, including crawl spaces shall:

i. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

ii. Be used solely for parking, storage, or building access

iii. Be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

A. A minimum of two (2) openings;

B. the total net area of non-engineered openings shall be not less than one (1) square inch for every square foot of enclosed area where the enclosed area is measured on the exterior of the enclosure walls.

C. The bottom of all openings shall be no higher than one (1) foot above grade.

D. Openings may be equipped with screens, louvers, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

E. All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.

iv. For structures that require building permits under the State of Oregon Specialty Code, flood openings shall be installed such that they comply with section (E)(2) (i) - (iii) and the following provisions:

A. There shall be not less than two openings on different sides of each enclosed area; if a building has more than one enclosed area below the Base Flood Elevation, each area shall have openings,

B. Openings shall be permitted to be installed in doors and windows on the condition that they fully comply with the requirements for flood openings stated in this Section.

b. Residential Construction.

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

ii. Enclosed areas below the lowest floor shall comply with the flood opening requirements in subsection (E)(2)(a).

c. Garages.

i. Attached garages may be constructed with the garage floor slab below the Base Flood Elevation (BFE) if the following requirements are met:

A. The floors are at or above grade on not less than one side;

B. The garage is used solely for parking, building access, and/or storage;

C. The garage is constructed with flood openings in compliance with Section (E)(2)(a) to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.

D. The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;

E. The garage is constructed in compliance with the standards in (E)(1); and

F. The garage is 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.

ii. Detached garages must be constructed in compliance with the standards for appurtenant structures in section (E)(2)(i).

d. Nonresidential Construction.

i. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall

A. Have the lowest floor, including basement, elevated at or above the base flood elevation; or, together with a utility and sanitary facilities, shall:

B. Be floodproofed so that below the base flood elevation, the structure is watertight with walls substantially impermeable to the passage of water;

C. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

D. Be certified by a registered professional engineer or architect that the standards of practice for meeting provisions of this subsection are based on their development and/or review of the structural design, specifications, and plans. Such certifications shall be provided to the Floodplain Administrator as set forth in subsection (D)(6);

ii. Nonresidential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in (E)(2)(a).

iii. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g. a building constructed to the base flood elevation will be rated as one (1) foot below that level).

e. Reserved.

f. All manufactured dwellings that are to be placed or substantially improved within zones A1-A30, AH, and AE on Reedsport's FIRM on sites.

i. The bottom of the longitudinal chassis frame beam shall be at or above Base Flood Elevation;

ii. The manufactured dwelling chassis is elevated as required in (f.)(i.) and is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.

iii. New, replacement, or substantially improved manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with section (E)(2)(a);

iv. New, replacement, or substantially improved manufactured dwellings 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 (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and;

v. Electrical crossover connections shall be a minimum of twelve (12) inches above Base Flood Elevation (BFE).

g. Recreational Vehicles: Recreational vehicles placed on sites are required to either:

- i. Be on the site for fewer than one hundred eighty (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 subsection (e) and (E)(2)(f) above, including the elevation and anchoring requirements for manufactured dwellings.

h. Below-grade crawl spaces: Below-grade crawl spaces allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas:

- i. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in sub-section ii (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.
- ii. The crawl space 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.
- iii. 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.
- iv. 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.
- v. The interior grade of a crawlspace below the BFE must no be more than two (2) feet below the lowest adjacent exterior grade.

- vi. The height of the below-grade crawl space, 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.
- vii. There must be an adequate drainage system that removes floodwaters from the interior area of the crawl space. 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.
- viii. 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. 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 (1) foot at any point within the community.
- i. Appurtenant (Accessory) Structures: Relief from elevation or floodproofing requirements for Residential and Non-Residential structures in Riverine (Non-Coastal) flood zones may be granted for appurtenant structures that meet the following requirements:
- i. Appurtenant structures must only be used for parking, access, and/or storage and shall not be used for human habitation;
- ii. In compliance with State of Oregon Specialty Codes, Appurtenant structures on properties that are zoned residential are limited in size to less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines. Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet.
- iii. The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials;
- iv. The appurtenant structure must be adequately 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.
- v. The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in section

(E)(2)(a);

vi. Appurtenant structures shall be located and constructed to have low damage potential;

vii. Appurtenant structures shall not be 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 section (E)(1)(d).

vii. Appurtenant structures shall be constructed with electrical, mechanical, 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.

F. Floodways. Located within areas of special flood hazard established in subsection (C)(2) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions apply:

1. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless:

i. Certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge; or

ii. A Conditional Letter of Map Revision (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.

2. If the requirements of subsection (F)(1) is satisfied, all new construction, substantial improvements, and other development shall comply with all applicable flood hazard reduction provisions of subsection (D) and (E). New installations of manufactured dwellings are prohibited (2002 Oregon Manufactured Dwelling and Park Specialty Code). Manufactured dwellings may only be located in floodways according to one (1) of the following conditions:

a. 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

b. 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:

- i. 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;
- ii. The replacement manufactured dwelling and any accessory buildings or accessory structures (encroachments) shall have the bottom of the longitudinal chassis frame beam elevated to or above the Base Flood Elevation;
- iii. 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 authority having jurisdiction and is anchored in compliance with the standards in (E)(2)(f);
- iv. 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 water level or diverts water in a manner that causes erosion or damage to other properties;
- v. The location of a replacement manufactured dwelling is allowed by the local planning department's ordinances; and
- vi. Any other requirements deemed necessary by the authority having jurisdiction.

G. Variance Procedure. The granting of a variance under this subsection is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

1. The Planning Commission shall hear and decide appeals and requests for variances from the requirements of the flood hazard provisions of this division. The Planning Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this division, and:

- a. The danger that materials may be swept onto other lands to the injury of others;
- b. The danger to life and property due to flooding or erosion damage;
- c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- d. The importance of the services provided by the proposed facility to the community;
- e. The necessity to the facility of a waterfront location, where applicable;

- f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- g. The compatibility of the proposed use with existing and anticipated development;
- h. The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
- i. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- j. 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
- k. The costs of providing government 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.

2. Upon consideration of the foregoing factors and the purposes of this division, the Planning Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this division.

3. The City Planner shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

4. Conditions for Variances.

a. Generally, variances may be issued is for new construction and substantial improvements to be erected on a lot of one-half ($\frac{1}{2}$) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation, in conformance with the provisions of (d) and (e) below. As the lot size increases the technical justification required for issuing the variance increases.

b. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

c. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.

d. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

e. Variances shall only be issued upon:

i. A showing of good and sufficient cause;

ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

iii. 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, or conflict with existing local laws or ordinances.

f. 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 population residential neighborhoods. As such, variances from the flood elevations should be quite rare.

g. 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 comply with other variance criteria.

h. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally water dependent use provided that the criteria of section (b) – (e) are met (if applicable), and 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.

i. 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 for their issuance shall be maintained in accordance with section (D)(6).

(Ord. No. 2015-1139, § 2, 1-5-2015; Ord. No. 2010-1099, § 1, 2-1-2010; Ord. 2003-1038 (part))