

BEFORE THE BOARD OF COMMISSIONERS
IN AND FOR THE COUNTY OF CURRY OREGON

An Ordinance)
Adopting a New Curry County)
Flood Damage Prevention) **ORDINANCE 2018- 06**
Ordinance and Repealing the)
2009 Curry County Flood)
Damage Prevention Ordinance)

On October 3, 2018, this matter came before the Board of Commissioners for Curry County, a general law county political subdivision of the state of Oregon, after duly posted and published notice; and

The Board having heard a staff report and considered public testimony the Board of Commissioners finds:

The proposed amendment to the Curry County Flood Management Ordinance is consistent with applicable statewide planning goals and the Curry County Comprehensive Plan. Because these amendments only impose additional requirements in a marginal way, they are consistent with the existing comprehensive plan and land development ordinances.

These amendments are consistent with Citizen Involvement by making materials available for public inspection and publishing and otherwise advertising a public hearing; individual landowner notice under 215.503 is not required under subsection (10) thereof.

Now therefore, The Board of Curry County Commissioners ordains as follows:

Section 1: Adoption

A new Curry County Flood Damage Prevention Ordinance which is attached hereto and incorporated by reference as Exhibit "A" is hereby adopted.

Section 2: Repealer

Curry County Ordinance 09-05 is hereby repealed.

Section 3: Effective Date

This ordinance is being adopted consistent with ORS Chapters 197 and 215 and with ORS 203.035. Pursuant to FEMA requirements, this ordinance must be adopted by November 16, 2018.

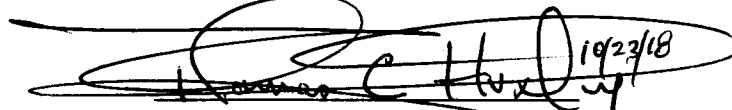
The Board of Curry County Commissioners for the County of Curry deems this ordinance necessary for the immediate preservation and protection of the public peace, health, safety and general welfare for Curry County and declares an emergency exists.

This ordinance shall be in full force and effect on November 16, 2018.

DATED this 3rd day of October, 2018.

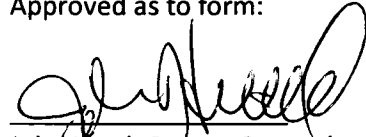
BOARD OF CURRY COUNTY COMMISSIONERS


Sue Gold, Chair


Tom Huxley, Vice Chair


Court Boice, Commissioner 10/23/18

Approved as to form:


John Huttel, County Counsel

Public Hearing /Reading October 3, 2018
Public Hearing/Reading October 17, 2018
Emergency Adoption Yes
Effective date November 16, 2018

EXHIBIT A

**CURRY COUNTY, OREGON
FLOOD DAMAGE PREVENTION ORDINANCE**

**SECTION 1.0. AUTHORIZATION, FINDINGS OF FACT, PURPOSE,
AND OBJECTIVES**

1.1 STATUTORY AUTHORIZATION

The State of Oregon has in ORS 197.175 and ORS 203.035 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 Board of Commissioners of Curry County Oregon does ordain as follows:

1.2 FINDINGS OF FACT

- (1) The flood hazard areas Curry County 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.
- (2) 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.

1.3 STATEMENT OF PURPOSE

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

- (1) To protect human life and health;
- (2) To minimize expenditure of public money and costly flood control projects;
- (3) To minimize the need for emergency rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;

- (6) To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- (7) To ensure that potential buyers are notified that property is in an area of special flood hazard and to discourage the victimization of uninformed land and home buyers;
- (8) To prevent development which increases base flood heights that could increase flood damage and may result in conflicts or litigation between property owners;
- (9) To make flood insurance available from FEMA at the lowest possible rates; and,
- (10) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

1.4 METHODS OF REDUCING FLOOD LOSSES

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 flood plains, 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; and
- (6) Coordinating and supplementing the provisions of the state building code with local land use and development ordinances.

SECTION 2.0. DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance it's most reasonable application.

"ACCESSORY (APPURTENANT) STRUCTURE" means a structure which is on the same parcel of land as the principal structure, and the use of which is incidental to the use of the principal structure.

"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, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 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 by ponding or sheet flow

"AREA OF SPECIAL FLOOD HAZARD" is the land in the flood plain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the flood insurance rate map, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1-30, VE, or V. For purposes of these regulations, the term "special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

"BASE FLOOD" means the flood having a one percent chance of being equaled or exceeded in any given year

"BASE FLOOD ELEVATION" means the water surface elevation of the one percent (1%) annual chance flood (100-year 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 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.

"BOARD" means the Curry County Board of Commissioners

"BREAKAWAY WALL" means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

"COASTAL HIGH HAZARD AREA" means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. -

"CRITICAL FACILITIES" 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.

"COUNTY" means Curry County, Oregon.

"DEVELOPMENT" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

"ELEVATED BUILDING" means 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.

"EXISTING MANUFACTURED HOME PARK OR SUBDIVISION" means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

"EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

"FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)" is the Federal agency which administers the National Flood Insurance Program.

"FLOOD OR FLOODING" means:

- (a) A general and temporary condition of partial or complete inundation of normally dry land areas from:
- (1) The overflow of inland or tidal waters.
 - (2) The unusual and rapid accumulation or runoff of surface waters from any source.
 - (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) 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.
- (b) 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 (a)(1) of this definition.

"FLOOD HAZARD ADMINISTRATOR" means the Planning Director or his or her designee.

"FLOOD HAZARD MAP" is a composite of Federal Flood Insurance Rate Maps, Floodway Maps and more recently acquired information that does not appear on the federal maps. It is used to administer the Curry County Flood Damage Prevention Ordinance.

"FLOOD INSURANCE RATE MAP (FIRM)": means an official map of a community, on which the Flood Insurance Administrator has delineated both the special hazard areas and the risk of 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" means the official report provided by the Federal Insurance Administration that includes 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 PROOFING" means any combination of structural and non-structural additions, changes, or adjustments to structure which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

"FLOODWAY FRINGE" means the area within the 100 year flood plain excluding the floodway.

"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 loading or

unloading cargo or passengers and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

"GRADE" is the elevation of the lowest ground level immediately adjacent to the building, or for pre-construction, the building site.

"HABITABLE SPACE" means a space occupied by one or more persons for living, sleeping, eating, or cooking. Habitable Space does not include the following: a space used for a bath, boiler room, closet, dressing room, heater, kitchenette, laundry, locker, pantry, storage, toilet, and utility; or for service and maintenance of a building; or used for access and vertical travel between stories.

"INCREASE IN BASE FLOOD HEIGHT" means a calculated upward rise in the base level flood elevation resulting from comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain

"LOWEST FLOOR" means 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 Code of Regulations Sec. 60.3.

"LOWEST HORIZONTAL SUPPORTING MEMBER" means the horizontal beam or floor joist that provides structural support for the habitable floor of the structure.

"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 home" does not include a ``recreational vehicle".

"MANUFACTURED HOME PARK OR SUBDIVISION" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"MEAN HIGH TIDE" means the average height, relative to mean sea level, of all observed high tides from tidal data available for coastal site shown on the community's Flood Insurance Rate Map.

"MEAN SEA LEVEL" means, for purposes of the National Flood Insurance Program, the North American Vertical Datum of 1988 (NAVD 88) 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 April 3, 1978 and includes any subsequent improvements to such structures.

"NEW MANUFACTURED HOME PARK OR SUBDIVISION" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations adopted by the community.

"PARTITION" means to divide land into two or three parcels of land within a calendar year, but does not include:

- (1) A division of land resulting from a lien foreclosure, foreclosure of a recorded contract for the sale of real property or the creation of cemetery lots;
- (2) An adjustment of a property line by the relocation of a common boundary where an additional unit of land is not created and where the existing unit of land reduced in size by the adjustment complies with any applicable zoning ordinance; or
- (3) A sale or grant by a person to a public agency or public body for state highway, county road, city street or other right of way purposes provided that such road or right of way complies with the applicable comprehensive plan and ORS 215.213 (2)(p) to (r) and 215.283 (2)(q) to (s).

"PLANNING COMMISSION" means the Planning Commission as appointed by the Board of Commissioners of Curry County.

"PRIMARY FRONTAL DUNE" means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

"RECREATIONAL VEHICLE" means a vehicle which is:

- (1) Built on a single chassis;
- (2) 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.

“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.

“START OF CONSTRUCTION” (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), 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 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 slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or 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 State of Oregon combined specialty codes.

“STRUCTURE” means, for floodplain management purposes, a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

“SUBDIVISION” means any land division of 4 or more lots.

“SUBSTANTIAL DAMAGE” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of 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 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 from the terms of a flood plain management regulation.

“WATER DEPENDENT” means 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.

SECTION 3.0. GENERAL PROVISIONS

3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all areas of special flood hazards within the jurisdiction of Curry County.

3.2 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 Curry County, Oregon, and Incorporated Areas”, dated November 16, 2018, with accompanying Flood Insurance Maps and Attachment A, Curry County Ordinance 98-1 (Flood Hazard Map Revision – Rogue Shores), are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at the Curry County Planning Department, located on the lower level of the Courthouse Annex, Gold Beach, Oregon. The best available information for flood hazard area identification as outlined in Section 4.3-2 shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under section 4.3-2.

3.3 PENALTIES FOR NONCOMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a violation. Any person who violates this ordinance or fails to comply with any of its requirements shall be subject to citation under *Curry County Code – Article Ten – Enforcement* and its amendments and subsequent revisions and in addition shall pay all costs and expenses involved in the case. Each day on which a violation exists shall be deemed to be a separate violation. Nothing herein contained shall

prevent Curry County from taking such other lawful action as is necessary to prevent or remedy any violation.

ABROGATION AND GREATER RESTRICTIONS

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

3.5 INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the furtherance of the purposes of this ordinance; and,
- (3) Deemed neither to limit nor repeal any other powers granted under State statutes and rules including the state building code.

3.6 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance 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 ordinance 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 ordinance shall not create liability on the part of Curry County, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

3.7 SEVERABILITY

Should any section, clause, or provision of this ordinance be declared invalid, the same shall not affect the validity of the ordinance as a whole or any part thereof other than the part so declared invalid.

SECTION 4.0. ADMINISTRATION

4.1 ESTABLISHMENT OF DEVELOPMENT PERMIT

4.1-1 Development Permit Required

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.2. 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."

4.1-2 Application for Development Permit

Application for a development permit shall be made on forms furnished by the Flood Hazard Administrator to be submitted with a fee as established by order of the Board 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 to which any structure has been flood proofed.
- (3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 9.2-2; and
- (4) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

Additional information which may be required by the Flood Hazard Administrator includes: 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.

4.2 DESIGNATION OF THE FLOOD HAZARD ADMINISTRATOR

The Flood Hazard Administrator is hereby designated to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.

4.3 DUTIES AND RESPONSIBILITIES OF THE FLOOD HAZARD ADMINISTRATOR

Duties of the Flood Hazard Administrator shall include, but not be limited to:

4.3-1 Notice and Development Permit Review

The Flood Hazard Administrator shall:

- (1) Provide notice to affected parties concerning all development permit requests as provided for in ORS 197.763 (2) and (3)
- (2) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
- (3) 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.
- (4) Review all development permits in un-numbered A zones and numbered A zones without a designated to determine if the proposed development adversely affects the flood carrying capacity of the area of special flood hazard. For the purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and permitted development will increase the water surface elevation of the base flood more than one foot at any point. In numbered A zones with designated floodways no increase in the water elevation of the base flood shall be allowed.
- (5) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 7.1-2(1) are met.
- (6) Ensure all development complies with all conditions of the development permit and this ordinance. The Flood Hazard Administrator shall have the authority to inspect developments for consistency with the issued permit and conditions thereto, this ordinance, and applicable FEMA regulations. The Flood Hazard Administrator may suspend or revoke the development permit and issue necessary orders to ensure compliance with the applicable requirements.
- (7) Ensure that where there is a reference to a study or design related to hydraulic, hydrostatic or hydrodynamic factors that the work is performed or certified by an Oregon registered engineer.
- (8) Render the decision regarding all development permits in the form of a written land use decision order which is supported by findings of fact.
- (9) Provide a copy of the decision order to the applicant and all affected parties who responded to the notice of the requested development permit, as well as to the Board.
- (10) Make a record of all determinations for the location of whether a proposed development site is located within a special flood hazard area on those lands which are partially located within flood hazard boundaries; however, no development permit fee shall be charged for such determinations and no

development permit fee shall be charged if the proposed development does not require base flood elevation or flood proofing.

- (11) Provide to building officials the base flood elevation and freeboard applicable to any building requiring a building permit.

4.3-2 Use of Other Base Flood Data (A and V Zones)

When base flood elevation data has not been provided (A and V Zones) in accordance with Section 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD, the Flood Hazard Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from Federal, State or other sources, in order to administer Sections 5.0 -SHALLOW FLOODING AREAS; 6.0 - FLOODPLAIN PROVISIONS; 7.0 – FLOODWAY PROVISIONS, 8.0 –COASTAL HIGH HAZARD AREA, and 9.0 PROVISIONS FOR FLOOD HAZARD REDUCTION.

4.3-3 Information to be Obtained and Maintained

- (1) Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or established as in Section 4.3-2, obtain and record the actual elevation (in relation to mean sea level) of the bottom of the lowest horizontal supporting member in V zones, and of the lowest floor (including basements and below-grade crawlspaces) in A zones 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 4.3-2:
 - (i) verify and record the actual elevation to which the structure was flood proofed (in relation to mean sea level), and
 - (ii) maintain the floodproofing certifications required in Section 4.1-2(3)
- (3) Maintain for public inspection all records pertaining to the provisions of this ordinance
- (4) In coastal high hazard areas, certification shall be obtained from a registered professional engineer or architect that the structure is securely anchored to adequately anchored pilings or columns in order to withstand velocity waters.
- (5) The Flood Hazard Administrator shall keep on file in the Planning Department information known on flooding conditions affecting lands under county jurisdiction. The applicant shall use the information in preparing the application to demonstrate compliance with the requirements of this ordinance.

- (6) The Flood Hazard Administrator shall maintain the records of all appeal actions and report any variances including justification for their issuance, to FEMA, annually or biennially.

4.3-4 Alteration of Watercourses

- (1) Notify adjacent communities, Curry Soil and Water Conservation District, the Army Corps of Engineers, Department of State Lands, the Department of Land Conservation and Development, and the Federal Emergency Management Agency, Region X, 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 required in Section 4.3-5.
- (2) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

4.3-5 Requirement to Submit New Technical Data

- (1) 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).
- (2) The property owner shall be responsible for preparing technical data to support the LOMR application and paying any processing or application fees to FEMA.
(3) The Floodplain Administrator shall 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.

4.3-6 Interpretation of FIRM Boundaries

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 4.4.

4.3-7 Critical Facilities

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. Flood proofing 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.

4.4 APPEAL AND VARIANCE PROCEDURE

4.4-1 Appeals Appeal of a decision by the Flood Hazard Administrator shall follow the appeal process as outlined in Curry County Zoning Ordinance Section 2.170 through 2.190 which provides appeal to the Planning Commission and then the Board of Commissioners.

- (1) All technical evaluations, all relevant factors, standards specified in other sections of this ordinance, shall be considered during an appeal and include evaluation of:
 - (i) The danger that materials may be swept onto other lands to the injury of others;
 - (ii) The danger to life and property due to flooding or erosion damage;
 - (iii) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (iv) The importance of the services provided by the proposed facility to the community;
 - (v) The necessity to the facility of a waterfront location, where applicable;
 - (vi) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (vii) The compatibility of the proposed use with existing and anticipated development;
 - (viii) The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - (ix) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (x) 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,
 - (xi) 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.
- (1) Upon consideration of the factors of Section 4.4-1 (1-11) and the purposes of this ordinance, conditions to the granting of variances may be required as deemed necessary to further the purposes of this ordinance.
- (2) The Flood Hazard Administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

4.4-2 Variance Procedure

- (1) The Planning Commission shall hear and decide written requests for variances from the requirements of this ordinance. In such hearings the burden of proof is on the applicant. The Planning Commission decision shall be reduced to a written order and shall contain findings of fact and conclusions of law which support the decision.
- (2) In passing upon such applications, the Planning Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance; and:
 - (i) the danger that materials may be swept onto other lands to the injury of others;
 - (ii) the danger to life and property due to flooding or erosion damage;
 - (iii) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (iv) the importance of the services provided by the proposed facility to the community;
 - (v) the necessity to the facility of a waterfront location, where applicable;
 - (vi) the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (vii) the compatibility of the proposed use with existing and anticipated development;
 - (viii) the relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - (ix) the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (x) 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;
 - (xi) 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.
- (3) Variances shall only be issued upon findings that:
 - (i) the requested variance is consistent with the purposes of this ordinance as stated in Section 1.3;
 - (ii) there is a showing of good and sufficient cause;
 - (iii) failure to grant the variance would result in exceptional hardship to the applicant;
 - (iv) the requested variance is not contrary to public interest; and
 - (v) 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 4.4-2(2), or conflict with existing local laws or ordinances.
 - (vi) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

- (4) Variances shall not:
 - (i) grant, extend or increase any use of the property prohibited by the Curry County Zoning Ordinance;
 - (ii) be granted for a hardship based solely on an economic gain or loss;
 - (iii) be granted for a hardship which is self-created;
 - (iv) damage the rights or property of others in the area;
 - (v) permit a lower degree of flood protection in the floodplain than the base flood elevation; and
 - (vi) allow any floor, basement or crawlway below the base flood elevation for residential structures.
- (5) Upon consideration of the factors of Section 4.4-2(2) and the purposes of this ordinance, the Planning Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- (6) Variances may be issued for the repair, reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in this section, provided that the alteration will not preclude the structures designation as a "historic structure".
- (7) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of flood proofing than watertight or dry-flood proofing, where it can be determined that such action will have low damage potential and complies with the variance criteria of this ordinance.
- (8) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
- (9) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
- (10) 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 and that such construction below the base flood elevation increases risks to life and property. Such notification shall be permanently maintained with the floodplain development permit.
- (11) The Flood Hazard Administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

SECTION 5.0. SHALLOW FLOODING AREAS

5.1 INTRODUCTION

The provisions of this section are applicable to shallow flooding areas (AO zones).

5.1.1 Identification of and Standards for Shallow Flooding Areas

Shallow flooding areas appear on FIRMs as AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

- (1) New construction and substantial improvements of residential structures and manufactured homes within AO zones have the lowest floor (including basement) elevated above the highest grade adjacent to the building, a minimum of one foot above the depth number specified on the FIRM (at least two feet if no depth number is specified).
- (2) New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (i) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - (ii) Together with attendant utility and sanitary facilities be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in section 9.2-2(3).
- (3) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
- (4) Recreational vehicles placed on sites within AO Zones on the community's FIRM shall either:
 - (i) Be on the site for fewer than 180 consecutive days, and 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
 - (ii) Meet the requirements of section 5.1.1(1) and the elevation and anchoring requirements for manufactured homes.

SECTION 6.0. FLOODPLAIN PROVISIONS

6.1 INTRODUCTION

The provisions of this section are applicable to all floodplain areas.

6.1-1 Floodplain Identification

Floodplains are areas of Curry County which are adjacent to rivers or streams that are designated as areas of special flood hazard or are subject to a one percent or greater chance of flooding (100 year flood). The 100 year floodplain may include the floodway fringe, floodway and the stream channel.

6.1-2 Flood Insurance Zones

Lands within the floodplain are divided into flood insurance zones, each having specific flood potential or hazard. The official flood insurance zones are delineated on the Flood Insurance Rate Maps (FIRM). The FIRM show base flood elevation lines and the locations of the expected "whole-foot" water-surface elevations of the base (100 year) flood.

6.1-3 Before Regulatory Floodway Designation

In areas where a regulatory floodway has not been designated, and where the Flood Insurance Study indicates that it is possible to calculate a floodway, 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 result in any increase in flood levels during the occurrence of the base flood discharge within the community.

SECTION 7.0. FLOODWAY PROVISIONS

7.1 INTRODUCTION

The provisions of this section are applicable to all floodway areas.

7.1-1 Floodway Identification

Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential. For streams, creeks, rivers and other watercourses where the county has not identified the floodway, the entire floodplain shall be treated as a floodway, or a study prepared by an Oregon registered professional engineer

and approved by the county and FEMA may be used to define the floodway limits for a stream section.

7.1-2 Floodway Provisions and Modification

- (1) Except as provided in paragraph (3) and (4), encroachments, including fill, new construction, substantial improvements, and other developments 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 base flood levels or floodway elevations when compared to pre-project conditions.
- (2) If the requirements of 7.1-2(1) are satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 9.0, PROVISIONS FOR FLOOD HAZARD REDUCTION or ASCE 24, whichever is more stringent.
- (3) Floodway modifications must be approved by FEMA.

7.1-3 Floodway Uses

- (1) The following open space uses are allowed in floodways:
 - (i) agricultural uses, such as farming, pasturing, outdoor plant nurseries, horticulture, viticulture, forestry, etc.;
 - (ii) nonstructural industrial and commercial uses, such as loading areas, parking areas, and airport landing strips;
 - (iii) nonstructural private and public recreational uses, such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, parks, fish hatcheries, etc.;
 - (iv) uses accessory to open space uses, or essential for historic areas that are not in conflict with the purpose and intent of this ordinance;
- (2) Subject to County approval, the following uses may be allowed in floodways:
 - (i) extraction of sand and gravel or other related materials;
 - (ii) functionally dependent uses; and
 - (iii) public utilities, streets, roads, and bridges.

7.1-4 Prohibited Floodway Uses

- (1) Structures, in, on, or over floodway areas which are designed for human habitation are prohibited.
- (2) New installation of manufactured dwellings are prohibited. Manufactured dwellings may only be located in floodways according to one of the following conditions:
 - (i) 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

- (ii) A new manufactured dwelling is replacing an existing manufactured dwelling whose original placement was permitted at the time of installation and the replacement home will not be a threat to life, health, property, or the general welfare of the public and it meets the following criteria:
 - (a) As required by 44 CFR Chapter 1, Subpart 60.3(d)(3), it must be demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the manufactured dwelling and any accessory buildings, accessory structures, or any property improvements (encroachments) will not result in any increase in flood levels during the occurrence of the base flood discharge;
 - (b) Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with 5.1-1(2) above;
 - (i) The bottom of the longitudinal chassis frame beam in A zones, shall be at or above BFE;
 - (ii) 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 (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and; Electrical crossover connections shall be a minimum of 12 inches above BFE identified on the Flood Insurance Rate Map;
 - (c) The replacement manufactured dwelling is placed and secured to a foundation support system designed by an Oregon professional engineer or architect and approved by the authority having jurisdiction;
 - (d) The replacement manufactured dwelling, its foundation supports, and any accessory buildings, accessory structures, or property improvements (encroachments) do not displace water to the degree that it causes a rise in the water level or diverts water in a manner that causes erosion or damage to other properties;
 - (e) The location of a replacement manufactured dwelling is allowed by the local planning department's ordinances; and
 - (f) Any other requirements deemed necessary by the authority having jurisdiction.

SECTION 8.0. COASTAL HIGH HAZARD AREAS

8.1 INTRODUCTION

The provisions of this section are applicable to all coastal high hazard areas. Coastal areas subject to this ordinance shall include all beaches, active foredunes, and other foredunes subject to ocean flooding, undercutting or wave overtopping.

8.1-1 Coastal High Hazard Area Identification

Coastal high hazard areas, designated as Zones V1-V30, VE and/or V, are located within the areas of special flood hazard established in Section 3.2 or described in Section 8.1. These areas have special flood hazards associated with high velocity waters from ocean waves and tidal surges and, therefore, in addition to meeting all provisions in this ordinance and state building codes, the following provisions shall also apply:

- (1) Residential developments and commercial and industrial buildings on beaches, active foredunes, on other foredunes that are subject to ocean flooding are prohibited. Excepted from this prohibition is residential development in any subdivision which, on October 8, 1991, was inside an acknowledged urban growth boundary, was serviced by roads and water and electrical utilities, and was developed with five or more residential dwellings. Further residential development in such a subdivision shall conform to the standards in Section 9.2-6 (2) through (12) of this ordinance.
- (2) All new construction and substantial improvements in Zones V1-V30 and VE, V (where base flood elevation data is available), and coastal A zones shall be elevated on pilings and columns such that:
 - (i) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated a minimum of one foot above the base flood level; and
 - (ii) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in and given year (100-year mean recurrence interval);
- (3) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of (i) and (ii) of this Section.
- (4) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.
- (5) Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening

intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

- (6) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
- (7) If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.
- (8) Walls intended to break away under flood loads shall have flood openings that meet or exceed the following 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) If a building has more than one area enclosed by breakaway walls, each area shall be equipped with sufficient flood openings.
- (9) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
- (10) Prohibit the use of fill for structural support of buildings.
- (11) All new construction shall be located landward of the reach of mean high tide.
- (12) Prohibit man-made alteration of sand dunes which would increase potential flood damage.
- (13) All manufactured homes to be placed or substantially improved within Zones V1-V30, V, VE or coastal A zones on the community's FIRM on sites meet the standards of paragraphs 8.1-1(1) through (11) of this section.

- (14) Recreational vehicles placed on sites within Zones V1-30, V, VE, or coastal A zones on the community's FIRM 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 Section 4.1-1(Permitting requirements) and paragraphs 8.1-1(1) through (11) of this section.
- (15) For construction of new essential and new special occupancy structures refer to ORS 455.446 and 447 which states that new essential and new special occupancy structures may not be constructed in the Tsunami Inundation Zone. The Tsunami Inundation Zone would include V, A, and potentially other flood zones. If an exception is granted then the Coastal High Hazard Area construction standards in the model ordinance shall apply to the building of these new structures in the Tsunami Inundation Zone.
- (16) For coastal areas extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources where the county has not identified coastal high hazard areas, the coastal area shall be treated as a V zone or a study shall be prepared by an Oregon Registered Professional Engineer and approved by the county and FEMA to define the coastal high hazard area for a section of coastline. Primary frontal dunes will not be considered as effective barriers to base flood storm surges and associated wave action where the cross-sectional area of the primary frontal dune, as measured perpendicular to the shoreline and above the 100-year stillwater flood elevation and seaward of the dune crest, is equal to, or less than, 540 square feet.

8.1-2 Dune Modification

Foredune grading or sand removal from foredunes is not permitted.

SECTION 9.0. PROVISIONS FOR FLOOD HAZARD REDUCTION

9.1 GENERAL STANDARDS

Unless otherwise noted the standards set forth in this section are applicable to all areas of special flood hazard.

9.1-1 Review of Building Permits

Where elevation data is not available, either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 4.3-2), applications for building permits shall be reviewed by a licensed civil engineer at the applicant's

expense 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 the lowest floor at least two (2) feet above grade in these zones may result in higher insurance rates.

9.1-2 Development Standards

- (1) No development shall be allowed that will:
 - (i) adversely restrict, alter, or increase the flow of floodwaters in the floodway;
 - (ii) adversely affect the efficiency or capacity of the floodway or the integrity or stability of flood protection facilities; or
 - (iii) increase water surface elevation within any area of special flood hazard or the location of the floodway during the base level flood beyond minimum FEMA standards.
- (2) All structures constructed in areas of shallow flooding shall have adequate drainage paths (ditches, culverts, storm drains, etc.) around them to guide floodwaters away from the structure. Structures constructed on slopes shall have drainage paths around them to guide floodwater safely down the slope in a natural flow pattern. Drainage paths used to comply with this section shall not direct floodwaters in a manner so as to cause an adverse effect on adjacent structures or property.
- (3) No dwelling shall be constructed in an area of special flood hazard if the lot or parcel contains sufficient, suitable, existing, buildable land area so as to permit construction at least one foot above the base flood elevation or outside the area of special flood hazard.

9.1-3 Anchoring

- (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).

9.1-4 Construction Materials and Methods

- (1) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (2) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- (3) Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so

as to prevent water from entering or accumulating within the components during conditions of flooding.

9.1-5 Utilities

- (1) All new and replacement public water supply systems shall be floodproofed to one foot above base flood elevation to minimize or eliminate infiltration of flood waters into the system.
- (2) New and replacement public sanitary sewage systems shall be designed to flood proof to one foot above base flood elevation to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
- (3) All new and replacement private water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- (4) On-site waste water disposal systems shall be permitted only if located and designed to avoid impairment and to eliminate contamination during flooding consistent with the Oregon Department of Environmental Quality.
- (5) Electrical, telephone and television lines, 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. Poles and towers shall be constructed and placed to minimize risk of flood damage.
- (6) Construction of utilities shall be done in a way which minimizes the impact on the flood plain and drainage hazard area. The site shall be restored, as far as practicable, to its original state.
- (7) Drainage systems shall be designed and constructed according to the adopted master drainage plan for the area, if one has been completed.

9.1-6 Subdivision and Partitions

- (1) All subdivision and partitions shall not be allowed within any area of special flood hazard with the following exceptions:
 - (i) partitions or subdivisions that propose lots or parcels with existing structures outside of areas of special flood hazard either through elevation above the base flood level or by location outside the area of special flood hazard;
 - (ii) partitions or subdivisions that propose lots or parcels that are partially within areas of special flood hazard but have designated development sites which are located entirely outside an area of special flood hazard.
- (2) All subdivision and partition proposals shall be consistent with the need to minimize flood damage.
- (3) All subdivision and partition proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (4) All subdivision and partition proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (5) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision or partition

proposals and other proposed developments which contain at least fifty (50) lots or five (5) acres, (whichever is less).

- (6) All proposed nonresidential use subdivision and partition lots shall have a setback from the ocean, lake, bay, riverfront or other body of water, to create a safety buffer consisting of a natural vegetative or contour strip. This buffer will be designated by the Flood Hazard Administrator according to the flood related erosion hazard and erosion rate, in conjunction with the anticipated "useful life" of structures, and depending upon the geologic, hydrologic, topographic and climatic characteristics of the land. The buffer may be used for suitable open space purposes, such as agricultural, forestry, outdoor recreation and wildlife habitat areas, and for other activities using temporary and portable structures only.

9.1-7 Accessory Structures

Accessory Structures such as sheds, detached garages, etc., shall be exempt from elevation and floodproofing standards providing the following conditions are met:

- (1) Accessory structures can not be more than 10% of the Curry County Tax Assessor Real Market Value (RMV) of the main structure;
- (2) Accessory structures shall not be used for human habitation;
- (3) Accessory structures shall be designed to have low potential for flood damage;
- (4) Accessory structures shall be constructed and placed on a building site so as to offer minimum resistance to the flow of flood waters;
- (5) Accessory structures shall be firmly anchored to prevent flotation which may result in damage to other structures and must have flood openings;
- (6) Service facilities such as electrical, communication and heating equipment included within an accessory structure shall be elevated or floodproofed. Flood resistant materials must be used below the BFE;
- (7) Use of a detached garage shall be limited to parking or limited storage (i.e., no workshops, recreation rooms, etc.);
- (8) A garage must be built using unfinished and flood damage resistant materials below the BFE;
- (9) A garage must be adequately anchored to prevent flotation, collapse or lateral movement, and meet the requirement of section 9.2-1 (2) and (5);
- (10) Any mechanical and utility equipment in a garage must be elevated to or above the BFE or floodproofed;
- (11) A garage must not violate the floodway encroachment standard;
- and
- (12) All other requirements for the construction of structures in an area of special hazard or encroachment in a floodway shall be applicable to the construction of accessory structures, including the approval of a development permit.

9.1-7 AH and AO Zone Drainage

Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

9.2 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 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD or Section 4.3-2, USE OF OTHER BASE FLOOD DATA, the following provisions are required:

9.2-1 Residential Construction

- (1) Fully enclosed areas below the lowest floor are prohibited or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to a minimum of one (1) foot above base flood elevation. Anchoring is required so as to prevent flotation, collapse or lateral movement of new construction or substantial improvement of any residential structure. Designs for meeting this requirement must be either 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 the flooding shall be provided;
 - (ii) the bottom of all openings shall be no higher than one foot above grade; and
 - (iii) openings may be equipped with screens, louvers, or other coverings or devices provided they permit the automatic entry and exit of flood waters.
 - (iv) New construction and substantial improvements of residential structures within AO zones shall have the lowest floor, including basement, elevated above the highest adjacent grade of the building site, to or above the depth number specified on the FIRM and at least two (2) feet above grade if no depth number is specified.
- (2) Dwellings shall be placed on pilings when certified by an Oregon registered engineer as being of sufficient strength to resist collapse or movement during a one hundred (100) year flood, or, dwellings shall be placed on approved fill (except in the Coastal High Hazard Area) providing the building site, which includes the ground under the structure plus a twenty-five (25) foot setback around all sides of the structure, is above the base flood elevation, or, dwellings shall be placed on foundations which shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
- (3) Fill used to elevate dwellings above the Base Flood Elevation shall be designed to prevent erosion and scour from flood waters in accordance with the standards

set forth in FEMA Document #102 Flood proofing Non-Residential Structures dated May 1986.

- (4) All new construction and improvements to existing structures shall be done with materials and utility equipment resistant to flood damage, using construction methods and practices that minimize such damage.
- (5) All new construction and improvements to existing structures shall be anchored to resist flotation, collapse or lateral movement.

9.2-2 Nonresidential Construction

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood elevation; except in an AO zone the lowest floor, including basement, shall be elevated above the highest adjacent grade of the building site, to or above the depth number on the FIRM and at least two (2) feet if no depth number is specified; or, together with attendant utility and sanitary facilities, shall:

- (1) be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water in accordance with the State Building Code;
- (2) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
- (3) be certified by a registered professional engineer or architect that the design and methods for 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 certification shall be provided to the Flood Hazard Administrator as set forth in Section 4.3-3 (2).
- (4) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in 9.2-1 (2) and (5)
- (5) The Flood Hazard Administrator shall notify applicants who are floodproofing nonresidential buildings 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 level will be rated as one (1) foot below that level).
- (6) 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.

- (7) 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.

9.2-3 Manufactured Dwellings

- (1) Anchoring must resist flotation, collapse or lateral movement, by providing over-the-top and frame ties to ground anchors in accordance with the following:
 - (i) require that over-the-top ties be provided at each of the four corners of the manufactured dwelling, with two (2) additional ties per side at intermediate locations. Manufactured dwellings less than fifty (50) feet long require only one additional tie per side;
 - (ii) require that frame ties be provided at each corner of the dwelling with five (5) additional ties per side at intermediate points. Manufactured dwellings less than fifty (50) feet long require only four (4) additional ties per side;
 - (iii) allow a manufactured dwelling to utilize only frame ties if:
 - (a) the dwelling was constructed in compliance with the Oregon Mobile Home Code in effect between 1972 and 1976 and bears a label to that effect;
 - (b) the dwelling was constructed in compliance with the "National Manufactured Housing Construction and Safety Standards Act";
 - (c) the dwelling is multisectional (double-wide or greater) or;
 - (d) the ground upon which the dwelling is located is at an elevation above the base flood level.
 - (iv) all components of the anchoring system must be capable of carrying a force of four-thousand-eight-hundred (4,800) pounds; and
 - (v) any additions to the manufactured dwelling must be similarly anchored.
- (2) Manufactured -dwellings shall be elevated and anchored according to the following standards:
 - (i) Manufactured dwellings placed outside manufactured home parks/subdivisions or within expanded parks/subdivisions, must be elevated so the lowest floor is a minimum of 18 inches above base flood elevation, and anchored to a permanent foundation to prevent flotation, collapse, and lateral movement;
 - (ii) There are two options for manufactured dwellings placed within an existing park/subdivision: (1) meet the requirements in (i) or (2) elevate the manufactured home's chassis on reinforced concrete piers or other foundation system of equivalent strength, no less than three (3) feet above grade and meet the anchoring requirements in (i).
 - (iii) All manufactured dwellings -that have incurred substantial damage from a 100-year flood or ocean storm must be elevated so that the lowest floor is at least 18 inches above base flood elevation.
 - (iv) Parks or Subdivisions are required to have evacuation plans for residents of existing manufactured home parks or subdivisions. These plans are to be developed by the individual park owners. The complexity of the plan would depend on the severity of potential flood damage and the amount of warning

time available. The plans are to be filed with the appropriate county emergency management authority.

- (3) Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with section 5;
- (4) The bottom of the longitudinal chassis frame beam in A zones, shall be at or above BFE;
- (5) 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 (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and;
- (6) Electrical crossover connections shall be a minimum of 12 inches above BFE.

9.2-4 Recreation Vehicles

- (1) Recreation vehicles within a permitted RV Park placed on sites within the 100-year floodplain must:
 - (i) be on site for fewer than 180 consecutive days and be fully licensed and highway ready, or
 - (ii) meet the elevation and anchoring requirements for manufactured homes.
- (2) A recreation vehicle is ready for highway use if it is on wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.
- (3) Recreational Vehicles outside Recreational Vehicle parks in areas of special flood hazard must meet manufactured home requirements in 5.1-1(1), 8.1-1(13), 9.1-3(2), 9.2-3, 9.2-4(1b).

9.2-5 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*:

- (1) 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 Section 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.
- (2) 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.

- (3) 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.
- (4) 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.
- (5) The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.
- (6) 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.
- (7) 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.
- (8) 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.

9.2.7 Small Accessory Structures. Relief from elevation or dry-floodproofing as required in 9.2-1 and 9.2-2 may be granted for small accessory structures that are:

- (1) Less than 200 square feet and do not exceed one story;
- (2) Not temperature controlled;
- (3) Not used for human habitation and are used solely for parking of vehicles or storage of items having low damage potential when submerged;
- (4) Not used to store toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall unless confined in a tank installed in compliance with this ordinance or stored at least one foot above Base Flood Elevation
- (5) Located and constructed to have low damage potential;
- (6) Constructed with materials resistant to flood damage;
- (7) 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 which may result in damage to other structures and must have flood openings

- (8) 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) 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.
- (9) 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.
- (10) Constructed and placed on a building site so as to offer minimum resistance to the flow of flood waters
- (11) Service facilities such as electrical, communication and heating equipment included within an accessory structure shall be elevated or floodproofed. Flood resistant materials must be used below the BFE.
- (12) A garage must be built using unfinished and flood damage resistant materials below the BFE;
- (13) A garage must be adequately anchored to prevent flotation, collapse or lateral movement, and meet the requirement of section 9.2-1 (2) and (5); and
- (14) Any mechanical and utility equipment in a garage must be elevated to or above the BFE or floodproofed;
- (15) A garage must not violate the floodway encroachment standard;
- (16) All other requirements for the construction of structures in an area of special hazard or encroachment in a floodway shall be applicable to the construction of accessory structures, including the approval of a development permit.

9.2-7 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 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.