



# NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE

File No.:

Received:

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption.** (See [OAR 660-018-0040](#)). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use [Form 4](#) for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use [Form 5](#) for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use [Form 6](#) with submittal of an adopted periodic review task.

Jurisdiction: Clatsop County

Local file no.: 18-03

Date of adoption: 05/09/2018

Date sent: 5/17/2018

Was Notice of a Proposed Change (Form 1) submitted to DLCD?

Yes: Date (use the date of last revision if a revised Form 1 was submitted): 04/09/2018

No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes  No

If yes, describe how the adoption differs from the proposal:

The adopted changes are the same as those last submitted on April 9, 2018

Local contact (name and title): Gail Henrikson, Community Development Director

Phone: 503-325-8611

E-mail: ghenrikson@co.clatsop.or.us

Street address: 800 Exchange Street, Suite 100

City: Astoria

Zip: 97103-

## PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

### For a change to comprehensive plan text:

Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

N/A

### For a change to a comprehensive plan map:

Identify the former and new map designations and the area affected:

- Change from \_\_\_\_\_ to \_\_\_\_\_ acres. A goal exception was required for this change.
- Change from \_\_\_\_\_ to \_\_\_\_\_ acres. A goal exception was required for this change.
- Change from \_\_\_\_\_ to \_\_\_\_\_ acres. A goal exception was required for this change.
- Change from \_\_\_\_\_ to \_\_\_\_\_ acres. A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address):

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

**If the comprehensive plan map change is a UGB amendment** including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

**If the comprehensive plan map change is an urban reserve amendment** including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

**For a change to the text of an ordinance or code:**

Identify the sections of the ordinance or code that were added or amended by title and number:

Sec. 4.000 Flood Hazard Overlay District

**For a change to a zoning map:**

Identify the former and new base zone designations and the area affected:

Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation:	Acres added:	Acres removed:
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Location of affected property (T, R, Sec., TL and address):

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List affected state or federal agencies, local governments and special districts: FEMA

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

Supplemental materials include: 1) Correspondence between the County and FEMA; 2) Public Comments; 3) Original Planning Commission staff report; 4) Minutes of the March 20, 2018 Planning Commission meeting.

The purpose of the amendments is to address mandatory revisions to the County's floodplain development ordinance. These revisions are required in order to ensure the County's continued eligibility to participate in the National Flood Insurance Program.

## NOTICE OF ADOPTED CHANGE – SUBMITTAL INSTRUCTIONS

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1. A Notice of Adopted Change must be received by DLCD no later than 20 days after the ordinance(s) implementing the change has been signed by the public official designated by the jurisdiction to sign the approved ordinance(s) as provided in [ORS 197.615](#) and [OAR 660-018-0040](#).

2. A Notice of Adopted Change must be submitted by a local government (city, county, or metropolitan service district). DLCD will not accept a Notice of Adopted Change submitted by an individual or private firm or organization.

3. **Hard-copy submittal:** When submitting a Notice of Adopted Change on paper, via the US Postal Service or hand-delivery, print a completed copy of this Form 2 on light green paper if available. Submit **one copy** of the proposed change, including this form and other required materials to:

Attention: Plan Amendment Specialist  
Dept. of Land Conservation and Development  
635 Capitol Street NE, Suite 150  
Salem, OR 97301-2540

This form is available here:

<http://www.oregon.gov/LCD/forms.shtml>

4. **Electronic submittals** of up to 20MB may be sent via e-mail. Address e-mails to [plan.amendments@state.or.us](mailto:plan.amendments@state.or.us) with the subject line "Notice of Adopted Amendment."

Submittals may also be uploaded to DLCD's FTP site at [http://www.oregon.gov/LCD/Pages/papa\\_submittal.aspx](http://www.oregon.gov/LCD/Pages/papa_submittal.aspx).

E-mails with attachments that exceed 20MB will not be received, and therefore FTP must be used for these electronic submittals. **The FTP site must be used for all .zip files** regardless of size. The maximum file size for uploading via FTP is 150MB.

Include this Form 2 as the first pages of a combined file or as a separate file.

5. **File format:** When submitting a Notice of Adopted Change via e-mail or FTP, or on a digital disc, attach all materials in one of the following formats: Adobe .pdf (preferred); Microsoft Office (for example, Word .doc or docx or Excel .xls or xlsx); or ESRI .mxd, .gdb, or .mpk. For other file formats, please contact the plan amendment specialist at 503-934-0017 or [plan.amendments@state.or.us](mailto:plan.amendments@state.or.us).

6. **Content:** An administrative rule lists required content of a submittal of an adopted change ([OAR 660-018-0040\(3\)](#)). By completing this form and including the materials listed in the checklist below, the notice will include the required contents.

Where the amendments or new land use regulations, including supplementary materials, exceed 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

7. Remember to notify persons who participated in the local proceedings and requested notice of the final decision. ([ORS 197.615](#))

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If you have any questions or would like assistance, please contact your DLCD regional representative or the DLCD Salem office at 503-934-0017 or e-mail [plan.amendments@state.or.us](mailto:plan.amendments@state.or.us).

### **Notice checklist. Include all that apply:**

Completed Form 2

A copy of the final decision (including the signed ordinance(s)). This must include city *and* county decisions for UGB and urban reserve adoptions

The findings and the text of the change to the comprehensive plan or land use regulation

If a comprehensive plan map or zoning map is created or altered by the proposed change:

A map showing the area changed and applicable designations, and

Electronic files containing geospatial data showing the area changed, as specified in OAR 660-018-0040(5), if applicable

Any supplemental information that may be useful to inform DLCD or members of the public of the effect of the actual change

**BEFORE THE BOARD OF COMMISSIONERS  
FOR THE COUNTY OF CLATSOP**

In the Matter of:

AN ORDINANCE ADOPTING LEGISLATIVE TEXT ADMENDMENTS TO THE LAND AND WATER DEVELOPMENT AND USE ORDINANCE 80-14 SECTION 4.000 FLOOD HAZARD OVERLAY; ADOPTING REVISED FEMA FLOOD INSURANCE RATE MAP PANELS FOR CLATSOP COUNTY, OREGON, DATED JUNE 20, 2018; AND ADOPTING THE REVISED FLOOD INSURANCE STUDY #41007CV001B AND #41007CV002B, REVISED JUNE 20, 2018, VERSION NUMBER 2.3.2.0, FOR UNINCORPORATED AREAS OF CLATSOP COUNTY, OREGON.

**ORDINANCE NO. 18-03**

**RECORDED**

Doc # \_\_\_\_\_

**MAY 10 2018**

Recording Date: 2018050017

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RECITALS

WHEREAS, the State of Oregon has delegated the responsibility to local governments to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, Clatsop County has the primary responsibility for planning, adoption and enforcement of land use regulations to accomplish proper management of special flood hazard areas; and

WHEREAS, The special flood hazard areas of Clatsop 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; and

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

WHEREAS, in the interest of the health, safety and welfare of the citizens of Clatsop County and pursuant to State and Federal law, the Board of Commissioners hereby determines the necessity of amending the Clatsop County Land and Water Development and Use Ordinance, Section 4.000 Flood Hazard Overlay; and

WHEREAS, in the interest of the health, safety and welfare of the citizens of Clatsop County and pursuant to State and Federal law, the Board of Commissioners hereby determines the necessity of

adopting the revised FEMA Flood Insurance Rate Maps, dated June 20, 2018, and the revised Flood Insurance Study #41007CV001B and #41007CV002B, revised June 20, 2018, Version Number 2.3.2.0, for unincorporated areas of Clatsop County; and

WHEREAS, the flood insurance rate maps, flood insurance study and associated text amendments were considered by the Planning Commission at a public hearing on March 20, 2018, the Commission voted 4-1 to recommend approval; and

WHEREAS, consideration for this ordinance complies with the Post Acknowledgement rules of the Oregon Land Conservation and Development Commission and the Clatsop County Planning Commission has sought review and comment and has conducted the public hearing process pursuant to the requirements of ORS 215.050 and 215.060, and the Board of Commissioners received and considered the Planning Commission's recommendations on this request and held a public hearing on April 25 and May 9, 2018, on this ordinance pursuant to law on; and

WHEREAS, public notice has been provided pursuant to law; now therefore,

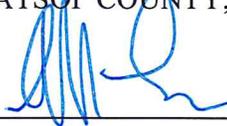
**THE BOARD OF COMMISSIONERS OF CLATSOP COUNTY ORDAIN AS FOLLOWS:**

SECTION 1. The Clatsop County Land and Water Development and Use Ordinance is modified to adopt the National Flood Insurance Rate Maps dated June 20, 2018 and Flood Insurance Study #41007CV001B and #41007CV002B, revised June 20, 2018, Version Number 2.3.2.0, for unincorporated areas of Clatsop County.

SECTION 2. The text of the Clatsop County Land and Water Development and Use Ordinance, Section 4.000 Flood Hazard Overlay, is hereby amended to reflect the changes as recommended by Staff and contained in Exhibit A.

Approved this 9<sup>th</sup> day of May, 2018

THE BOARD OF COUNTY COMMISSIONERS  
FOR CLATSOP COUNTY, OREGON

By  \_\_\_\_\_  
Scott Lee, Chair

**ORDINANCE 18-03,  
WITH  
AMENDMENTS TO  
SECTION 4.000,  
LWDUO**

# EXHIBIT A

## **ARTICLE 4. SPECIAL DISTRICTS**

### **SECTION 4.000. FLOOD HAZARD OVERLAY DISTRICT (/FHO).**

#### **Section 4.010. Purpose**

The purpose of the flood hazard overlay district is to identify those areas of the County subject to the hazards of periodic flooding and establish standards and regulations to reduce flood damage or loss of life in those areas. This district shall apply to all areas of special flood hazards within the unincorporated areas of Clatsop County as identified on Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps. In advancing these principles and the general purposes of the Clatsop County Comprehensive Plan, the specific objectives are: ~~(1) To promote the general health, welfare and safety of the County; (2) To prevent the establishment of certain structures and land uses unsuitable for human habitation because of the danger of flooding, unsanitary conditions or other hazards; (3) To minimize the need for rescue and relief efforts associated with flooding; (4) To help maintain a stable tax base by providing for sound use and development in flood-prone areas and to minimize prolonged business interruptions; (5) To minimize damage to public facilities and utilities located in flood hazard areas; (6) To insure that potential home and business buyers are notified that property is in a flood area.~~

- (1) To promote the general health, welfare and safety of the County;
- (2) To prevent the establishment of certain structures and land uses unsuitable for human habitation because of the danger of flooding, unsanitary conditions or other hazards;
- (3) To minimize the need for rescue and relief efforts associated with flooding;
- (4) To help maintain a stable tax base by providing for sound use and development in flood-prone areas and to minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities located in flood hazard areas;
- (6) To insure that potential home and business buyers are notified that property is in a flood area.

The area of special flood hazard are identified in “The Flood Insurance Study (FIS) #41007CV001B and #41007CV002B, dated June 20, 2018, Version Number 2.3.2.0, for unincorporated areas of Clatsop County” and in “The Flood Insurance Study (FIS) #41007CV001A and #41007CV002A, dated September 17, 2010, for unincorporated areas of Clatsop County”.

#### **Section 4.011. Definitions**

The following words and phrases shall be interpreted so as to give them the meanings they have in common usage and to give this chapter its most reasonable application:

“**ACCESSORY STRUCTURE**” means a structure on the same or adjacent parcel as a principal structure, the use of which is incidental and subordinate to the principal structure. A separate insurable building should not be classified as an accessory or appurtenant structure

“**ALTERATION OF A WATERCOURSE**” includes, but is not limited to, any dam, culvert, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area or capacity, which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

**“AREA OF SHALLOW FLOODING”** means a designated AO or AH zone on the Flood Insurance Rate Map (FIRM) with a one percent or greater chance of flooding to an average depth. ~~The base flood depth range is from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.~~ AO is characterized as sheet flow and AH indicates ponding.

**“AREA OF SPECIAL FLOOD HAZARD”** is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Zone designations on FIRMs include the letters A or V. Also known as the Special Flood Hazard Area (SFHA)

**“BASE FLOOD”** means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood”. Designation on maps always includes the letters A or V.

**“BASE FLOOD ELEVATION (BFE)”** means the water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation (BFE) is depicted on the FIRM to the nearest foot and in the FIS to the nearest 0.1-foot.

**“BASEMENT”** means any area of the building having its floor subgrade (below ground level) on all sides.

**“BELOW-GRADE CRAWLSPACE”** 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.

**“BREAKAWAY WALL”** means a wall that is not a 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.

**“BUILDING”** means a building or structure subject to building codes.

**“BUILDING CODES”** means the combined specialty codes adopted under ORS 446.062, 446.185, 447.020 (2), 455.020 (2), 455.496, 455.610, 455.680, 460.085, 460.360, 479.730 (1) or 480.545, but does not include regulations adopted by the State Fire Marshal pursuant to ORS chapter 476 or ORS 479.015 to 479.200 and 479.210 to 479.220.

**“COASTAL HIGH-HAZARD AREA”** ~~means the area subject to high velocity waters, including but not limited to, storm surge or tsunamis. The map is designated on a FIRM (Flood Insurance Rate Map) as a “V” zone.~~ 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. The area is designated in the FIRM as Zone V1-V30, VE or V.

**“CRITICAL FACILITIES”** means those structures or facilities which produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials; hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood; police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and public and private facilities that are vital to maintaining or restoring normal services to flooded areas before, during and after a flood.

**“DATUM”** is a base measurement point (or set of points) from which all elevations are determined. Historically, that common set of points has been the National Geodetic Vertical Datum of 1929 (NAVD29). The vertical datum currently adopted by the federal government as a basis for measuring heights is the North American Vertical Datum of 1988 (NAVD88).

**“DEVELOPMENT”** means any manmade change to improved or unimproved real property, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard. ~~Development does not include:~~

- ~~(1) — Signs, markers, aids, etc. placed by a public agency to serve the public~~
- ~~(2) — Driveways, parking lots, or other open space use areas where no alteration of topography occurs;~~
- ~~(3) — Minor repairs or improvements to existing structures provided that the alterations do not increase the size or intensity of use, and do not constitute repair of substantial damage, or substantial improvement as defined in this section;~~
- ~~(4) — Customary dredging associated with routine channel maintenance consistent with State or Federal laws and permits;~~
- ~~(5) — Replacement of utility facilities necessary to serve established and permitted uses;~~
- ~~(6) — Accessory residential or noncommercial structures less than 200 square feet in area;~~
- ~~(7) — Storage of equipment and material associated with residential uses.~~

**“DIGITAL FIRM (DFIRM),”** means Digital Flood Insurance Rate Map. It depicts flood risk and zones and flood risk information. The DFIRM presents the flood risk information in a format suitable for electronic mapping applications.

**“ENCROACHMENT”** means the advancement or infringement of uses, fill, excavation, buildings, permanent structures or other development into a floodway which may impede or alter the flow capacity of a floodplain.

**“ELEVATED BUILDING”** means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

**“EXISTING BUILDING OR STRUCTURE”** means a structure for which the “start of construction” commenced before ~~1980~~ July 3, 1978.

**“EXISTING MANUFACTURED HOME PARK OR SUBDIVISION”** means one in which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed is completed before the effective date of Clatsop County’s floodplain management regulations (~~1980~~) July 3, 1978. The “construction of facilities includes, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

**“FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)”** means the agency with the overall responsibility for administering the National Flood Insurance Program.

**“FLOOD” or “FLOODING”** means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

**“FLOOD HAZARD BOUNDARY MAP”** means the official map used by the Federal ~~Insurance Administrator Emergency Management Agency (FEMA)~~ where the boundaries of the areas of special flood hazard have been designated.

**“FLOOD INSURANCE RATE MAP (FIRM)”** means an official map of a community, on which the Federal Insurance administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. ~~the official map on which the Federal Emergency Management Agency (FEMA) has delineated areas of special flood hazards.~~

**“FLOOD INSURANCE STUDY (FIS)”** means the official report provided by the Federal ~~Insurance Administrator Emergency Management Agency (FEMA)~~ that includes flood profiles, the flood boundary-floodway map and the water surface elevation of the base flood.

**“FLOOD PROOFING”** means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**“FLOODPLAIN ADMINISTRATOR”** means the ~~Director of Transportation and Development Services~~ Community Development Director, or an individual or committee that is designated by the Director, to implement and administer the provisions of this ordinance.

**“FLOODWAY (~~Regulatory Floodway~~)”** means the channel of a river or other watercourse and ~~those portions of the floodplain adjoining the channel required to discharge and store the floodwater or flood flows associated with the regulatory flood.~~ the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

**“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”** means a structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register, ~~or~~;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or to a district preliminarily determined by the Secretary to qualify as a registered historic district, ~~or~~;
- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior; or;
- (4) Individually listed on a local inventory of historic places ~~and determined as eligible by~~ in communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the Secretary of the Interior, or
  - b. Directly by the Secretary of the Interior in states without approved programs.

“**LATERAL ADDITION**” means an addition that requires a foundation to be built outside of the foundation footprint of the existing building.

“**LETTER OF MAP CHANGE (LOMC)**” means an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. LOMCs are issued in the following categories:

**Letter of Map Amendment (LOMA)**

A revision based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a special flood hazard area.

**Letter of Map Revision (LOMR)**

A revision based on technical data showing that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination that a structure of parcel has been elevated by fill above the base flood elevation and is excluded from the special flood hazard area.

**Letter of Map Revision Based on Fill – (LOMR-F)**

A modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM), based on the placement of fill outside the existing regulatory floodway.

**Conditional Letter of Map Revision (CLOMR)**

A formal review and comment by FEMA as to whether a proposed project complies with the minimum National Flood Insurance Program floodplain management criteria. A

CLOMR does NOT amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

**“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 this chapter.

**“MANUFACTURED DWELLING”** (aka manufactured housing) 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 connected to the required utilities. The term “manufactured dwelling” 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 SEA LEVEL (MSL)”** means the North American Vertical Datum (NGVD) of 1988 or other datum, to which base flood elevations shown on the flood insurance rate map are referenced.

**“NATURAL ELEVATION”** means the elevation of natural grade, or the grade in existence before ~~September 17, 2010~~ July 3, 1978.

**“NEW CONSTRUCTION”** means a structure for which the “start of construction” commenced after ~~1980~~ July 3, 1978 and includes subsequent substantial improvements to the structure.

**“NEW MANUFACTURED HOME PARK OR SUBDIVISION”** means a manufactured home park or subdivision for which the construction of facilities for serving 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 ~~the adoption of this chapter~~ floodplain management regulations adopted by Clatsop County.

**“RECREATION 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 towed by a light-duty truck, and (4) ~~primarily designed~~ designed primarily not for use as temporary living quarters for recreational, camping, travel or seasonal use.

**“SPECIAL FLOOD HAZARD AREA (SFHA)”** means areas subject to inundation from the waters of a one-hundred-year flood.

**“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 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 a 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 walkways; nor does it include excavation for a basement, footings, piers or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**“STRUCTURE”** means a walled and roofed building, a manufactured dwelling, a modular or temporary building, or a gas or liquid storage tank that is principally above ground.

**“SUBSTANTIAL DAMAGE”** means the damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50-percent of the market value of the structure before the damage occurred.

**“SUBSTANTIAL IMPROVEMENT”** means any repair, 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 “repetitive loss” or “substantial damage,” regardless of the actual repair work performed. The market value of the structure should be:

- (1) the appraised value of the structure prior to the start of the initial repair or improvement, or
- (2) in the case of damage, the value of the structure prior to the damage occurring. This term includes structures which have incurred “substantial damage”, regardless of the actual amount of repair work performed. The term does not include either:
  - (a) A 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
  - (b) Alteration of an Historic Structure, provided that the alteration will not preclude the structure's continued designation as an Historic Structure.

**“VERTICAL ADDITION”** means the addition of a room or rooms on top of an existing building.

**“WATERCOURSE”** means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

“WATER-DEPENDENT” means a use or use and activity which can only be carried out on, in or adjacent to water areas because the use requires access to the waterbody for water-borne transportation, recreation, energy production, or source of water.

“WATER SURFACE ELEVATION” means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

#### **Section 4.015 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 governing body, and;
- 3) Deemed neither to limit nor repeal any other powers granted under state statutes, including state building codes.

#### **Section 4.016 Floodplain Administrator Duties and Responsibilities**

##### 1. Permit Review

- ~~1)~~—The Floodplain Administrator duties shall include, but not be limited to, the following:
  - ~~A) 2)~~—Review all development permit applications to determine whether proposed new development will be located in Areas of Special Flood Hazard and to determine that all new development complies with the requirements of this ordinance ;
  - ~~B) 3)~~—Review applications for modifications of any existing development in Areas of Special Flood Hazard for compliance with the requirements of this ordinance;
  - ~~4)~~—Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
  - ~~C) 5)~~—Review proposed development to assure that necessary permits have been received from governmental agencies from which approval is required by federal, state and local law, including but not limited to section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334; the Endangered Species Act of 1973, 16 U.S.C. 1531-1544; and State of Oregon Removal Fill permits those Federal, State or local governmental agencies from which prior approval is required. Copies of such permits shall be provided and maintained on file.
  - ~~D) 6)~~—Review all development permit applications for property in a Special Flood Hazard Area to determine if the proposed development is located in the floodplain or floodway, and if so located in a floodway, ensure that the encroachment standards of Section 4.026 are met.
  - ~~E)~~—Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;
  - ~~F)~~—Coordinate with the Building Official to assure that applications for buildings permits comply with the requirements of this ordinance.

##### 2. Use of Base Flood Data

- ~~A)~~—Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
- ~~B) 7)~~—When Base Flood Elevation data or floodway data are not available, then 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 the provisions of this ordinance.

- ~~C) 8)~~—When Base Flood Elevations or other current engineering data are not available, the Floodplain Administrator shall take into account the flood hazards, to the extent they are known, to determine whether a proposed building site will be reasonably safe from flooding.

### 3. Interpretation of FIRM Boundaries

- ~~A) 9)~~—~~Where interpretation is~~ Make interpretations, as needed, of the exact location of boundaries of the Areas of Special Flood Hazard, including regulatory floodways (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) ~~the Floodplain Administrator shall make the interpretation~~. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.021.
- ~~10)~~—~~Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;~~
- ~~11)~~—~~Coordinate with the Building Official to assure that applications for building permits comply with the requirements of this ordinance.~~

### 4. Obtain and Maintain Information

- ~~A) 12)~~—Obtain, verify and record the actual elevation in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, of the lowest floor level, including basements and below-grade crawlspaces, of all new construction or substantially improved buildings and structures.
- ~~B) 13)~~—Obtain, verify and record the actual elevation, in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, to which any new or substantially improved buildings or structures have been flood-proofed. When flood-proofing is utilized for a structure, the Floodplain Administrator shall obtain certification of design criteria from a registered professional engineer or architect;
- ~~C) 14)~~—Ensure that all records pertaining to the provisions of this ordinance are permanently maintained in the office of ~~Transportation and Development Services~~ Community Development and shall be open for public inspection.
- ~~D) 15)~~—Make inspections in Areas of Special Flood Hazard to determine whether development has been undertaken without issuance of a floodplain development permit, ensure that development is undertaken in accordance with this ordinance, and verify that existing buildings and structures maintain compliance with this ordinance;
- ~~E) 16)~~—Coordinate with the Building Official to inspect areas where buildings and structures in flood hazard areas have been damaged, regardless of the cause of damage, and notify owners that permits may be required prior to repair, rehabilitation, demolition, relocation, or reconstruction of the building or structure;
- ~~F) 17)~~—Make Substantial Damage or Substantial Damage determinations based on criteria set forth in Section 4.023 of this ordinance.

### Section 4.017 Alteration of Water Courses

- 1) The bankfull flood carrying capacity of the altered or relocated portion of the water course shall not be diminished. Prior to issuance of a floodplain development permit, the

applicant must submit a description of the extent to which any water course will be altered or relocated as a result of the proposed development and submit certification by a registered professional engineer that the bankfull flood carrying capacity of the water course will not be diminished.

- 2) The applicant shall notify adjacent communities, the U.S. Army Corps of Engineers, Oregon Department of State Lands, and Oregon Department of Land Conservation and Development prior to any alteration or relocation of a water source. Evidence of notification must be submitted to the floodplain administrator and to the Federal Emergency Management Agency.
- 3) The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished.
- 4) The applicant shall meet the requirements to submit technical data in Section 4.032 when the alteration of a watercourse, including the placement of culverts, results in the relocation or elimination of the special flood hazard area.

#### **Section 4.018 Non-Conversion of Enclosed areas below the Lowest Floor**

To ensure that the areas below the BFE continue to be used solely for parking vehicles, limited storage, or access to the building and not be finished for use as human habitation without first becoming fully compliant with the floodplain management ordinance in effect at the time of conversion, the Floodplain Administrator shall:

- 1) Determine which applicants for new construction and/or substantial improvements have fully enclosed areas below the lowest floor that are 5 feet or higher;
- 2) Enter into a "NON-CONVERSION AGREEMENT FOR CONSTRUCTION WITHIN FLOOD HAZARD AREAS" or equivalent with Clatsop County. The agreement shall be recorded with the Clatsop County Clerk as a deed restriction. The non-conversion agreement shall be in a form acceptable to the Floodplain Administrator and County Counsel; and
- 3) Have the authority to inspect any area of a structure below the base flood elevation to ensure compliance upon prior notice of at least 72 hours.

#### **Section 4.019 Floodplain Inspection and Enforcement**

- 1) The Administrator or designee shall make periodic inspections of floodplain areas to establish that development activities within the floodplain are being performed in compliance with an approved floodplain development permit. The Administrator or designee shall prepare a field report listing non-complying conditions to be delivered to the Code Compliance Officer within 5 business days.
- 2) Upon receipt of the report the Code Compliance Officer shall take action in accordance with Clatsop County Code of Regulations to effect the abatement of such violation.
  - (A) ~~The Code Compliance Officer shall take action in accordance with Clatsop County Code of Regulations to effect the abatement of such violation; or~~
  - (B) ~~The property owner shall apply for a variance in accordance with the provisions of Section 4.024 (Variance Procedures) herein.~~
- 3) If the violation is not resolved through the code enforcement ~~or variance procedure~~ the Floodplain Administrator shall request to the Administrator of Federal Insurance

Administration a declaration for denial of insurance, stating that the property is in violation of a cited statute or local law, regulation or ordinance, pursuant to section 1316 of the National Flood Insurance Act of 1968 as amended.

#### **Section 4.020 Warning and Disclaimer of Liability**

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific 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 a liability on the part of Clatsop County or by an officer, or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made there under.

#### **Section 4.021 Appeals**

An appeal of a Floodplain Administrator decision pursuant to this chapter may be appealed in accordance with Section 2.230. Appeals of a decision by the ~~Code Enforcement~~ Hearings Officer pursuant to this chapter may be appealed in accordance with Clatsop County Code of Regulations.

#### **Section 4.022 Permit Procedures**

A Floodplain Development Permit shall be obtained before construction or development begins within any area of special flood hazard. Application for a Floodplain Development Permit shall be made to the Floodplain Administrator on forms furnished by the Administrator or the Administrator's designee prior to starting development activities. Specifically, the following information is required:

- 1) Application Stage:
  - (A) Plans in duplicate drawn to scale with elevations of the project area and the nature, location, dimensions of existing and proposed structures, earthen fill placement, storage of materials or equipment and drainage facilities.
  - (B) Delineation of flood hazard areas, floodway boundaries including base flood elevations, or flood depth in AO zones, where available;
  - (C) For all proposed structures, elevation in relation to the highest adjacent grade and the base flood elevation, or flood depth in AO zones, of the:
    - 1) lowest enclosed area, including crawlspace or basement floor;
    - 2) bottom of the lowest horizontal structural member in coastal high hazard areas (V Zones);
    - 3) top of the proposed garage slab, if any, and;
    - 4) next highest floor
  - (D) Locations and sizes of all flood openings;
  - (E) Elevation to which any non-residential structure will be flood-proofed;
  - (F) Certification from a registered professional engineer or architect that any proposed non-residential flood-proofed structure will meet the flood-proofing criteria of the NFIP and building codes;

- (G) Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development;
- 2) Construction Stage:
  - (A) For all new construction and substantial improvements, the permit holder shall provide to the Floodplain Administrator an as-built certification of the floor elevation or flood-proofing level immediately after the lowest floor or flood-proofing is placed and prior to further vertical construction .
  - (B) Any deficiencies identified by the Floodplain Administrator shall be corrected by the permit holder immediately and prior to work proceeding. Failure to submit certification or failure to make the corrections shall be cause for the Floodplain Administrator to issue a stop-work order for the project.
- 3) Certificate of Occupancy
  - (A) In addition to the requirements of the building codes pertaining to certificate of occupancy, prior to the final inspection the owner or authorized agent shall submit the following documentation that has been prepared and sealed by a registered surveyor or engineer;
    - 1) For elevated buildings and structures in non-coastal Areas of Special Flood Hazard (A zones), the elevation of the lowest floor, including basement or where no base flood elevation is available the height above highest adjacent grade of the lowest floor;
    - 2) For buildings and structures in coastal Areas of Special Flood Hazard (V zones), the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor.
  - (B) Failure to submit certification or failure to correct violations shall be cause for the Building Official to withhold a certificate of occupancy or delay a final building inspection until such deficiencies are corrected.
- 4) Expiration of Floodplain Development Permit
  - (A) Floodplain development permit shall expire 180 days after issuance unless the permitted activity has been substantially begun and thereafter is pursued to completion.
  - (B) Commencement of work includes start of construction, when the permitted work requires a building permit.

**Section 4.023 Substantial Damage and Substantial Improvement Determination**

For applications for permits to improve buildings and structures, including additions, repairs, renovations, and alterations, the Floodplain Administrator, shall:

- 1) Estimate the market value, or require the applicant to obtain a professional appraisal of the market value, of the building or structure before the proposed work is performed; when repair of damage is proposed, the market value of the building or structure shall be the market value before the damage occurred;
- 2) Compare the cost of improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
  - (A) Except as indicated in subsections (D) and (E) below, all costs to repair substantial damage, including emergency repairs, must be included;

- (B) The costs associated with the correction of pre-existing violations of state or local health, sanitary, or safety code specifications that were identified by the building official, the director of environmental health, or any other local code enforcement official prior to the improvement or repair and that are the minimum necessary to ensure safe living conditions shall not be included;
  - (C) Except as indicated in subsections (d) and (e) below, the costs of complying with any county, state, or federal regulation other than those described in subsection (b) must be included;
  - (D) Costs associated with the following items are not included:
    - 1) The preparation and approval of all required plans, calculations, certifications, and specifications;
    - 2) The performance of surveys or other geotechnical or engineering studies and resulting reports;
    - 3) Permit and review fees;
    - 4) The construction, demolition, repair, or modification of outdoor improvements, including landscaping, fences, swimming pools, detached garages and sheds, etc.;
  - (E) Proposed alterations of a designated historic building or structure is not to be considered substantial improvement unless the alteration causes a loss of said designation.
- 3) The Floodplain Administrator shall make the final determination of whether the proposed improvement and/or repair constitutes a substantial improvement or substantial damage;
  - 4) The Floodplain Administrator shall notify the applicant of the results of the determination by letter,
  - 5) Applicant has the right to appeal the determination pursuant to Section 4.021.

**Section 4.024 Variances**

A request for a variance from a standard contained in this chapter shall be reviewed in accordance with the procedures of Section 5.1330 - 5.134. The burden to show that the variance is warranted and meets the criteria set out herein is on the applicant.

When considering a variance application, the deciding body shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

- 1) The danger that materials may be swept onto other lands to the injury of others;
- 2) The danger to life and property due to flooding or erosion damage;
- 3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- 4) The importance of the services provided by the proposed facility to the community;
- 5) The necessity to the facility of a waterfront location, where applicable;
- 6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- 7) The compatibility of the proposed use with existing and anticipated development;
- 8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

- 9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- 10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
- 11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Upon consideration of the factors identified above and the purposes of this ordinance, the deciding body may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

The floodplain administrator shall maintain a permanent record of all variances and report any variances to the Federal Emergency Management Agency upon request.

The following standards are applicable to a variance request, not those of Section 5.132:

- 1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items ~~A-K-1-11~~ in Section ~~4.204~~ 4.024 have been fully considered. As the lot size increases the technical justification required for issuing the variance increases
- ~~2) A)~~—Variances shall only be issued upon:
  - ~~A) B)~~—A showing of good and sufficient cause,
  - ~~B) C)~~—A determination that failure to grant the variance would result in exceptional hardship to the applicant, and
  - ~~C)~~—A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
- ~~2)~~—~~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.~~
- 3) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- 4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- 5) Variances may be issued for a water dependent use provided that
  - (A) The criteria of paragraphs (1) through (4) of this section are met, and;
  - (B) 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.
- 6) Variances may be issued for the repair, ~~reconstruction,~~ restoration or rehabilitation of structures listed on the National Register of Historic Places or the Statewide Inventory of Historic Properties, without regard to the procedures set forth in this section.
- 7) 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~~ 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.

- 8) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria and otherwise complies with building codes.
- 9) When a variance is granted, the county shall give written notice to the property owner within five days after the decision is final. The notice shall state that:
  - (A) The structure or manufactured home will be allowed to be built or placed with the lowest floor elevation at or below the base flood elevation, and
  - (B) That the issuance of the variance to construct a structure below the base flood level will result in increased premium rates for flood insurance as high as twenty-five dollars for every one hundred dollars of insurance coverage, and
  - (C) Such construction below the base flood level increases the risk to life and property.
  - (D) The above notification shall be maintained with a record of all variance actions.
- 10) Variance Time Limit. Authorization of a variance shall conform to the requirements of Section 5.134.

#### **Section 4.025 Development Standards**

##### **1. General Standards**

In all areas of special flood hazards as presented on the FIRM, the following standards shall apply for all new construction and substantial improvements:

##### **A. Site Improvements and Subdivisions:**

- 1) All proposed new development and subdivisions shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding.
- ~~2) A)~~ Residential building lots shall have adequate buildable area outside of floodways.
- ~~3) B)~~ All new development proposals and subdivision preliminary plats/development plans shall include the mapped flood hazard zones from the effective FIRM.
- ~~4) C)~~ Base flood elevation data shall be generated and/or provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than fifty lots or five acres, whichever is less.
- 5) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated and/or provided for subdivision proposals and all other proposed developments that contain at least 50 lots or five acres, whichever is less.
- ~~6) D)~~ All new development in a subdivision shall have public utilities and facilities such as sewer, gas, electric and water systems located and constructed to minimize flood damage.
- ~~E)~~ On-site waste disposal systems shall be located and constructed to avoid functional impairment, or contamination from them, during flooding.

7) F) All subdivisions shall have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.

B) G) Coastal High Hazard Area:

In coastal high hazard areas (V Zones), alteration of sand dunes shall be prohibited unless it has been demonstrated by engineering analysis that the alteration will not increase potential flood damage.

C) H) Tsunami Inundation Zone:

New essential and new special occupancy structures shall not be constructed in the Tsunami Inundation Zone. The Tsunami Inundation Zone may include V, A, and potentially other flood zones. If an exception is granted then the Coastal High Hazard Area construction standards in ~~the model~~ this ordinance shall apply to the building of these new structures in the Tsunami Inundation Zone.

D) I) Building Design and Construction:

Buildings and structures, including manufactured dwellings, within the scope of the building codes, including repair of substantial damage and substantial improvement of such existing buildings and structures, shall be designed and constructed in accordance with the flood-resistant construction provisions of these codes, including but not limited to Section ~~R324~~ R322 of the Residential Specialty Code and Section 1612 of the Structural Specialty Code.

E) Construction Materials and Methods:

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

(B) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

(C) Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.

F) Review of Development Permits:

Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.

G) Anchoring:

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

(B) All manufactured dwellings 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.

H) Utilities:

(A) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

(B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and

C) ~~E)~~ 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 regulations.

D) ~~8)~~ Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.

2. Specific Standards

In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-A30, AH and AE) as set forth in this ordinance, the following provisions are required:

A) ~~2)~~ Manufactured Dwellings:

1) ~~A)~~ New and replacement manufactured dwellings are within the scope of the building codes; and,

2) ~~B)~~ All new manufactured dwellings and replacement manufactured dwellings shall be installed using methods and practices which minimize flood damage and shall be securely anchored to an ~~adequately anchored foundation system to resist~~ prevent flotation, collapse and lateral movement during the base flood. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. Additional techniques may be found in FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

3) ~~C)~~ Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with Section 4.025(1)(E), above.

4) ~~D)~~ Electrical crossover connections shall be a minimum of 12 inches above BFE.

3) Construction Materials and Methods:

(A) ~~All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.~~

(B) ~~All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.~~

~~(C) Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.~~

**B) 4) Critical Facilities:**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the ~~area of special flood hazard~~ Special Flood Hazard Area (SFHA).

Construction of new critical facilities shall be permissible within the ~~area of special flood hazard~~ SFHA if no feasible alternative site is available. Critical facilities constructed within the ~~area of special flood hazard~~ SFHA shall have the lowest floor elevated three feet above BFE (or depth number in AO zones) or to the height of the 0.2 percent (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 or persistent organic pollutants as defined by the Oregon Department of Environmental Quality 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.

~~5) Review of Development Permits: Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.~~

**C) 6) Residential Construction:**

- 1) New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to a minimum of one foot above the base flood elevation.
- 2) Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - (A) A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
  - (B) The bottom of all openings shall be no higher than one (1) foot above grade; and
  - (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters flow of floodwaters in both directions.

**D) 7) Non-Residential Construction:**

New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall either have the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

- ~~1) (A)~~ Be flood proofed so that below ~~this~~ the base flood level the structure is water tight with walls substantially impermeable to the passage of water;
- ~~2) (B)~~ Have structural components ~~having the capability~~ capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; ~~and~~
- ~~3) (C)~~ Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with 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 as set forth in Section 4.018(2).
- ~~4)~~ Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below).
- ~~5) (D)~~ If construction will be elevated instead of floodproofed, Fully fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - ~~a) 1)~~ A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
  - ~~b) 2)~~ The bottom of all openings shall be no higher than one (1) foot above grade; and
  - ~~c) 3)~~ Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters flow of floodwaters in both directions.
- ~~8) —~~ Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.
- ~~E) 9)~~ Below-grade crawl spaces-Crawlspace:
  - ~~1) (A)~~ Crawlspace construction shall meet the standards for space below the lowest floor as described for residential construction in Section 4.025(7) 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 2) 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) (B) 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 but also any joists, insulation, or other materials that extend below the BFE. 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) (C) Any ductwork, or other building utility system, within the crawlspace must be elevated above the BFE or sealed from floodwaters. 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) (D) Below-grade crawlspaces (i.e., where the interior grade of the crawlspace is below the building's lowest adjacent exterior grade) must be constructed in accordance with Figure 1 below: 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 be either placed above the BFE or sealed from floodwaters.~~

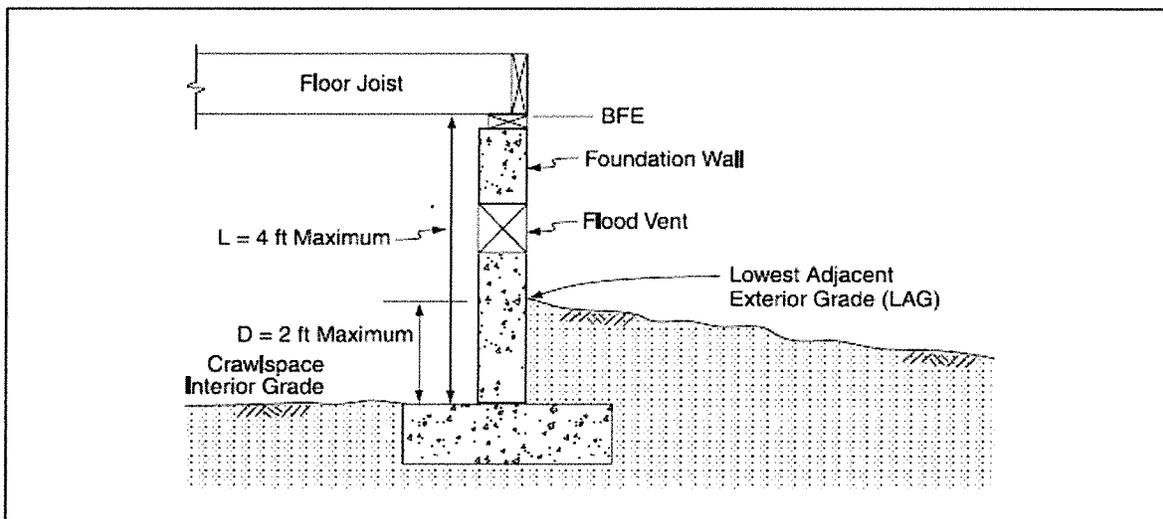


Figure 1: Requirements for below-grade crawlspace construction. (Provided by FEMA)

- ~~5) (E) The crawlspace must be provided with an adequate drainage system that removes floodwaters from the interior of the crawlspace within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage considerations, 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. 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 crawlspace shall not be temperature controlled.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) If the crawlspace provisions listed in 1) through 8) above are used written notice shall be given that the structure will be rated for flood insurance as having its lowest floor below the base flood elevation, and that the cost of flood insurance will be commensurate with that rating.

**F) 10) Fences and Walls:**

New fencing shall be designed to collapse under conditions of the base flood or to allow the passage of water by having flaps or openings in the areas at or below the base flood elevation sufficient to allow flood water and associated debris to pass freely.

**G) 11) On-site Sewage Systems:**

**1) (A)** Soil absorption systems shall be located outside of flood hazard areas. Where suitable soil absorption sites outside of the flood hazard area are not available, the soil absorption site is permitted to be located within the flood hazard area provided it is located to minimize the effects of inundation under conditions of the base flood.

**2) (B)** Mound systems in flood hazard areas shall be prohibited.

**H) 12) Tanks:**

**1) (A)** Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the design flood.

**2) (B)** Above-ground tanks in flood hazard areas shall be:

**3) (C)** Attached to and elevated to or above the base flood elevation (or depth number in AO zones) on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood; or be

**4) (D)** Anchored or otherwise designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including

the effects of buoyancy assuming the tank is empty, during conditions of the design flood.

- 5) (E) Tank inlets, fill openings, outlets and vents shall be:
- a) 1) A minimum of 2 feet above BFE or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tank during conditions of the design flood; and
  - b) 2) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

I) 13) Recreation Vehicle:

~~In all Areas of Special Flood Hazard, Recreational Vehicles that are an allowed use or structure under the zoning ordinance must either In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must:~~

- 1) (A) Be on the site for fewer than 180 consecutive days, and
- 2) (B) Be fully licensed and ready for highway ready use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached structures or additions; or
- 3) (C) Meet the elevation and anchoring requirements for manufactured homes listed in Section 4.025 Be elevated and anchored.

J) 14) Accessory Structures:

- 1) (A) Relief from the elevation or dry flood-proofing standards may be granted for an accessory structure containing no more than 200 square feet and not exceeding one story in height. Such a structure must meet the following standards:
- 2) (B) ~~The accessory structure is not subject to building codes;~~ The accessory structure is not temperature controlled;
- 3) (C) The accessory structure shall be located on property with a dwelling;
- 4) (D) The accessory structure shall not be used for human habitation and shall be used solely for parking of vehicles or storage of items having low damage potential when submerged.
- 5) (E) Toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall not be stored below BFE, or where no BFE is available lower than three feet above grade, unless confined in a tank installed in compliance with this ordinance;
- 6) (F) The accessory structure shall be constructed of flood resistant materials.
- 7) (G) The accessory structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters;
- 8) (H) The accessory structure shall be firmly anchored to prevent flotation;
- 9) (I) All service facilities, such as electrical and heating equipment associated with the accessory structure, shall be elevated or flood proofed to or above the flood protection elevation, and;
- 10) (J) It shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for complying with this requirement must be certified by a licensed professional engineer or architect, or

- a) ~~1)~~ Provide a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
- b) ~~2)~~ The bottom of all openings shall be no higher than one foot above the higher of the exterior or interior grade or floor immediately below the opening;
- c) ~~3)~~ 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.

**K) ~~15)~~ Temporary Structures, Storage, and Bridges:**

- 1) ~~(A)~~** A floodplain development permit is required for construction or placement of temporary structures, temporary storage associated with non-residential uses, and temporary bridges located in areas of special flood hazard:
- 2) ~~(B)~~** Temporary structures, not including bridges, shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the structure. Temporary structures shall be anchored to prevent flotation, collapse, or lateral movement.
- 3) ~~16)~~** Temporary storage of materials shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the storage. Stored material shall be anchored or contained to prevent flotation or release outside the assigned storage area. Hazardous materials or materials deemed to be persistent organic pollutants by the Oregon Department of Environmental Quality shall not be stored in the floodway.
- 4) ~~17)~~** Temporary encroachments in the floodway for the purposes of capital improvement projects (including bridges) require a floodplain development permit. No CLOMR/LOMR is required.

**Section 4.026 Development in Floodways**

- 1) Except as provided in paragraphs (3) and (4), encroachments, including fill, new construction, substantial improvements, and other development are prohibited unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachments shall not result in any increase in base flood or floodway elevations when compared to pre-project conditions~~flood levels during the occurrence of the base flood discharge.~~
- 2) Any fill allowed to be placed in the floodway shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour.
- 3) Applicants shall obtain a Conditional Letter of Map Revision (CLOMR) before an encroachment in the floodway is permitted that will cause any increase in the base flood elevation. Applicants must obtain a Letter of Map Revision (LOMR) no later than six months after project completion.
- 4) ~~Projects for stream habitat restoration may be permitted in the floodway provided:~~

- (A) ~~The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP 2007-1023); and,~~
- (B) ~~A qualified professional (a Registered Professional Engineer; or staff of NRCS; the county; or fisheries, natural resources, or water resources agencies) has provided a feasibility analysis and certification that the project was designed to keep any rise in 100-year flood levels as close to zero as practically possible given the goals of the project; and,~~
- (C) ~~No structures would be impacted by a potential rise in flood elevation; and,~~
- (D) ~~An agreement to monitor the project, correct problems, and ensure that flood carrying capacity remains unchanged is included as part of the local approval.~~
- 4)5)** Construction of new fencing is prohibited, unless the fencing is designed to collapse or break-away, and is anchored at one end and cabled together so as to not create debris. As an alternative to a break-away design, a new fence may be designed to allow the passage of water by having a flap or opening in the areas at or below the base flood elevation sufficient to allow floodwaters to pass freely.

**Section 4.027 Zones with Base Flood Elevation but no Floodway**

- 1) In areas within Zones A1-30 and AE on the community's FIRM with a base flood elevation, or where a base flood elevation is developed according to Section 4.025(2) but where no regulatory floodway has been designated, new construction, substantial improvements, or other development (including fill) shall be prohibited, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.
- 2) Applicants of proposed projects that increase the base flood elevation more than one foot should obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted. Applicants must obtain a Letter of Map Revision (LOMR) no later than six months after project completion.

**Section 4.028 Zones Without Base Flood Elevations**

- 1) These standards apply in riverine areas of special flood hazard where no base flood elevation data have been provided (A Zones):
- 2) When base flood elevation or floodway data have not been identified by FEMA in a Flood Insurance Study and /or Flood Insurance Rate Maps, the Floodplain Administrator shall obtain, review, and reasonably utilize scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer this ordinance. If data are not available from any source, only then subsection 3 shall apply.
- 3) Where the floodplain administrator has obtained base flood elevation data, applicants of proposed projects that increase the base flood elevation more than one foot shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted. Applicants must obtain a Letter of Map Revision (LOMR) no later than six months after project completion.
- 4) In special flood hazard areas without base flood elevation data, no encroachments, including structures or fill, shall be located in an Area of Special Flood Hazard within an area equal to the width of the stream or fifty feet, whichever is greater, measured from the

ordinary high water mark, unless a base flood elevation is developed by a licensed professional engineer.

#### **Section 4.029 Coastal High Hazard Area**

All other development in coastal high hazard areas (V Zones) for which specific provisions are not specified in this ordinance or building codes, shall:

- 1) All new construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:
  - (A) 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
  - (B) 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 any given year (100-year mean recurrence interval).
- 2) 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 1(A) and 1(B) of this section.
- 3) 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 in Zones V1-30, VE and V, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.
- 4) All new construction shall be located landward of the reach of mean high tide.
- 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:
  - (A) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
  - (B) 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 non-structural). 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).
- 6) 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.

- 7) Prohibit the use of fill for structural support of buildings.
- 8) Prohibit man-made alteration of sand dunes which would increase potential flood damage.
- 9) All manufactured homes to be placed or substantially improved within Zones V1-V30, V and VE that are:
  - (A) Outside of a manufactured home park or subdivision;
  - (B) In a new manufactured home park or subdivision;
  - (C) In an expansion to an existing manufactured home park or subdivision, or
  - (D) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood

Shall comply with the requirements of Section 4.029(1)-(8). Manufactured homes placed or substantially improved on all other sites in an existing manufactured home park or subdivision shall comply with the requirements of Section 4.025(2)(A).

- 10) Recreational vehicles places on sites within Zones V1-V30, V and VE shall:
  - (A) Be on the site for fewer than 180 consecutive days;
  - (B) Be fully licensed and ready for highway use, on its wheels or jacking systems and attached to the site only by quick disconnect type utilities and security devices, and have to permanently attached additions; or
  - (C) Meet the requirements of Section 4.029(1)-(8).

- 1) ~~Be located outside the footprint of, and not structurally attached to, buildings and structures, and be permitted only if analysis by a registered design professional demonstrates no harmful diversion of floodwaters or wave runup and wave reflection onto adjacent buildings and structures.~~
  - Exception:** A deck that is structurally attached to a building or structure is allowed if the bottom of the lowest horizontal structural member is one (1) foot above the base flood elevation and any supporting members that extend below the base flood elevation comply with the foundation requirements that apply to the building or structure and a registered design professional demonstrates that the potential loads generated by the deck on the building will be mitigated.
- 2) ~~Have nonstructural fill no steeper than one unit vertical to five units horizontal unless an engineering analysis demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection on adjacent development;~~
- 3) ~~Not alter, or cause to be altered, sand dunes in such a way to cause increased potential flood damage.~~
- 4) ~~Be anchored to prevent flotation or lateral movement resulting from wind and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;~~
- 5) ~~Be constructed of flood damage and corrosion resistant materials;~~
- 6) ~~Be designed to limit creation of debris, and;~~
- 7) ~~Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.~~

#### **Section 4.030 Non-Coastal High Hazard Areas**

- 1) All development in non-coastal high hazard areas (A zones) for which specific provisions are not specified in this ordinance or building codes, shall:
- 2) Be located and constructed to minimize flood damage;
- 3) Be designed so as not to impede flow of flood waters under base flood conditions;
- 4) If located in a floodway, meet the limitations of Section 4.027 of this ordinance;
- 5) Be anchored to prevent flotation or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- 6) Be constructed of flood damage-resistant materials; and
- 7) Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.

#### **Section 4.031 Specific Standards for Areas of Shallow Flooding (AO and AH Zone)**

In all areas of special flood hazards designated as areas of shallow flooding, the following provisions shall apply:

- 1) ~~All new construction and substantial improvements of residential structures shall have the lowest floor including basement elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade.~~
- 2) ~~All construction and substantial improvement of non-residential structures shall:~~
  - (A) ~~Have the lowest floor including basement elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade; or~~
  - (B) ~~Together with attendant utility and sanitary facilities be completely flood proofed to meet the flood proofing standard of Section 4.025(8).~~
- 3) ~~Provide adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.~~

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 shall 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:

- a. 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
- b. 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 4.025(2)(E).
- 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 either:
  - a. Be on the site for fewer than 180 consecutive days, and
  - b. Be fully licensed and ready for high use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
  - c. Meet the requirements of Section 4.029(1)-(8).

**Section 4.032 Requirement to Submit New Technical Data**

- 1) Within six months of project completion, an applicant who obtains an approved Conditional Letter of Map Revision (CLOMR) from FEMA, or whose development modifies floodplain boundaries, ~~or modifies~~ base flood elevations, or alters a watercourse, shall obtain from FEMA a Letter of Map Revision (LOMR) reflecting the as-built changes to the FIRM.
- 2) It is the responsibility of the applicant to have technical data prepared in a format required for a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) and to submit such data to FEMA on the appropriate application forms. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
- 3) ~~Applicants shall be responsible for all costs associated with obtaining a Conditional Letter of Map Amendment (CLOMR) or Letter of Map Revision from FEMA.~~
- 4) Clatsop County 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.

**FEMA EMAIL  
REQUESTING  
ADDITIONAL  
CHANGES,  
DATED MARCH 30,  
2018**

## Gail Henrikson

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**From:** Pilkenton, Roxanne <roxanne.reale-pilkenton@fema.dhs.gov>  
**Sent:** Friday, March 30, 2018 9:15 PM  
**To:** Gail Henrikson  
**Cc:** Lentzner, Dave  
**Subject:** RE: Staff Report and Revised Draft Ordinance Language - Clatsop County  
**Attachments:** FEMA\_Markups\_PDF\_Version\_03302018.pdf

Hello Gail,

I hope this email finds you well. Attached please find the FEMA markups in reference to the Ordinance update. Please note that these are just the FEMA markups and DLCDC may still have requested edits and changes. FEMA requests that you take a look at the markups and contact me directly with any questions that you may have. Please note that FEMA needs to approve the final ordinance language prior to Clatsop County adopting and any new ordinance updates required by the State or proposed by Clatsop County need to be submitted to FEMA for approval.

I am out of the office for training next week but will be able to monitor my email. Please feel free to email any questions that you may have in regard to the ordinance and I will do my best to get back to you as soon as possible.

V/R,

Roxanne Reale-Pilkenton CFM

Floodplain Management Specialist

FEMA Region X | Floodplain Management and Insurance Branch

130 228<sup>th</sup> Street SW | Bothell, Washington 98021-9792

Phone: (425) 487-4654 | Cell: (202) 341-6948

[Roxanne.Pilkenton@fema.dhs.gov](mailto:Roxanne.Pilkenton@fema.dhs.gov)

*Federal Emergency Management Agency (FEMA), Region X is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request a disability accommodation contact me at least five (5) working days in advance at 425-487-4654 or [roxanne.reale-pilkenton@fema.dhs.gov](mailto:roxanne.reale-pilkenton@fema.dhs.gov).*



# FEMA

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**From:** Gail Henrikson [<mailto:gghenrikson@co.clatsop.or.us>]

**Sent:** Thursday, March 15, 2018 3:16 PM

**To:** 'dlentzner@dlcd.state.or.us' <[dlentzner@dlcd.state.or.us](mailto:dlentzner@dlcd.state.or.us)>; Pilkenton, Roxanne <[roxanne.reale-pilkenton@fema.dhs.gov](mailto:roxanne.reale-pilkenton@fema.dhs.gov)>

**Subject:** Staff Report and Revised Draft Ordinance Language - Clatsop County

Attached is the staff report and proposed text amendments for the revisions to the Flood Hazard Overlay ordinance for Clatsop County. If you see any glaring errors, incorrect statements, and/or things that absolutely must be revised to ensure approval, please let me know. We are taking this to the Planning Commission on March 20<sup>th</sup>. It is tentatively scheduled to go before the Board of Commissioners on April 25<sup>th</sup> and May 9<sup>th</sup>. I'll also be giving the Board a brief

presentation about the upcoming changes on April 14<sup>th</sup> – mainly to give them some basic background about the why this is even being brought forward to them.

Thanks again to both of you for helping staff through the process – this has been a new experience for all of us here.

**Gail Henrikson, AICP, Director**

Clatsop County Community Development

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## FEMA Comments

Deletions requested

Insertions requested

FEMA questions

(FEMA did not make any of the edits (yellow highlighted, etc.) that are not like the examples shown above. The other edits were already on the pdf that Clatsop County sent and were left as they were received.)

*Please provide the location of the following:*

- *Citation of Statutory Authority – Either in this code or in a portion of the code where it is applicable.*
- *Abrogation and Greater Restriction section (e.g., This Ordinance shall not in any way impair/remove the necessity of compliance with any other applicable laws, ordinances, regulations, etc. Where this Ordinance imposes a greater restriction, the provisions of this Ordinance shall control.)*
- *Severability section. (e.g., If any section, provision, or portion of this ordinance is adjudged unconstitutional or invalid by a court, the remainder of the ordinance shall not be affected.)*
- *The adoption or reference to the correct Map and date (44 CFR § 60.3(b)).*
- *The adoption or reference to the correct Flood Insurance Study and date (44 CFR § 60.3(c), (d), and/or (e)).*

## **ARTICLE 4. SPECIAL DISTRICTS**

### **SECTION 4.000. FLOOD HAZARD OVERLAY DISTRICT (/FHO).**

#### **Section 4.010. Purpose**

The purpose of the flood hazard overlay district is to identify those areas of the County subject to the hazards of periodic flooding and establish standards and regulations to reduce flood damage or loss of life in those areas. This district shall apply to all areas of special flood hazards within the unincorporated areas of Clatsop County as identified on Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps. In advancing these principles and the general purposes of the Clatsop County Comprehensive Plan, the specific objectives are:

- (1) To promote the general health, welfare and safety of the County;
- (2) To prevent the establishment of certain structures and land uses unsuitable for human habitation because of the danger of flooding, unsanitary conditions or other hazards;
- (3) To minimize the need for rescue and relief efforts associated with flooding;
- (4) To help maintain a stable tax base by providing for sound use and development in flood prone areas and to minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities located in flood hazard areas;

(6) To insure that potential home and business buyers are notified that property is in a flood area.

#### **Section 4.011. Definitions**

The following words and phrases shall be interpreted so as to give them the meanings they have in common usage and to give this chapter its most reasonable application:

“**ACCESSORY STRUCTURE**” means a structure on the same or adjacent parcel as a principal structure, the use of which is incidental and subordinate to the principal structure. A separate insurable building should not be classified as an accessory or appurtenant structure.

“**ALTERATION OF A WATERCOURSE**” includes, but is not limited to, any dam, culvert, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area or capacity, which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

“**AREA OF SHALLOW FLOODING**” means a designated AO or AH zone on the Flood Insurance Rate Map (FIRM) with a one percent or greater chance of flooding to an average depth ~~The base flood depth range is from of~~ one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. AO is characterized as sheet flow and AH indicates ponding.

“**AREA OF SPECIAL FLOOD HAZARD**” is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Zone designations on FIRMs include the letters A or V. Also known as the Special Flood Hazard Area (SFHA).

“**BASE FLOOD**” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood”. Designation on maps always includes the letters A or V.

“**BASE FLOOD ELEVATION (BFE)**” means the water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation (BFE) is depicted on the FIRM to the nearest foot and in the FIS to the nearest 0.1-foot.

“**BASEMENT**” means any area of the building having its floor subgrade (below ground level) on all sides.

“**BELOW-GRADE CRAWLSPACE**” 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.

“**BREAKAWAY WALL**” means a wall that is not a 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.

“**BUILDING**” means a building or structure subject to building codes.

“**BUILDING CODES**” means the combined specialty codes adopted under ORS 446.062, 446.185, 447.020 (2), 455.020 (2), 455.496, 455.610, 455.680, 460.085, 460.360, 479.730 (1) or 480.545, but does not include regulations adopted by the State Fire Marshal pursuant to ORS chapter 476 or ORS 479.015 to 479.200 and 479.210 to 479.220.

“**COASTAL HIGH-HAZARD AREA**” means the area subject to high velocity waters, including but not limited to, storm surge or tsunamis. The map is designated on a FIRM (Flood Insurance Rate Map) as a “V” zone. 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. The area is designated in the FIRM as Zone VI-V30, VE or V.

“**CRITICAL FACILITIES**” means those structures or facilities which produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials; hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood; police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and public and private facilities that are vital to maintaining or restoring normal services to flooded areas before, during and after a flood.

“**DATUM**” is a base measurement point (or set of points) from which all elevations are determined. Historically, that common set of points has been the National Geodetic Vertical Datum of 1929 (NAVD29). The vertical datum currently adopted by the federal government as a basis for measuring heights is the North American Vertical Datum of 1988 (NAVD88).

“**DEVELOPMENT**” means any manmade change to improved or unimproved real property, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard. Development does not include:

- (1) — Signs, markers, aids, etc. placed by a public agency to serve the public
- (2) — Driveways, parking lots, or other open space use areas where no alteration of topography occurs;
- (3) — Minor repairs or improvements to existing structures provided that the alterations do not increase the size or intensity of use, and do not constitute repair of substantial damage, or substantial improvement as defined in this section;
- (4) — Customary dredging associated with routine channel maintenance consistent with State or Federal laws and permits;
- (5) — Replacement of utility facilities necessary to serve established and permitted uses;
- (6) — Accessory residential or noncommercial structures less than 200 square feet in area;
- (7) — Storage of equipment and material associated with residential uses.

“**DIGITAL FIRM (DFIRM)**,” means Digital Flood Insurance Rate Map. It depicts flood risk and zones and flood risk information. The DFIRM presents the flood risk information in a format suitable for electronic mapping applications.

“**ENCROACHMENT**” means the advancement or infringement of uses, fill, excavation, buildings, permanent structures or other development into a floodway which may impede or alter the flow capacity of a floodplain.

“**ELEVATED BUILDING**” means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

“**EXISTING BUILDING OR STRUCTURE**” means a structure for which the “start of construction” commenced before 1980 July 3, 1978.

“**EXISTING MANUFACTURED HOME PARK OR SUBDIVISION**” means one in which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed is completed before the effective date of Clatsop County’s floodplain management regulations (1980 July 3, 1978). The “construction of facilities includes, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

“**FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)**” means the agency with the overall responsibility for administering the National Flood Insurance Program.

“**FLOOD**” or “**FLOODING**” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

“**FLOOD HAZARD BOUNDARY MAP**” means the official map used by the Federal Insurance Administrator Emergency Management Agency (FEMA) where the boundaries of the areas of special flood hazard have been designated.

“**FLOOD INSURANCE RATE MAP (FIRM)**” means an official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. means the official map on which the Federal Emergency Management Agency (FEMA) has delineated areas of special flood hazards.

“**FLOOD INSURANCE STUDY (FIS)**” means the official report provided by the Federal Insurance Administrator Emergency Management Agency (FEMA) that includes flood profiles, the flood boundary-floodway map and the water surface elevation of the base flood.

“**FLOOD PROOFING**” means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

“**FLOODPLAIN ADMINISTRATOR**” means the Director of Transportation and Development Services Community Development Director, or an individual or committee that is designated by

the Director, to implement and administer the provisions of this ordinance.

**“FLOODWAY (Regulatory Floodway)”** means the channel of a river or other watercourse and those portions of the floodplain adjoining the channel required to discharge and store the floodwater or flood flows associated with the regulatory flood. the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

**“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”** means a structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register, ~~or;~~
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or to a district preliminarily determined by the Secretary to qualify as a registered historic district, ~~or;~~
- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior, or;
- (4) Individually listed on a local inventory of historic places and determined as eligible by in communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the Secretary of the Interior, or
  - b. Directly by the Secretary of the Interior in states without approved programs.

**“LATERAL ADDITION”** means an addition that requires a foundation to be built outside of the foundation footprint of the existing building.

**“LETTER OF MAP CHANGE (LOMC)”** means an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. LOMCs are issued in the following categories:

**Letter of Map Amendment (LOMA)**

A revision based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a special flood hazard area.

**Letter of Map Revision (LOMR)**

A revision based on technical data showing that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination that a structure of parcel has been elevated by fill above the base flood elevation and is excluded from the special flood hazard area.

**Letter of Map Revision Based on Fill – (LOMR-F)**

A modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM), based on the placement of fill outside the existing regulatory floodway.

**Conditional Letter of Map Revision (CLOMR)**

A formal review and comment by FEMA as to whether a proposed project complies with the minimum National Flood Insurance Program floodplain management criteria. A CLOMR does NOT amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

**“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 this chapter.

**“MANUFACTURED DWELLING”** (aka manufactured housing) 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 connected to the required utilities. The term “manufactured dwelling” 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 SEA LEVEL (MSL)”** means the North American Vertical Datum (NGVD) of 1988 or other datum, to which base flood elevations shown on the flood insurance rate map are referenced.

**“NATURAL ELEVATION”** means the elevation of natural grade, or the grade in existence before ~~September 17, 2010~~ July 3, 1978.

**“NEW CONSTRUCTION”** means a structure for which the “start of construction” commenced after ~~1980~~ July 3, 1978 and includes subsequent substantial improvements to the structure.

**“NEW MANUFACTURED HOME PARK OR SUBDIVISION”** means a manufactured home park or subdivision for which the construction of facilities for serving 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 ~~the adoption of this chapter.~~ Floodplain management regulations adopted by a community.

“RECREATION 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 towed by a light-duty truck, and (4) primarily designed designed primarily not for use as temporary living quarters for recreational, camping, travel or seasonal use.

“SPECIAL FLOOD HAZARD AREA (SFHA)” means areas subject to inundation from the waters of a one-hundred-year flood.

“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 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 a 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 walkways; nor does it include excavation for a basement, footings, piers or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

“STRUCTURE” means a walled and roofed building, a manufactured dwelling, a modular or temporary building, or a gas or liquid storage tank that is principally above ground.

“SUBSTANTIAL DAMAGE” means the damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50-percent of the market value of the structure before the damage occurred.

“SUBSTANTIAL IMPROVEMENT” means any repair 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 “repetitive loss” or “substantial damage,” regardless of the actual repair work performed. The market value of the structure should be:

- (1) the appraised value of the structure prior to the start of the initial repair or improvement, or
- 2) in the case of damage, the value of the structure prior to the damage occurring. This term includes structures which have incurred “substantial damage”, regardless of the actual amount of repair work performed. The term does not include either:

- (a) A 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
- (b) Alteration of an Historic Structure, provided that the alteration will not preclude the structure's continued designation as an Historic Structure.

“VERTICAL ADDITION” means the addition of a room or rooms on top of an existing building.

“WATERCOURSE” means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

“WATER-DEPENDENT” means a use or use and activity which can only be carried out on, in or adjacent to water areas because the use requires access to the waterbody for water-borne transportation, recreation, energy production, or source of water.

“WATER SURFACE ELEVATION” means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

#### **Section 4.015 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 governing body, and;
- 3) Deemed neither to limit nor repeal any other powers granted under state statutes, including state building codes.

#### **Section 4.016 Floodplain Administrator Duties and Responsibilities**

##### 1. Permit Review

- ~~1)~~ — The Floodplain Administrator duties shall include, but not be limited to, the following:
  - ~~A) 2)~~ Review all development permit applications to determine whether proposed new development will be located in Areas of Special Flood Hazard and to determine that all new development complies with the requirements of this ordinance ;
  - ~~B) 3)~~ Review applications for modifications of any existing development in Areas of Special Flood Hazard for compliance with the requirements of this ordinance;
  - ~~4)~~ Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
  - ~~C) 5)~~ Review proposed development to assure that necessary permits have been received from governmental agencies from which approval is required by federal, state and local law, including but not limited to section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334; the Endangered Species Act of 1973, 16 U.S.C. 1531-1544; and State of Oregon Removal Fill permits those Federal, State or local governmental agencies from which prior approval is required. Copies of such permits shall be provided and maintained on file.
  - ~~D) 6)~~ Review all development permit applications for property in a Special Flood Hazard Area to determine if the proposed development is located in the floodplain or floodway, and if

so located in a floodway, ensure that the encroachment standards of Section 4.026 are met.

- E) Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;
- F) Coordinate with the Building Official to assure that applications for buildings permits comply with the requirements of this ordinance.

## 2. Use of Base Flood Data

- A) Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
- ~~B) 7)~~ When Base Flood Elevation data or floodway data are not available, then 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 the provisions of this ordinance.
- ~~C) 8)~~ When Base Flood Elevations or other current engineering data are not available, the Floodplain Administrator shall take into account the flood hazards, to the extent they are known, to determine whether a proposed building site will be reasonably safe from flooding.

## 3. Interpretation of FIRM Boundaries

- ~~A) 9)~~ Where interpretation is Make interpretations, as needed, of the exact location of boundaries of the Areas of Special Flood Hazard, including regulatory floodways (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) ~~the Floodplain Administrator shall make the interpretation.~~ Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.021.
- ~~10)~~ Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;
- ~~11)~~ Coordinate with the Building Official to assure that applications for building permits comply with the requirements of this ordinance.

## 4. Obtain and Maintain Information

- ~~A) 12)~~ Obtain, verify and record the actual elevation in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, of the lowest floor level, including basements and below-grade crawlspaces, of all new construction or substantially improved buildings and structures.
- ~~B) 13)~~ Obtain, verify and record the actual elevation, in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, to which any new or substantially improved buildings or structures have been flood-proofed. When flood-proofing is utilized for a structure, the Floodplain Administrator shall obtain certification of design criteria from a registered professional engineer or architect;
- ~~C) 14)~~ Ensure that all records pertaining to the provisions of this ordinance are permanently maintained in the office of Transportation and Development Services Community Development and shall be open for public inspection.

- D) 15) Make inspections in Areas of Special Flood Hazard to determine whether development has been undertaken without issuance of a floodplain development permit, ensure that development is undertaken in accordance with this ordinance, and verify that existing buildings and structures maintain compliance with this ordinance;
- E) 16) Coordinate with the Building Official to inspect areas where buildings and structures in flood hazard areas have been damaged, regardless of the cause of damage, and notify owners that permits may be required prior to repair, rehabilitation, demolition, relocation, or reconstruction of the building or structure;
- F) 17) Make Substantial Damage or Substantial Damage determinations based on criteria set forth in Section 4.023 of this ordinance.

#### **Section 4.017 Alteration of Water Courses**

- 1) The bankfull flood carrying capacity of the altered or relocated portion of the water course shall not be diminished. Prior to issuance of a floodplain development permit, the applicant must submit a description of the extent to which any water course will be altered or relocated as a result of the proposed development and submit certification by a registered professional engineer that the bankfull flood carrying capacity of the water course will not be diminished.
- 2) The applicant shall notify adjacent communities, the U.S. Army Corps of Engineers, Oregon Department of State Lands, and Oregon Department of Land Conservation and Development prior to any alteration or relocation of a water source. Evidence of notification must be submitted to the floodplain administrator and to the Federal Emergency Management Agency.
- 3) The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished.
- 4) The applicant shall meet the requirements to submit technical data in Section 4.032 when the alteration of a watercourse, including the placement of culverts, results in the relocation or elimination of the special flood hazard area.

#### **Section 4.018 Non-Conversion of Enclosed areas below the Lowest Floor**

To ensure that the areas below the BFE continue to be used solely for parking vehicles, limited storage, or access to the building and not be finished for use as human habitation without first becoming fully compliant with the floodplain management ordinance in effect at the time of conversion, the Floodplain Administrator shall:

- 1) Determine which applicants for new construction and/or substantial improvements have fully enclosed areas below the lowest floor that are 5 feet or higher;
- 2) Enter into a "NON-CONVERSION AGREEMENT FOR CONSTRUCTION WITHIN FLOOD HAZARD AREAS" or equivalent with Clatsop County. The agreement shall be recorded with the Clatsop County Clerk as a deed restriction. The non-conversion agreement shall be in a form acceptable to the Floodplain Administrator and County Counsel; and
- 3) Have the authority to inspect any area of a structure below the base flood elevation to ensure compliance upon prior notice of at least 72 hours.

#### **Section 4.019 Floodplain Inspection and Enforcement**

- 1) The Administrator or designee shall make periodic inspections of floodplain areas to establish that development activities within the floodplain are being performed in compliance with an approved floodplain development permit. The Administrator or designee shall prepare a field report listing non-complying conditions to be delivered to the Code Compliance Officer within 5 business days.
- 2) Upon receipt of the report:
  - (A) The Code Compliance Officer shall take action in accordance with Clatsop County Code of Regulations to effect the abatement of such violation; or
  - (B) ~~The property owner shall apply for a variance in accordance with the provisions of Section 4.024 (Variance Procedures) herein.~~ Clatsop code granting the ability for a variance to be applied to correct a non-compliant structure goes against the variance criteria listed in Clatsop County Code 4.024 (9)(A) through (D). FEMA does not support the use of a variance to allow a violation. This option needs to be removed from code.
- 3) If the violation is not resolved through ~~the code enforcement or variance procedure~~ the Floodplain Administrator shall request to the Administrator of Federal Insurance Administration a declaration for denial of insurance, stating that the property is in violation of a cited statute or local law, regulation or ordinance, pursuant to section 1316 of the National Flood Insurance Act of 1968 as amended. Please note that FEMA is unable to process a Section 1316 action request until Clatsop County has provided a full case file that provides the evidence that demonstrates that they have gone the furthest extent possible as outlined in their code enforcement regulations. Region X only forwards the request to headquarters who then make a ruling on the 1316 action request.

#### **Section 4.020 Warning and Disclaimer of Liability**

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific 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 a liability on the part of Clatsop County or by an officer, or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made there under.

#### **Section 4.021 Appeals**

An appeal of a Floodplain Administrator decision pursuant to this chapter may be appealed in accordance with Section 2.230. Appeals of a decision by the Code Enforcement Hearings Officer pursuant to this chapter may be appealed in accordance with Clatsop County Code of Regulations.

#### **Section 4.022 Permit Procedures**

A Floodplain Development Permit shall be obtained before construction or development begins within any area of special flood hazard. Application for a Floodplain Development Permit shall

be made to the Floodplain Administrator on forms furnished by the Administrator or the Administrator's designee prior to starting development activities. Specifically, the following information is required:

- 1) Application Stage:
  - (A) Plans in duplicate drawn to scale with elevations of the project area and the nature, location, dimensions of existing and proposed structures, earthen fill placement, storage of materials or equipment and drainage facilities.
  - (B) Delineation of flood hazard areas, floodway boundaries including base flood elevations, or flood depth in AO zones, where available;
  - (C) For all proposed structures, elevation in relation to the highest adjacent grade and the base flood elevation, or flood depth in AO zones, of the:
    - 1) lowest enclosed area, including crawlspace or basement floor;
    - 2) bottom of the lowest horizontal structural member in coastal high hazard areas (V Zones);
    - 3) top of the proposed garage slab, if any, and;
    - 4) next highest floor
  - (D) Locations and sizes of all flood openings;
  - (E) Elevation to which any non-residential structure will be flood-proofed;
  - (F) Certification from a registered professional engineer or architect that any proposed non-residential flood-proofed structure will meet the flood-proofing criteria of the NFIP and building codes;
  - (G) Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development;
- 2) Construction Stage:
  - (A) For all new construction and substantial improvements, the permit holder shall provide to the Floodplain Administrator an as-built certification of the floor elevation or flood-proofing level immediately after the lowest floor or floodproofing is placed and prior to further vertical construction .
  - (B) Any deficiencies identified by the Floodplain Administrator shall be corrected by the permit holder immediately and prior to work proceeding. Failure to submit certification or failure to make the corrections shall be cause for the Floodplain Administrator to issue a stop-work order for the project.
- 3) Certificate of Occupancy
  - (A) In addition to the requirements of the building codes pertaining to certificate of occupancy, prior to the final inspection the owner or authorized agent shall submit the following documentation that has been prepared and sealed by a registered surveyor or engineer;
    - 1) For elevated buildings and structures in non-coastal Areas of Special Flood Hazard (A zones), the elevation of the lowest floor, including basement or where no base flood elevation is available the height above highest adjacent grade of the lowest floor;
    - 2) For buildings and structures in coastal Areas of Special Flood Hazard (V zones), the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor.
  - (B) Failure to submit certification or failure to correct violations shall be cause for the Building Official to withhold a certificate of occupancy or delay a final building

- inspection until such deficiencies are corrected.
- 4) Expiration of Floodplain Development Permit
    - (A) Floodplain development permit shall expire 180 days after issuance unless the permitted activity has been substantially begun and thereafter is pursued to completion.
    - (B) Commencement of work includes start of construction, when the permitted work Requires a building permit.

#### **Section 4.023 Substantial Damage and Substantial Improvement Determination**

For applications for permits to improve buildings and structures, including additions, repairs, renovations, and alterations, the Floodplain Administrator, shall:

- 1) Estimate the market value, or require the applicant to obtain a professional appraisal of the market value, of the building or structure before the proposed work is performed; when repair of damage is proposed, the market value of the building or structure shall be the market value before the damage occurred;
- 2) Compare the cost of improvement, the cost to repair the damaged building to its predamaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
  - (A) Except as indicated in subsections (D) and (E) below, all costs to repair substantial damage, including emergency repairs, must be included;
  - (B) The costs associated with the correction of pre-existing violations of state or local health, sanitary, or safety code specifications that were identified by the building official, the director of environmental health, or any other local code enforcement official prior to the improvement or repair and that are the minimum necessary to ensure safe living conditions shall not be included;
  - (C) Except as indicated in subsections (d) and (e) below, the costs of complying with any county, state, or federal regulation other than those described in subsection (b) must be included;
  - (D) Costs associated with the following items are not included:
    - 1) The preparation and approval of all required plans, calculations, certifications, and specifications;
    - 2) The performance of surveys or other geotechnical or engineering studies and resulting reports;
    - 3) Permit and review fees;
    - 4) The construction, demolition, repair, or modification of outdoor improvements, including landscaping, fences, swimming pools, detached garages and sheds, etc.;
  - (E) Proposed alterations of a designated historic building or structure is not to be considered substantial improvement unless the alteration causes a loss of said designation.
- 3) The Floodplain Administrator shall make the final determination of whether the proposed improvement and/or repair constitutes a substantial improvement or substantial damage;
- 4) The Floodplain Administrator shall notify the applicant of the results of the determination by letter,
- 5) Applicant has the right to appeal the determination pursuant to Section 4.021.

#### Section 4.024 Variances

A request for a variance from a standard contained in this chapter shall be reviewed in accordance with the procedures of Sections 5.130-5.131 - and 5.133 -5.134. The burden to show that the variance is warranted and meets the criteria set out herein is on the applicant. FEMA was unable to find Section 5.131.

When considering a variance application, the deciding body shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

- 1) The danger that materials may be swept onto other lands to the injury of others;
- 2) The danger to life and property due to flooding or erosion damage;
- 3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- 4) The importance of the services provided by the proposed facility to the community;
- 5) The necessity to the facility of a waterfront location, where applicable;
- 6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- 7) The compatibility of the proposed use with existing and anticipated development;
- 8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- 9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- 10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
- 11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Upon consideration of the factors identified above and the purposes of this ordinance, the deciding body may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

The floodplain administrator shall maintain a permanent record of all variances and report any variances to the Federal Emergency Management Agency upon request.

The following standards are applicable to a variance request, not those of Section 5.132:

- 1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items A-K 1-11 in Section 4.204 4.024 have been fully considered. As the lot size increases the technical justification required for issuing the variance increases
- 2) A)—Variances shall only be issued upon:
  - A) B)—A showing of good and sufficient cause,
  - B) C)—A determination that failure to grant the variance would result in exceptional hardship to the applicant, and

C) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

- ~~2) 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.~~
- 3) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- 4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- 5) Variances may be issued for a water dependent use provided that
  - (A) The criteria of paragraphs (1) through (4) of this section are met, and;
  - (B) 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.
- 6) Variances may be issued for the repair, reconstruction, restoration or rehabilitation of structures listed on the National Register of Historic Places or the Statewide Inventory of Historic Properties, without regard to the procedures set forth in this section.
- 7) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece or 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.
- 8) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria and otherwise complies with building codes.
- 9) When a variance is granted, the county shall give written notice to the property owner within five days after the decision is final. The notice shall state that:
  - (A) The structure or manufactured home will be allowed to be built or placed with the lowest floor elevation at or below the base flood elevation, and
  - (B) That the issuance of the variance to construct a structure below the base flood level will result in increased premium rates for flood insurance as high as twentyfive dollars for every one hundred dollars of insurance coverage, and
  - (C) Such construction below the base flood level increases the risk to life and property.
  - (D) The above notification shall be maintained with a record of all variance actions.
- 10) Variance Time Limit. Authorization of a variance shall conform to the requirements of Section 5.134.

## **Section 4.025 Development Standards**

### **1. General Standards**

In all areas of special flood hazards as presented on the FIRM, the following standards shall apply for all new construction and substantial improvements:

A. Site Improvements and Subdivisions:

- 1) All proposed new development and subdivisions shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding.
- 2) ~~A)~~ Residential building lots shall have adequate buildable area outside of floodways.
- 3) ~~B)~~ All new development proposals and subdivision preliminary plats/development plans shall include the mapped flood hazard zones from the effective FIRM.
- 4) ~~C)~~ Base flood elevation data shall be generated and/or provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than fifty lots or five acres, whichever is less.
- 5) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated and/or provided for subdivision proposals and all other proposed developments that contain at least 50 lots or five acres, whichever is less.
- 6) ~~D)~~ All new development and subdivision shall have public utilities and facilities such as sewer, gas, electric and water systems located and constructed to minimize flood damage.
- E) ~~On-site waste disposal systems shall be located and constructed to avoid functional impairment, or contamination from them, during flooding.~~
- 7) ~~F)~~ All subdivisions shall have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.

B) ~~G)~~ Coastal High Hazard Area:

In coastal high hazard areas (V Zones), alteration of sand dunes shall be prohibited unless it has been demonstrated by engineering analysis that the alteration will not increase potential flood damage.

C) ~~H)~~ Tsunami Inundation Zone:

New essential and new special occupancy structures shall not be constructed in the Tsunami Inundation Zone. The Tsunami Inundation Zone may include V, A, and potentially other flood zones. If an exception is granted then the Coastal High Hazard Area construction standards in ~~the model~~ this ordinance shall apply to the building of these new structures in the Tsunami Inundation Zone.

D) ~~I)~~ Building Design and Construction:

Buildings and structures, including manufactured dwellings, within the scope of the building codes, including repair of substantial damage and substantial improvement of such existing buildings and structures, shall be designed and constructed in accordance with the flood-resistant construction provisions of these codes, including but not limited to Section ~~R324~~ R322 of the Residential Specialty Code and Section 1612 of the Structural Specialty Code.

E) Construction Materials and Methods:

- (A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

- (B) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (C) Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.

**F) Review of Development Permits:**

Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.

**G) Anchoring:**

- (A) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- (B) All manufactured dwellings 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.

**H) Utilities:**

- (A) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and
- C) E) On-site waste disposal systems shall be located ~~and constructed to avoid functional impairment, or contamination from them, during flooding.~~ to avoid impairment to them or contamination from them during flooding consistent with the Oregon Department of Environmental Quality regulations.

- I) 8) Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.

**2. Specific Standards**

In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-A30, AH and AE) as set forth in this ordinance, the following provisions are required:

**A) 2) Manufactured Dwellings:**

- 1) A)** New and replacement manufactured dwellings are within the scope of the building codes; and,
- 2) B)** All new manufactured dwellings and replacement manufactured dwellings shall be installed using methods and practices which minimize flood damage and shall be securely anchored to **an adequately anchored foundation system to resist prevent** flotation, collapse and lateral movement **during the base flood**. Methods of anchoring 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)**. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
- 3)** **Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with Section 4.025(1)(E), above.**
- 4)** **Electrical crossover connections shall be a minimum of 12 inches above BFE.**

**3) Construction Materials and Methods:**

- (A)** All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (B)** All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (C)** Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.

**B) 4) Critical Facilities:**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the **area of special flood hazard Special Flood Hazard Area (SFHA)**. Construction of new critical facilities shall be permissible within the **area of special flood hazard SFHA** if no feasible alternative site is available. Critical facilities constructed within the **area of special flood hazard SFHA** shall have the lowest floor elevated three feet above BFE (or depth number in AO zones) or to the height of the 0.2 percent (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 or persistent organic pollutants as defined by the Oregon Department of Environmental Quality 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.

~~5) Review of Development Permits: Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.~~

**C) 6) Residential Construction:**

- 1)** New construction or substantial improvement of any residential structure shall

have the lowest floor, including basement, elevated to **a minimum of** one foot above the base flood elevation.

- 2) Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

- (A) A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
- (B) The bottom of all openings shall be no higher than one (1) foot above grade; and
- (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic **flow of floodwaters in both directions, entry and exit of floodwaters.**

**D) 7) Non-Residential Construction:**

New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall either have the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

- 1) (A)** Be flood proofed so that below **this the base flood** level the structure is water tight with walls substantially impermeable to the passage of water;
- 2) (B)** Have structural components **having the capability capable** of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; **and**
- 3) (C)** Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with standards of practice for meeting provisions of this **sub**section based on their development and/or review of the structural design, specifications and plans. Such certification shall be provided as set forth in Section 4.018(2).

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

- 5) (D) If construction will be elevated instead of floodproofed, Fully fully** enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

- a) 1)** A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
- b) 2)** The bottom of all openings shall be no higher than one (1) foot above grade; and
- c) 3)** Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic **flow of floodwaters in**

both directions, entry and exit of floodwaters.

8) Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.

E) 9) Below-grade crawl spaces: Crawlspace:

- 1) (A) Crawlspace construction shall meet the standards for space below the lowest floor as described for residential construction in Section 4.025(7) 4.025(2)(C). 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 2) 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) (B) 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 but also any joists, insulation, or other materials that extend below the BFE. 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) (C) Any ductwork, or other building utility system, within the crawlspace must be elevated above the BFE or sealed from floodwaters. 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) (D) Below grade crawlspaces (i.e., where the interior grade of the crawlspace is below the building's lowest adjacent exterior grade) must be constructed in accordance with Figure 1 below: 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 be either placed above the BFE or sealed from floodwaters.
- 5) (E) The crawlspace must be provided with an adequate drainage system that removes floodwaters from the interior of the crawlspace within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage considerations, 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. 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.~~
- ~~9) If the crawlspace provisions listed in 1) through 8) above are used written notice shall be given that the structure will be rated for flood insurance as having its lowest floor below the base flood elevation, and that the cost of flood insurance will be commensurate with that rating.~~

**F) 10) Fences and Walls:**

New fencing shall be designed to collapse under conditions of the base flood or to allow the passage of water by having flaps or openings in the areas at or below the base flood elevation sufficient to allow flood water and associated debris to pass freely.

**G) 11) On-site Sewage Systems:**

- ~~1) (A)~~ Soil absorption systems shall be located outside of flood hazard areas. Where suitable soil absorption sites outside of the flood hazard area are not available, the soil absorption site is permitted to be located within the flood hazard area provided it is located to minimize the effects of inundation under conditions of the base flood.
- ~~2) (B)~~ Mound systems in flood hazard areas shall be prohibited.

**H) 12) Tanks:**

- ~~1) (A)~~ Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the design flood.
- ~~2) (B)~~ Above-ground tanks in flood hazard areas shall be:
- ~~3) (C)~~ Attached to and elevated to or above the base flood elevation (or depth number in AO zones) on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood; or be
- ~~4) (D)~~ Anchored or otherwise designed and constructed to prevent flotation, collapse or

lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the design flood.

- ~~5) (E)~~ Tank inlets, fill openings, outlets and vents shall be:
- ~~a) (F)~~ A minimum of 2 feet above BFE or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tank during conditions of the design flood; and
  - ~~b) (Z)~~ Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

**I) 13) Recreation Vehicle:**

~~In all Areas of Special Flood Hazard, Recreational Vehicles that are an allowed use or structure under the zoning ordinance must either In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must:~~

- ~~1) (A)~~ Be on the site for fewer than 180 consecutive days, and be elevated and anchored; OR
- ~~2) (B)~~ Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached structures or additions; or be on the site for less than 180 consecutive days; OR
- ~~3) (C)~~ Meet the elevation and anchoring requirements for manufactured homes listed in Section 4.025. be fully licensed and highway ready.

**J) 14) Accessory Structures:**

- ~~1) (A)~~ Relief from the elevation or dry flood-proofing standards may be granted for an accessory structure containing no more than 200 square feet. Such a structure must meet the following standards:
- ~~2) (B)~~ The accessory structure is not subject to building codes;
- ~~3) (C)~~ The accessory structure shall be located on property with a dwelling;
- ~~4) (D)~~ The accessory structure shall not be used for human habitation and shall be used solely for parking of vehicles or storage of items having low damage potential when submerged.
- ~~5) (E)~~ Toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall not be stored below BFE, or where no BFE is available lower than three feet above grade, unless confined in a tank installed in compliance with this ordinance;
- ~~6) (F)~~ The accessory structure shall be constructed of flood resistant materials.
- ~~7) (G)~~ The accessory structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters;
- ~~8) (H)~~ The accessory structure shall be firmly anchored to prevent flotation;
- ~~9) (I)~~ All service facilities, such as electrical and heating equipment associated with the accessory structure, shall be elevated or flood proofed to or above the flood protection elevation, and;
- ~~10) (J)~~ It shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for complying

with this requirement must be certified by a licensed professional engineer or architect, or

- a) ~~4~~ Provide a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
- b) ~~2~~ The bottom of all openings shall be no higher than one foot above the higher of the exterior or interior grade or floor immediately below the opening;
- c) ~~3~~ 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.

**K) ~~45~~ Temporary Structures, Storage, and Bridges:**

- 1) ~~(A)~~ A floodplain development permit is required for construction or placement of temporary structures, temporary storage associated with non-residential uses, and temporary bridges located in areas of special flood hazard:
- 2) ~~(B)~~ Temporary structures, not including bridges, shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the structure. Temporary structures shall be anchored to prevent flotation, collapse, or lateral movement.
- 3) ~~16~~ Temporary storage of materials shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the storage. Stored material shall be anchored or contained to prevent flotation or release outside the assigned storage area. Hazardous materials or materials deemed to be persistent organic pollutants by the Oregon Department of Environmental Quality shall not be stored in the floodway.
- 4) ~~17~~ Temporary encroachments in the floodway for the purposes of capital improvement projects (including bridges) require a floodplain development permit. No CLOMR/LOMR is required.

**Section 4.026 Development in Floodways**

- 1) Except as provided in paragraphs (3) and (4), encroachments, including fill, new construction, substantial improvements, and other development are prohibited unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge. Base flood or floodway elevations when compared to pre-project conditions.
- 2) Any fill allowed to be placed in the floodway shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour.
- 3) Applicants shall obtain a Conditional Letter of Map Revision (CLOMR) before an encroachment in the floodway is permitted that will cause any increase in the base flood elevation.

- 4) ~~Projects for stream habitat restoration may be permitted in the floodway provided:~~
  - ~~(A) The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP 2007-1023); and,~~
  - ~~(B) A qualified professional (a Registered Professional Engineer; or staff of NRCS; the county; or fisheries, natural resources, or water resources agencies) has provided a feasibility analysis and certification that the project was designed to keep any rise in 100-year flood levels as close to zero as practically possible given the goals of the project; and,~~
  - ~~(C) No structures would be impacted by a potential rise in flood elevation; and,~~
  - ~~(D) An agreement to monitor the project, correct problems, and ensure that flood carrying capacity remains unchanged is included as part of the local approval.~~

***This is an outdated provision that is currently being reviewed in the Oregon Model Ordinance. This provision should be removed until it is renegotiated with FEMA and shown to still be a compliant exemption.***

- 5) Construction of new fencing is prohibited, unless the fencing is designed to collapse or break-away, and is anchored at one end and cabled together so as to not create debris. As an alternative to a break-away design, a new fence may be designed to allow the passage of water by having a flap or opening in the areas at or below the base flood elevation sufficient to allow floodwaters to pass freely.

#### **Section 4.027 Zones with Base Flood Elevation but no Floodway**

- 1) In areas within Zones A1-30 and AE on the community's FIRM with a base flood elevation, or where a base flood elevation is developed according to Section 4.025(2) but where no regulatory floodway has been designated, new construction, substantial improvements, or other development (including fill) shall be prohibited, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.
- 2) Applicants of proposed projects that increase the base flood elevation more than one foot should obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted.

#### **Section 4.028 Zones Without Base Flood Elevations**

- 1) These standards apply in riverine areas of special flood hazard where no base flood elevation data have been provided (A Zones):
- 2) When base flood elevation or floodway data have not been identified by FEMA in a Flood Insurance Study and /or Flood Insurance Rate Maps, the Floodplain Administrator shall obtain, review, and reasonably utilize scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer this ordinance. If data are not available from any source, only then subsection 3 shall apply.
- 3) Where the floodplain administrator has obtained base flood elevation data, applicants of proposed projects that increase the base flood elevation more than one foot shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted. ***Does this particular code, or the last sentence in 2) belong in this Section of code? It does not appear to fit.***
- 4) In special flood hazard areas without base flood elevation data, no encroachments,

including structures or fill, shall be located in an Area of Special Flood Hazard within an area equal to the width of the stream or fifty feet, whichever is greater, measured from the ordinary high water mark, unless a base flood elevation is developed by a licensed professional engineer.

#### **Section 4.029 Coastal High Hazard Area**

~~All other development and substantial improvements in coastal high hazard areas (V Zones) for which specific provisions are not specified in this ordinance or building codes, shall:~~

- ~~1) Be located outside the footprint of, and not structurally attached to, buildings and structures, and be permitted only if analysis by a registered design professional demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection onto adjacent buildings and structures.  
Exception: A deck that is structurally attached to a building or structure is allowed if the bottom of the lowest horizontal structural member is one (1) foot above the base flood elevation and any supporting members that extend below the base flood elevation comply with the foundation requirements that apply to the building or structure and a registered design professional demonstrates that the potential loads generated by the deck on the building will be mitigated.~~
- ~~2) Have nonstructural fill no steeper than one unit vertical to five units horizontal unless an engineering analysis demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection on adjacent development;~~
- ~~3) Not alter, or cause to be altered, sand dunes in such a way to cause increased potential flood damage.~~
- ~~4) Be anchored to prevent flotation, collapse or lateral movement resulting from wind and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;~~
- ~~5) Be constructed of flood damage and corrosion-resistant materials;~~
- ~~6) Be designed to limit creation of debris, and;~~
- ~~7) Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.~~

*There are many required code references that are not in the code above. The code above should be replaced with the Oregon Model Ordinance Section 5.6.*

#### **Section 4.030 Non-Coastal High Hazard Areas**

- 1) All development in non-coastal high hazard areas (A zones) for which specific provisions are not specified in this ordinance or building codes, shall:
- 2) Be located and constructed to minimize flood damage;
- 3) Be designed so as not to impede flow of flood waters under base flood conditions;
- 4) If located in a floodway, meet the limitations of Section 4.027 of this ordinance;
- 5) Be anchored to prevent flotation or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- 6) Be constructed of flood damage-resistant materials; and
- 7) Have electric service and or mechanical equipment elevated above the base flood

elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.

#### Section 4.031 Specific Standards for Areas of Shallow Flooding (AO and AH Zone)

~~In all areas of special flood hazards designated as areas of shallow flooding, the following provisions shall apply:~~

- ~~1) All new construction and substantial improvements of residential structures and manufactured homes shall have the lowest floor, including basement, elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade.~~
- ~~2) All new construction and substantial improvement of non-residential structures shall:
  - ~~(A) Have the lowest floor, including basement, elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade; or~~
  - ~~(B) Together with attendant utility and sanitary facilities be completely flood proofed to meet the flood proofing standard of Section 4.025 General Standards (§ 9).~~~~
- ~~3) Provide adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.~~

*There are many required code references that are not in the code above. The code above should be replaced with the Oregon Model Ordinance Section 5.5.*

#### Section 4.032 Requirement to Submit New Technical Data

- 1) Within six months of project completion, an applicant who obtains an approved Conditional Letter of Map Revision (CLOMR) from FEMA, or whose development modifies floodplain boundaries, ~~or modifies~~ base flood elevations, or alters a watercourse, shall obtain from FEMA a Letter of Map Revision (LOMR) reflecting the as-built changes to the FIRM.
- 2) It is the responsibility of the applicant to have technical data prepared in a format required for a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) and to submit such data to FEMA on the appropriate application forms. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
- 3) Applicants shall be responsible for all costs associated with obtaining a Conditional Letter of Map Amendment (CLOMR) or Letter of Map Revision from FEMA.
- 4) Clatsop County 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.

**MINUTES OF THE  
MARCH 20, 2018  
PLANNING  
COMMISSION  
MEETING**

Minutes of March 20, 2018  
Clatsop County Planning Commission  
Regular Session  
Judge Guy Boyington Building  
857 Commercial Street  
Astoria, Oregon 97103

The regular meeting was called to order at 10:04 a.m. by Chair Francis.

<u>Commissioners Present</u>	<u>Commissioners Absent</u>	<u>Staff Present</u>
Bruce Francis	Chris Farrar	Clancie Adams
Thomas Merrell	Jacque Pressley	Gail Henrikson
Michael Magyar		
Myrna Patrick		
Robin Risley		

*Commissioner Merrell moved and Commissioner Risley seconded to adopt the agenda as presented. Motion passed unanimously.*

**Business from the Public:**

There was no business from the public.

**Minutes:**

*Commissioner Patrick moved and Commissioner Merrell seconded to approve the February 13, 2018 Clatsop County Planning Commission Regular Meeting minutes. Motion passed with Commissioner Magyar abstaining.*

**Public Hearing - Legislative Hearing to consider proposed Ordinance #18-03:**

Considering revisions to the Flood Insurance Rate Map (FIRM) Panels, revised June 20, 2018, revisions to the Flood Insurance Study (FIS) for unincorporated Clatsop County, revised June 20, 2018; and amendments to the Land and Water Development and Use Ordinance 80-14 to revise Article 4, Special Districts, Sections 4.000-4.032 Flood Hazard Overlay District (FHO).

**No conflicts of interest or objections to the jurisdiction of the Commission to hear the matter at this time were reported.**

*Chair Francis called for the staff report.*

**Gail Henrikson, Community Development Director.**

Ms. Henrikson reviewed the staff report with a power point presentation highlighting the following:

- The process started in 2010 when the county adopted the FEMA Flood Insurance Rate Maps (FIRM). At that time the methodology used for determining those maps was questioned resulting in a revised study. The updated maps will go into effect on June 20, 2018.
- Adoption of the revised Flood Insurance Study justifying the map changes will include adoption of FEMA required updates to the county code, specifically provisions that address development in the flood hazard overlay. The county is required by state law to adopt the changes or lose participation in the National Flood Insurance Program which would restrict home buyers from obtaining conventional loans.
- In 1989 FEMA issued a statement with their definition of development which disallows any exceptions. The county code currently excludes seven items from permitting requirements; public agency signs,

1 driveways/parking lots without change to property grade, minor repairs, dredging, channeling,  
2 replacing utility facilities, accessory structures less than 200 square feet in area, and storage of  
3 equipment and material associated with residential uses. Performing any of these activities on your  
4 property will now require permits.

- 5 • Property located along the ocean and in the velocity zone must adhere to specific construction  
6 standards per FEMA.
- 7 •

8 ***Chair Francis called for public testimony.***

9  
10 **Henry Willener, 19645 NW Sauvie Island Road, Portland, OR.**

11 Mr. Willener questioned how a 1980 built house could be defined as a new building and would such older  
12 buildings be subject to the proposed changes. He also had concerns regarding a single person administrator  
13 and one person having that much authority over construction. Section 4.105 states these are minimum  
14 requirements; does that mean the administrator can enact other requirements as they see fit? The  
15 language is liberally construed in favor of the governing body but should be liberally construed in favor of  
16 the property owner and the applicant and should be very specific as to what the powers of the  
17 administrator are. He suggested an Oregon, Washington, Idaho consortium be formed to provide flood  
18 insurance to property owners.

19  
20 **David Hellberg, 80990 Gronnel Road, Seaside, OR**

21 Mr. Hellberg thinks flood insurance was available prior to the establishment of the national program and  
22 stated government needs to get out of the insurance business as it takes away our freedoms and erodes all  
23 of the things we hold dear.

24  
25 **Darrell Vinson, 93401 Knappa Dock Road, Astoria, OR**

26 Mr. Vinson stated the last flood overlay map he saw showed his house in the flood zone but showed the  
27 county road out of the flood zone even though his house is located 25 feet above the road. He also  
28 questioned how minor repairs to floats less than 200 square feet located in Warren Slue would be handled  
29 under the revisions.

30  
31 ***Chair Francis explained that the 2010 maps contained many anomalies and errors and that is why the***  
32 ***new maps, with LIDAR information, needs to be adopted. The 2010 maps are currently used by insurance***  
33 ***companies, mortgage holders, etc. and premiums are being based upon false information.***

34  
35 **Edwin Owen, 92925 Keller Road, Astoria, OR .**

36 Mr. Owen is very concerned with the government coming up with ideas that are then forced on the little  
37 guy. The government needs to get out of the insurance business and the public needs to establish co-ops to  
38 cover flood insurance needs and restore land owner rights.

39  
40 **Ken Johnson, 1497 Delaura Beach Lane, Warrenton, OR.**

41 Mr. Johnson related problems and costs he has encountered since purchasing a home in the flood zone.  
42 Costs have included hiring surveyors, bank imposed costs, etc. He questioned how to obtain a certified  
43 elevation certificate that will satisfy the bank and FEMA and determine if his property is or is not actually in  
44 the flood zone.

45  
46  
47  
48 **Beeb Ashcroft, 985 North Wahanna Road, Seaside, OR.**

49 Ms. Ashcroft owns property in the proposed change area that will impact her with regards to permitting  
50 and financial burdens when performing basic repairs to her 1929 built home. She is sympathetic to the fact

1 the county has to act on the FEMA proposals but she personally cannot afford flood insurance and  
2 questioned how the changes might devalue her property.

3  
4 **Steve Hess, 92081 Lewis & Clark Road, Astoria, OR.**

5 Mr. Hess questioned whether the only way for continued participation in the FEMA program is to comply  
6 with all of the requested changes. He also asked for clarification on how long Clatsop County has  
7 participated in the program, how often has it been updated, interpretation of permit requirements, reviews  
8 and costs, and the basis for setting insurance rates and increases. Mr. Hess feels we're being strong armed  
9 into complying with FEMA.

10  
11 **Kohel Haver, 89792 Ocean Avenue, Warrenton OR 97146**

12 Mr. Haver's property is now in the flood plain area, affecting both his mortgage and flood insurance rates.  
13 The property immediately north of his property is also included in the flood area but the property  
14 immediately south is not, even though they are all located at the same elevation. He feels the changes are  
15 arbitrary, do not make sense and will cost him thousands of dollars annually.

16  
17 **Steve Fulton, 3598 Grand Avenue, Astoria, OR 97103**

18 Mr. Fulton agrees it is beneficial to have the option of purchasing flood insurance but questions if the  
19 county needs to blanket adopt everything FEMA is asking for even though the language does provide a  
20 method to request a map change in specific areas. He is concerned with the seven items being removed  
21 from the code and the ramifications for properties located in flood zones? He doesn't agree with adopting  
22 the changes prior to considering floodplain versus floodway and the actual water displacement in those  
23 areas. The language change will require someone paving their driveway to apply for an \$84 permit but the  
24 required documents to obtain the permit could cost thousands of dollars. Mr. Fulton views the commission  
25 as representatives of the public and requested the county obtain a legal opinion to justify and explain the  
26 need for the changes prior to making a decision.

27  
28 **Tom Tetlow, 35072 Jefferson Lane, Astoria, OR 97103**

29 Mr. Tetlow owns properties in the Miles Crossing area and has issues with the ordinance language,  
30 especially Section 4.010. He asked who and how will it be determined what structures and land uses are  
31 unsuitable for human habitation because of the danger of flooding, how will the county insure potential  
32 property buyers are notified their property is in a flood area, and how will it be determined what minor  
33 repairs to existing buildings must be permitted? Mr. Tetlow feels the language is vague and questioned how  
34 much regulation is enough.

35  
36 **Gail Henrikson, Community Development Director**

37 Ms. Henrikson responded:

- 38 • Structures currently on the ground will not have to be brought up to code unless they are removed,  
39 replaced, or subject to substantial alterations. In these instances, current code requirements will need  
40 to be met.
- 41 • FEMA notified the county that adoption of the changes were required to be in compliance. Non-  
42 compliance will result in Clatsop County being unable to participate in the National Flood Insurance  
43 Program.
- 44 • A legal opinion would be helpful in informing the Board of Commissioners of the implications of their  
45 decision.

46  
47 ***Chair Francis closed Public Testimony.***

48  
49 ***Commissioner Magyar moved and Commissioner Risley seconded to recommend the Board of***  
50 ***Commissioners adopt the amendments to Section 4.000 of the Land and Water Development and Use***

1 **Ordinance, adopt the revised Flood Insurance Rate Map Panels dated June 20, 2018 and adopt the revised**  
2 **Insurance Study of unincorporated areas of Clatsop County dated Jun 20, 2018 in consideration of the**  
3 **testimony presented at the meeting and that further analysis of the development portion be made to the**  
4 **FEMA development regulations.**

5  
6 Roll Call:

7	Commissioner Risley	Yes
8	Commissioner Merrell	No
9	Commissioner Patrick	Yes
10	Commissioner Magyar	Yes
11	Chair Francis	Yes

12 Motion passed.

13  
14 **Chair Francis called for a recess at 11:43 a.m. and reconvened the meeting at 11:59 a.m.**

15  
16 **Chair Francis stated the commission no longer had a quorum as Commissioner Merrell needed to depart**  
17 **the meeting. He recommended the public hearing to consider proposed Ordinance #18-02 be continued to**  
18 **the next regular meeting April 10, 2018.**

19  
20 **Other Business:**

- 21 • Gail Henrikson asked that the by-law review be held over until the April 10, 2018 meeting.
- 22 • Election of officers was scheduled for the April 10, 2018 meeting.
- 23 • Gail Henrikson provided a heads up concerning upcoming updates to the LWDUO and Comprehensive
- 24 Plan documents.

25  
26 **As there was no further business or discussion, Chair Francis adjourned the meeting at 12:13 p.m.**

27  
28 Respectfully Submitted,

29  
30  
31 \_\_\_\_\_  
32 Bruce Francis  
33 Chairperson - Planning Commission

**PLANNING  
COMMISSION  
STAFF REPORT,  
DATED  
MARCH 12, 2018**



## Staff Report Ordinance #18-03

**REPORT DATE:** March 12, 2018

**HEARING DATE:** March 20, 2018

**REQUESTS:** Approval of text amendments to the *Land and Water Development and Use Ordinance 80-14*, Section 4.000. Flood Hazard Overlay, adoption of revised FEMA Flood Insurance Rate Maps (FIRMs):

PANEL 200 OF 800 / MAP 41007C0200F  
PANEL 204 OF 800 / MAP 41007C0204F  
PANEL 205 OF 800 / MAP 41007C0205F  
PANEL 208 OF 800 / MAP 41007C0208F  
PANEL 212 OF 800 / MAP 41007C0212F  
PANEL 214 OF 800 / MAP 41007C0214F  
PANEL 215 OF 800 / MAP 41007C0215F  
PANEL 216 OF 800 / MAP 41007C0216F  
PANEL 218 OF 800 / MAP 41007C0218F  
PANEL 352 OF 800 / MAP 41007C0352F  
PANEL 355 OF 800 / MAP 41007C0355F  
PANEL 358 OF 800 / MAP 41007C0358F  
PANEL 366 OF 800 / MAP 41007C0366F

PANEL 367 OF 800 / MAP 41007C0367F  
PANEL 368 OF 800 / MAP 41007C0368F  
PANEL 369 OF 800 / MAP 41007C0369F  
PANEL 502 OF 800 / MAP 41007C0502F  
PANEL 505 OF 800 / MAP 41007C0505F  
PANEL 506 OF 800 / MAP 41007C0506F  
PANEL 512 OF 800 / MAP 41007C0512F  
PANEL 514 OF 800 / MAP 41007C0514F  
PANEL 515 OF 800 / MAP 41007C0515F  
PANEL 652 OF 800 / MAP 41007C0652F  
PANEL 654 OF 800 / MAP 41007C0654F  
PANEL 662 OF 800 / MAP 41007C0662F  
PANEL 665 OF 800 / MAP 41007C0665F

and adoption of the Flood Insurance Study (FIS) #41007CV001B and #41007CV002B, revised June 20, 2018, Version Number 2.3.2.0, for unincorporated areas of Clatsop County.

**STAFF REVIEWER:** Gail Henrikson, Community Development Director

**RECOMMENDATION:** Recommend the Planning Commission recommend that the the Board of Commissioners adopt the amendments to Section 4.000 of the *Land and Water Development and Use Ordinance*, adopt the revised Flood Insurance Rate Map (FIRM) panels dated June 20, 2018, and adopt the revised Flood Insurance Study for unincorporated areas of Clatsop County, dated June 20, 2018.

**EXHIBITS:**

1. FEMA Letter dated December 20, 2017
2. Special Flood Hazard Area Map
3. Proposed Flood Hazard Overlay Text
4. Public Comment

## I. BACKGROUND

### **Revised FEMA Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS)**

On May 5, 2017, FEMA notified the County of proposed modifications to the Flood Hazard Determinations affecting the Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS). A 90-day appeal period started on May 19, 2017. During that appeal period, FEMA did not receive any valid requests for changes to the Flood Hazard Determinations. FEMA declared the Flood Hazard Determinations final on December 20, 2017. The new Flood Insurance Rate Map (FIRM) and the revised Flood Insurance Study (FIS) will become effective on June 20, 2018. The County must adopt the revised FIRMs and FIS by June 20, 2018, in order to continue to participate in the National Flood Insurance Program. A copy of the letter from FEMA, dated December 20, 2017, notifying the County of the final Flood Hazard Determinations, is attached as **Exhibit 1**.

The FIRM and FIS revisions primarily apply to properties located along the coastline. Approximately 700 properties within unincorporated Clatsop County are affected by these changes.

### **Amendments to Section 4.000. Flood Hazard Overlay District (FHO), Land and Water Development and Use Ordinance 80-14 (LWDUO)**

Clatsop County voluntarily participates in the National Flood Insurance Program (NFIP). Because of the County's participation in the NFIP, it is mandated to meet minimum criteria of the program. Therefore, in addition to adoption of the revised FIRMs and FIS, FEMA is also requiring the County to update and amend its regulations related to development in the Special Flood Hazard Overlay Areas. While the FIRM and FIS revisions primarily apply to properties located along the coastline, the proposed revisions to Section 4.000, LWDUO, would apply to all properties in unincorporated Clatsop County that are wholly or partially located within the Special Flood Hazard Area. Maps showing the location of the Special Flood Hazard Areas are attached as **Exhibit 2**.

The text revisions are based on a model ordinance provided by the State Department of Land Conservation and Development (DLCD). The most significant change requested by FEMA is to the definition of "Development". The current definition exempts the following seven activities from having to obtain a Floodplain Development Permit:

- (1) Signs, markers, aids, etc. placed by a public agency to serve the public
- (2) Driveways, parking lots, or other open space use areas where no alteration of topography occurs;
- (3) Minor repairs or improvements to existing structures provided that the alterations do not increase the size or intensity of use, and do not constitute repair of substantial damage, or substantial improvement as defined in this section;
- (4) Customary dredging associated with routine channel maintenance consistent with State or Federal laws and permits;
- (5) Replacement of utility facilities necessary to serve established and permitted uses;
- (6) Accessory residential or noncommercial structures less than 200 square feet in area;
- (7) Storage of equipment and material associated with residential uses.

Removing these exemptions means that property owners would be required to obtain permits for all these activities in the future. It does not prohibit these activities and permits may be issued if all applicable criteria are met.

Staff has met with or spoken with representatives from both FEMA and DLCD to verify what, if any, latitude the County has with regard to the required changes. In an email from Roxanne Pilkenton, FEMA Floodplain Management Specialist, dated March 8, 2018, she states that:

FEMA's stand is that the exclusions that Clatsop County has offered in their definition of development makes their definition of development noncompliant with the NFIP [National Flood Insurance Program]. FEMA takes the definition of development seriously and currently push back from the state of Idaho has them facing suspension if they continue to allow exemptions that are expressly included in the definition of development

The proposed amendments are attached as **Exhibit 3**. The amendments also include new language detailing how structures in the V zones (typically areas along the coastline) are required to be constructed. The language does not prohibit construction within those areas, but instead specifies *how* structures must be built. Adoption of the proposed amendments would ensure compliance with applicable state and federal criteria.

**Clatsop County is required to adopt the FIS and FIRMs and the amendments to Section 4.000 before June 20, 2018, or face suspension from the NFIP. Suspension would make Clatsop County property owners ineligible for the renewal of flood insurance policies and the issuance of new policies.**

### Timeline

Below is a timeline of the map revision process for Clatsop County:

<b>May 16, 2016:</b>	Preliminary FIS and DFIRM products released by FEMA
<b>June 15, 2016:</b>	Community Coordination Officers meeting with stakeholders
<b>August 15, 2016:</b>	Public open house held by FEMA
<b>March 15, 2017:</b>	Flood Hazard Docket published in the Federal Register
<b>May 12 and 19, 2017:</b>	Legal notice published in <i>The Daily Astorian</i>
<b>May 19-August 16, 2017:</b>	90-day appeal period
<b>December 20, 2017:</b>	FEMA issues Letter of Final Determination for Clatsop County
<b>June 20, 2018:</b>	New FIRMs and FIS become effective

## II. EVALUATION OF APPLICABLE CRITERIA

### A. LAND AND WATER DEVELOPMENT AND USE ORDINANCE 80-14

#### Section 2.035 Type IV Procedure.

- (1) Type IV actions are legislative processes. They involve the creation, broad scale implementation or revision of public policy. These include amendments to the text of the Comprehensive Plan, Community Plans, or Zoning Code. Large-scale changes in Community Development maps also may be characterized as legislative where a larger number of property owners are directly affected. The Type IV procedure is for use where indicated in this Ordinance.
- (2) Under the Type IV procedure, the Director shall schedule a public hearing pursuant to Section 2.105 before the Planning Commission.
- (3) The Director shall mail and publish a notice pursuant to Section 2.315.

### SECTION 2.300 LEGISLATION.

#### Section 2.310 Legislative Action Under This Ordinance.

- (1) The following are legislative actions under this Ordinance:
  - (A) An amendment to this Ordinance.
  - (B) A district or zone change action the County Commission has designated as legislative after finding the matter at issue involves such a substantial area and number of property

owners or such broad public policy changes that administrative processing would be inappropriate.

- (2) A legislative action shall follow the Type IV procedure subject to the modifications and supplements of Sections 2.310 to 2.335.

Section 2.315 Legislative Hearing Notice.

Notice of a hearing on a legislative decision under this Ordinance need not include a mailing to property owners where the matter at issue does not relate to a specific geographic area. Where such mailing or posting is omitted, the Community Development Director shall prepare a notice program designed to reach persons believed to have a particular interest and to provide the general public with a reasonable opportunity to be aware of the hearings on the proposal.

Department Finding:

Clatsop County is processing this text amendment as a Type IV Legislative procedure with a public hearing to be held before the Planning Commission on March 20, 2018 and additional hearings to be tentatively held on April 25 and May 9, 2018, before the Board of Commissioners. Published notice was provided in accordance with Section 2.035 and 2.315. **The criteria have been met.**

**B. COMPREHENSIVE PLAN TEXT AMMENDMENTS**

**APPLICABLE CRITERIA**

**COMPREHENSIVE PLAN GOALS AND POLICIES**

**Goal 1 Element – Citizen Involvement:**

Policies

2. The Planning Commission and active Citizen Advisory Committees shall hold their meetings in such a way that the public is notified in advance and given the opportunity to attend and participate in a meaningful fashion.
5. Citizens shall be provided the opportunity to be involved in the phases of the planning process as set forth and defined in the goals and guidelines for Land Use Planning, including Preparation of Plans and Implementation Measures, Plan Content, Plan Adoption, Minor Changes and Major Revisions in the Plan and Implementation Measures.
7. Clatsop County shall use the news media, mailings, meetings, and other locally available means to communicate planning information to citizens and governmental agencies. Prior to public hearings regarding major Plan revisions, notices shall be publicized.
9. Public notices will also be sent to affected residents concerning zone and Comprehensive Plan changes, conditional uses, subdivisions and planned developments.

Clatsop County is processing this text amendment as a Type IV Legislative procedure with a public hearing to be held before the Planning Commission on March 20, 2018, with additional hearings to be tentatively held on April 25 and May 9, 2018, before the Board of Commissioners. Published notice was provided in accordance with Section 2.035 and 2.315. On February 16, 2018, mailed notice of the Planning Commission Hearing was provided to all property owners within Special Flood Hazard Areas. **The criteria have been met.**

Department Finding:

The text amendment satisfies the applicable citizen involvement policies of the Goal 1 element of the Clatsop County Comprehensive Plan.

**Goal 2 Element – Land Use Planning:**

Not applicable

**Goal 3 Element – Agricultural Lands:**

Not applicable

**Goal 4 Element – Forest Lands:**

Not Applicable

**Goal 5 Element – Open Space, Scenic, Historic Areas and Natural Resources:**

Not Applicable

**Goal 6 Element – Air, Water, and Land Quality:**

Not Applicable.

**Goal 7 Element – Natural Hazards:**

Goal

To protect life and property from natural disasters and hazards.

Flood Hazard Policies

1. Clatsop County recognizes the value of an integrated flood hazard management program in order to protect human life and property and shall continue participation in the Federal Flood Insurance Program.

Analysis:

Adoption of the revised FIRMs and FIS, as well as updating of the County's flood hazard policies will allow for continued participation in the NFIP.

2. Flood hazard engineering works are not the final answer to deter potential flooding; a sound land use program must precede them.
3. A floodplain ordinance shall be adopted which sets forth development standards for the floodway and areas of special flood hazard. Structures for human habitation shall be prohibited from the floodway. Structures in the floodway fringe shall be floodproofed or required to have their first floor elevated at least one foot above the 100-year flood level.

Analysis:

Adoption of the revised FIRMs and FIS, as well as updating of the County's flood hazard policies will allow for implementation of updated land-use development standards in the Special Flood Hazard Areas.

4. The County shall strive to make flood hazard information available to the public to insure that owners and potential buyers of flood prone land are aware of the hazard.

Analysis:

Clatsop County offers flood hazard information on its website and WebMaps online application. The proposed text amendments do not modify or change this practice.

5. Maintenance and repair of existing flood control works shall be encouraged. Where development occurs or is planned on existing diked lands, the dikes shall be improved and

maintained. Construction of new dikes for establishing future development in floodplain areas shall be discouraged.

**Analysis:**

The land use policies of Clatsop County currently encourage the use of existing flood control structures and discourage the construction of new dikes, except for the purposes of habitat and wetland restoration. The proposed text amendments do not modify or change this practice.

6. All future river or stream crossings shall be designed to provide adequate waterway openings and bridge clearance above flood flows. Existing roads and bridges that are subject to being undermined or washed out will be identified on maps for reference during emergency situations.

**Analysis:**

The flood hazard policies of Clatsop County currently require a “no-rise” certification for bridges, the proposed text amendments do not modify or change this requirement.

7. Agriculture, forestry, open space and recreation shall be preferred uses of flood prone areas.
8. Community structures such as hospitals, public schools, nursing homes, etc. will not be built in areas identified as flood prone.

**Analysis:**

The flood hazard policies of Clatsop County currently discourage the placement of critical facilities in the floodplain. The proposed text amendments do not modify or change this requirement.

9. Subdivisions occurring within floodplain areas shall be encouraged to cluster land uses outside of the floodplain area leaving the floodplain in open space.

**Analysis:**

The flood hazard policies of Clatsop County currently encourage clustering of development in the floodplain. The proposed text amendments do not modify or change this practice.

10. Filling and construction within designated floodways shall be prohibited if it presents a danger of raising future flood levels.

**Analysis:**

The flood hazard policies of Clatsop County currently require a “no-rise” certification for all development in floodways. The proposed text amendments do not modify or change this requirement.

11. Transportation systems constructed in floodplains shall be designed so as to cause the least adverse hydraulic effect considering expected flood flows and debris loads.

**Analysis:**

The flood hazard policies of Clatsop County currently require all new development to minimize flood damage. The LWDUO does not currently include policies or regulations regarding transportation systems. The proposed text amendments do not modify or change this.

**Department Finding:**

The text amendment satisfies the applicable citizen involvement policies of the Goal 7 element of the Clatsop County Comprehensive Plan.

**Goal 8 Element – Recreation:**

Not applicable

**Goal 9 Element – Economy:**

Not applicable

**Goal 10 Element – Population & Housing:**

Not applicable

**Goal 11 Element – Public Facilities and Services:**

Not applicable

**Goal 12 Element – Transportation:**

Not applicable

**Goal 13 Element – Energy Conservation:**

Not applicable

**Goal 14 Element – Urbanization:**

Not applicable

**Goal 16/17 Elements – Estuarine Resources and Coastal Shorelands:**

Not applicable

**VI. PUBLIC COMMENT**

Staff received over 200 telephone, email and in-person inquiries regarding the proposed changes. While staff emailed, mailed or provided copies of the proposed ordinance to many individuals, only two sets of written comments regarding the ordinance were received. Those comments are attached as **Exhibit 4**.

**Vicki Wollam**

Staff Note: The Wollam property is located within incorporated Seaside. Therefore, the proposed amendments would not affect Ms. Wollam's property.

**Bill and Christie Smith**

Staff Note: The revisions noted in the email relate to the changes to the Flood Insurance Rate Maps and not to the proposed amendments to the LWDUO. There is a process that property owners may initiate through FEMA to revise the FIRM. That process would be conducted independent of the County.

**VII. CONCLUSION and RECOMMENDATION:**

The department has evaluated the application materials against the appropriate criteria contained in the Clatsop County Comprehensive Plan and the *Land and Water Development and Use Ordinance 80-14*. The proposed text amendments do not conflict with the applicable criteria.

The Department recommends that the Planning Commission recommend that the Board of Commissioners adopt the amendments to Section 4.000 of the *Land and Water Development and Use Ordinance*, adopt the revised Flood Insurance Rate Map (FIRM) panels dated June 20, 2018, and adopt the revised Flood Insurance Study for unincorporated areas of Clatsop County, dated June 20, 2018.

# EXHIBIT 1



# Federal Emergency Management Agency

Washington, D.C. 20472

RECEIVED  
Clatsop County

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:  
115-I

DEC 26 2017

December 20, 2017

Land Use Planning

Scott Lee  
Chair, Board of Commissioners  
Clatsop County  
County Government Offices  
800 Exchange Street, Suite 410  
Astoria, Oregon 97103

Community: Clatsop County, Oregon  
(Unincorporated Areas)  
Community No.: 410027  
Map Panels Affected: See FIRM Index

Dear Mr. Lee:

On May 5, 2017, you were notified of proposed modified flood hazard determinations (FHDs) affecting the Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for the Unincorporated Areas of Clatsop County, Oregon. The statutory 90-day appeal period that was initiated on May 19, 2017, when the Department of Homeland Security's Federal Emergency Management Agency (FEMA) published a notice of proposed FHDs for your community in *The Daily Astorian*, has elapsed.

FEMA received no valid requests for changes in the FHDs. Therefore, the determination of the Agency as to the FHDs for your community is considered final. The final FHDs will be published in the *Federal Register* as soon as possible. The modified FHDs and revised map panels, as referenced above, will be effective as of June 20, 2018, and revise the FIRM that was in effect prior to that date. For insurance rating purposes, the community number and new suffix code for the panels being revised are indicated above and on the maps and must be used for all new policies and renewals.

The modifications are pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (Public Law 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, Public Law 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Because of the modifications to the FIRM and FIS report for your community made by this map revision, certain additional requirements must be met under Section 1361 of the 1968 Act, as amended, within 6 months from the date of this letter. Prior to June 20, 2018, your community is required, as a condition of continued eligibility in the National Flood Insurance Program (NFIP), to adopt or show evidence of adoption of floodplain management regulations that meet the standards of Paragraph 60.3(d and e) of the NFIP regulations. These standards are the minimum requirements and do not supersede any State or local requirements of a more stringent nature.

It must be emphasized that all the standards specified in Paragraph 60.3(d and e) of the NFIP regulations must be enacted in a legally enforceable document. This includes the adoption of the effective FIRM and FIS report to which the regulations apply and the modifications made by this map revision. Some of the standards should already have been enacted by your community. Any additional requirements can be met by taking one of the following actions:

1. Amending existing regulations to incorporate any additional requirements of Paragraph 60.3(d and e);
2. Adopting all the standards of Paragraph 60.3(d and e) into one new, comprehensive set of regulations; or
3. Showing evidence that regulations have previously been adopted that meet or exceed the minimum requirements of Paragraph 60.3(d and e).

Communities that fail to enact the necessary floodplain management regulations will be suspended from participation in the NFIP and subject to the prohibitions contained in Section 202(a) of the 1973 Act as amended.

A Consultation Coordination Officer (CCO) has been designated to assist your community with any difficulties you may be encountering in enacting the floodplain management regulations. The CCO will be the primary liaison between your community and FEMA. For information about your CCO, please contact:

Mr. David M. Ratté  
 Engineer, Federal Emergency Management Agency, Region 10  
 130 - 228th Street, Southwest  
 Bothell, WA 98021-8627  
 (425) 487-4657

To assist your community in maintaining the FIRM, we have enclosed a Summary of Map Actions (SOMA) to document previous Letter of Map Change (LOMC) actions (i.e., Letters of Map Amendment (LOMAs), Letters of Map Revision (LOMRs)) that will be superseded when the revised FIRM panels referenced above become effective. Information on LOMCs is presented in the following four categories: (1) LOMCs for which results have been included on the revised FIRM panels; (2) LOMCs for which results could not be shown on the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lots or structures involved were outside the Special Flood Hazard Area as shown on the FIRM; (3) LOMCs for which results have not been included on the revised FIRM panels because the flood hazard information on which the original determinations were based is being superseded by new flood hazard information; and (4) LOMCs issued for multiple lots or structures where the determination for one or more of the lots or structures cannot be revalidated through an administrative process like the LOMCs in Category 2 above. LOMCs in Category 2 will be revalidated through a single letter that reaffirms the validity of a previously issued LOMC; the letter will be sent to your community shortly before the effective date of the revised FIRM and will become effective 1 day after the revised FIRM becomes effective. For the LOMCs listed in Category 4, we will review the data previously submitted for the LOMA or LOMR request and issue a new determination for the affected properties after the revised FIRM becomes effective.

The FIRM and FIS report for your community have been prepared in our countywide format, which means that flood hazard information for all jurisdictions within Clatsop County, Oregon has been combined into one FIRM and FIS report. When the FIRM and FIS report are printed and distributed, your community will receive only those panels that present flood hazard information for your community. We will provide complete sets of the FIRM panels to county officials, where they will be available for review by your community.

The FIRM panels have been computer-generated. Once the FIRM and FIS report are printed and distributed, the digital files containing the flood hazard data for the entire county can be provided to your

community for use in a computer mapping system. These files can be used in conjunction with other thematic data for floodplain management purposes, insurance purchase and rating requirements, and many other planning applications. Copies of the digital files or paper copies of the FIRM panels may be obtained by calling our FEMA Map Information eXchange (FMIX), toll free, at 1-877-FEMA-MAP (1-877-336-2627). In addition, your community may be eligible for additional credits under our Community Rating System if you implement your activities using digital mapping files.

If you have any questions regarding the necessary floodplain management measures for your community or the NFIP in general, we urge you to call the Director, Federal Insurance and Mitigation Division of FEMA in Bothell, Washington, at (425) 487-4600 for assistance. If you have any questions concerning mapping issues in general or the enclosed Summary of Map Actions please call our FMIX at the number shown above. Additional information and resources your community may find helpful regarding the NFIP and floodplain management, such as *The National Flood Insurance Program Code of Federal Regulations*, *Answers to Questions About the NFIP*, *Use of Flood Insurance Study (FIS) Data as Available Data*, *Frequently Asked Questions Regarding the Effect that Revised Flood Hazards have on Existing Structures*, and *National Flood Insurance Program Elevation Certificate and Instructions*, can be found on our website at <http://www.floodmaps.fema.gov/lfd>. Paper copies of these documents may also be obtained by calling our FMIX.

Sincerely,



Luis Rodriguez, P.E., Director  
Engineering and Modeling Division  
Federal Insurance and Mitigation Administration

Enclosure:

Final Summary of Map Actions

cc: Community Map Repository  
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## FINAL SUMMARY OF MAP ACTIONS

Community: CLATSOP COUNTY

Community No: 410027

To assist your community in maintaining the Flood Insurance Rate Map (FIRM), we have summarized below the effects of the enclosed revised FIRM panels(s) on previously issued Letter of Map Change (LOMC) actions (i.e., Letters of Map Revision (LOMRs), Letter of Map Revision based on Fill (LOMR-Fs), and Letters of Map Amendment (LOMAs)) that will be affected when the revised FIRM becomes effective on June 20, 2018.

**1. LOMCs Incorporated**

The modifications effected by the LOMCs listed below will be reflected on the revised FIRM. In addition, these LOMCs will remain in effect until the revised FIRM becomes effective.

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
			NO CASES RECORDED		

**2. LOMCs Not Incorporated**

The modifications effected by the LOMCs listed below will not be reflected on the revised FIRM panels or will not be reflected on the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lot(s) or structure(s) involved were outside the Special Flood Hazard Area, as shown on the FIRM. These LOMCs will remain in effect until the revised FIRM becomes effective. These LOMCs will be revalidated free of charge 1 day after the revised FIRM becomes effective through a single revalidation letter that reaffirms the validity of the previous LOMCs.

**2A. LOMCs on Revised Panels**

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	11-10-0980A	04/28/2011	PARCEL 3, PARTITION PLAT NO. 2004-016 -- 89060 EASY WAY ROAD	41007C0366E	41007C0366F
LOMR-F	12-10-0737A	08/21/2012	85883 HIGHWAY 101	41007C0506E	41007C0506F

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## 2B. LOMCs on Unrevised Panels

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	93-RX-0092	06/04/1993	SECTION 9, T8N, R7W, WILLAMETTE MERIDIAN	4100270013A	41007C0385E
LOMA	95-10-003A	01/18/1995	PORTION OF SECTION 15, T7N, R9W	4100270023A	41007C0385E
LOMA	99-10-018A	11/04/1998	VINEMAPLE ACRES, BLOCK 1, LOTS 21-22	4100270060A	41007C0595E
LOMA	99-10-221A	03/01/1999	PARTITION PLAT NO. 1995-008, PARCEL NO. 1	4100270023A	41007C0405E
LOMA	04-10-0432A	04/09/2004	92220 LEWIS AND CLARK ROAD - PORTION OF SECTION 30, T8N, R9W, W.M.	4100270021B	41007C0240E
LOMR-F	05-10-0569A	10/04/2005	PORTION OF SECTION 8, T4N, R8W, W.M.	4100270052A	41007C0705E
LOMA	06-10-B149A	03/09/2006	89558 LOGAN ROAD - Sec 7, T7N, R9W, W.M.	4100270023A	41007C0380E
LOMA	06-10-B537A	08/17/2006	A PORTION OF Section 4, T4N, R7W, W.M. - 79490 HIGHWAY 103	4100270060A	41007C0735E
LOMA	07-10-0097A	11/21/2006	89817 YOUNGS RIVER ROAD - A portion of Sections 9, 10, 15, and 18, T7N, R9W, W.M.	4100270023A	41007C0385E
LOMA	07-10-0096A	11/30/2006	RIVER RANCH SUBDIV, Portions of BLOCKS 1, 2, 3 & 4 - RIVER RANCH, Columbia River, & Overlook	4100270027A	41007C0340E
LOMA	07-10-0179A	01/11/2007	RIVER RANCH SUBDIV, LOT 4, BLOCK 2 - 91610 Columbia River Road	4100270027A	41007C0340E
LOMA	08-10-0236A	04/22/2008	RIVER RANCH SUBDIV, BLOCK 2, LOT 8 - 91636 COLUMBIA RIVER ROAD	4100270027A	41007C0340E
LOMA	08-10-0589A	07/15/2008	RIVER RANCH SUBDIV, BLOCK 2, LOT 8 - 91630 COLUMBIA RIVER ROAD	4100270027A	41007C0340E
LOMA	11-10-0487A	02/15/2011	46744 OLD 77 VESPER LANE	41007C0610E	41007C0610E
LOMA	11-10-1071A	05/12/2011	91402 YOUNGS RIVER ROAD	41007C0240E	41007C0240E

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LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	12-10-0504A	03/22/2012	PORTION OF LOTS 5 & 10 – 94404 ALDRICH POINT ROAD	41007C0285E	41007C0285E
LOMA	12-10-1065A	05/31/2012	PARCEL 2, PARTITION PLAT NO. 1999-021 – 91292 KIRWEN DRIVE	41007C0385E	41007C0385E
LOMA	13-10-0107A	01/10/2013	91090 YOUNGS RIVER ROAD (POLE BARN)	41007C0380E	41007C0380E
LOMA	13-10-0441A	01/10/2013	91090 YOUNGS RIVER ROAD (HOUSE)	41007C0380E	41007C0380E
LOMA	13-10-0547A	03/07/2013	92811 JOHN DAY RIVER ROAD	41007C0242E	41007C0242E
LOMA	14-10-0088A	10/29/2013	RIVER RANCH, BLOCK 4, LOT 5 – 47048 RIVER RANCH LANE	41007C0320E	41007C0320E
LOMA	14-10-0186A	12/12/2013	LOT 9, BLOCK 1, RIVER RANCH -- 47063 RIVER RANCH LANE	41007C0320E 41007C0340E	41007C0320E 41007C0340E
LOMA	14-10-0320A	12/12/2013	LTS 1-2,6,8,10 & 12, BLK 4, RIVER RANCH – 47008, 47014, 47058, 47070, 47100 & 47122 RIVER RANCH LN	41007C0320E 41007C0340E	41007C0320E 41007C0340E
LOMA	14-10-0322A	12/12/2013	LOTS 1, 7, 8 AND 10, BLOCK 3, RIVER RANCH	41007C0340E	41007C0340E
LOMA	14-10-0311A	12/17/2013	LOTS 3 AND 5, BLOCK 2, RIVER RANCH -- 47063 RIVER RANCH LANE: A VACANT LOT	41007C0340E	41007C0340E
LOMA	14-10-1279A	04/24/2014	RIVER RANCH SUBDIVISION, BLOCK 1, LOT 5 – 47043 RIVER RANCH LANE	41007C0320E	41007C0320E
LOMA	14-10-1578A	07/08/2014	LOT 9, BLOCK 2, RIVER RANCH SUBDIVISION – 91638 COLUMBIA RIVER ROAD	41007C0340E	41007C0340E
LOMA	15-10-0229A	01/08/2015	LOT 4, BLOCK 1, RIVER RANCH – 47031 RIVER RANCH LANE	41007C0320E	41007C0320E
LOMR-VZ	15-10-1100A	06/25/2015	SECTION 19, T4N, R10W – 8056 CARNAHAN ROAD	41007C0655E	41007C0655E
LOMA	15-10-1493A	10/02/2015	RIVER RANCH, BLOCK 4, LOT 11 -- 47108 RIVER RANCH LANE	41007C0340E	41007C0340E
LOMA	15-10-1513A	09/29/2015	RIVER RANCH, BLOCK 3, LOT 3 -- 91597 COLUMBIA RIVER ROAD	41007C0340E	41007C0340E

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LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
LOMA	17-10-0054A	11/23/2016	RIVER RANCH, BLOCK 4, LOT 15 – RIVER RANCH LANE	41007C0340E	41007C0340E
LOMA	17-10-0053A	12/02/2016	RIVER RANCH, BLOCK 3, LOT 4 – COLUMBIA RIVER ROAD	41007C0340E	41007C0340E
LOMA	17-10-0740A	03/09/2017	SECTION 20, T5N, R9W – 36286 HIGHWAY 26	41007C0540E	41007C0540E

**3. LOMCs Superseded**

The modifications effected by the LOMCs listed below have not been reflected on the Final revised FIRM panels because they are being superseded by new or revised flood hazard information or the information available was not sufficient to make a determination. The reason each is being superseded is noted below. These LOMCs will no longer be in effect when the revised FIRM becomes effective.

LOMC	Case No.	Date Issued	Project Identifier	Reason Determination Will be Superseded
			NO CASES RECORDED	

1. Insufficient information available to make a determination.
2. Lowest Adjacent Grade and Lowest Finished Floor are below the proposed Base Flood Elevation.
3. Lowest Ground Elevation is below the proposed Base Flood Elevation.
4. Revised hydrologic and hydraulic analyses.
5. Revised topographic information.
6. Superseded by another LOMC.

**4. LOMCs To Be Redetermined**

The LOMCs in Category 2 above will be revalidated through a single revalidation letter that reaffirms the validity of the determination in the previously issued LOMC. For LOMCs issued for multiple lots or structures where the determination for one or more of the lots or structures is no longer valid, the LOMC cannot be revalidated through this administrative process. Therefore, we will review the data previously submitted for the LOMC requests listed below and if appropriate issue a new determination for the affected properties after the effective date of the revised FIRM.

LOMC	Case No.	Date Issued	Project Identifier	Original Panel	Current Panel
			NO CASES RECORDED		

**§ 59.24 Suspension of community eligibility.**

(a) A community eligible for the sale of flood insurance shall be subject to suspension from the Program for failing to submit copies of adequate flood plain management regulations meeting the minimum requirements of paragraphs (b), (c), (d), (e) or (f) of § 60.3 or paragraph (b) of §§ 60.4 or 60.5, within six months from the date the Federal Insurance Administrator provides the data upon which the flood plain regulations for the applicable paragraph shall be based. Where there has not been any submission by the community, the Federal Insurance Administrator shall notify the community that 90 days remain in the six month period in order to submit adequate flood plain management regulations. Where there has been an inadequate submission, the Federal Insurance Administrator shall notify the community of the specific deficiencies in its submitted flood plain management regulations and inform the community of the amount of time remaining within the six month period. If, subsequently, copies of adequate flood plain management regulations are not received by the Administrator, no later than 30 days before the expiration of the original six month period the Federal Insurance Administrator shall provide written notice to the community and to the state and assure publication in the FEDERAL REGISTER under part 64 of this subchapter of the community's loss of eligibility for the sale of flood insurance, such suspension to become effective upon the expiration of the six month period. Should the community remedy the defect and the Federal Insurance Administrator receive copies of adequate flood plain management regulations within the notice period, the suspension notice shall be rescinded by the Federal Insurance Administrator. If the Federal Insurance Administrator receives notice from the State that it has enacted adequate flood plain management regulations for the community within the notice period, the suspension notice shall be rescinded by the Federal Insurance Administrator. The community's eligibility shall remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Federal Insurance Administrator.

(b) A community eligible for the sale of flood insurance which fails to adequately enforce flood plain management regulations meeting the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5 shall be subject to probation. Probation shall represent formal notification to the community that the Federal Insurance Administrator regards the community's flood plain management program as not compliant with NFIP criteria. Prior to imposing probation, the Federal Insurance Administrator (1) shall inform the community upon 90 days prior written notice of the impending probation and of the specific program deficiencies and violations relative to the failure to enforce, (2) shall, at least 60 days before probation is to begin, issue a press release to local media explaining the reasons for and the effects of probation, and (3) shall, at least 90 days before probation is to begin, advise all policyholders in the community of the impending probation and the additional premium that will be charged, as provided in this paragraph, on policies sold or renewed during the period of probation. During this 90-day period the community shall have the opportunity to avoid probation by demonstrating compliance with Program requirements, or by correcting Program deficiencies and remedying all violations to the maximum extent possible. If, at the end of the 90-day period, the Federal Insurance Administrator determines that the community has failed to do so, the probation shall go into effect. Probation may be continued for up to one year after the community corrects all Program deficiencies and remedies all violations to the maximum extent possible. Flood Insurance may be sold or renewed in the community while it is on probation. Where a policy covers property located in a community placed on probation on or after October 1, 1986, but prior to October 1, 1992, an additional premium of \$25.00 shall be charged on each such policy newly issued or renewed during the one-year period beginning on the date the community is placed on probation and during any successive one-year periods that begin prior to October 1, 1992. Where a community's probation begins on or after October 1, 1992, the additional premium described in the preceding sentence shall be \$50.00, which shall also be charged during any successive one-year periods during which the community remains on probation for any part thereof. This \$50.00 additional premium shall further be charged during any successive one-year periods that begin on or after October 1, 1992, where the preceding one-year probation period began prior to October 1, 1992.

(c) A community eligible for the sale of flood insurance which fails to adequately enforce its flood plain management regulations meeting the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5

and does not correct its Program deficiencies and remedy all violations to the maximum extent possible in accordance with compliance deadlines established during a period of probation shall be subject to suspension of its Program eligibility. Under such circumstances, the Federal Insurance Administrator shall grant the community 30 days in which to show cause why it should not be suspended. The Federal Insurance Administrator may conduct a hearing, written or oral, before commencing suspensive action. If a community is to be suspended, the Federal Insurance Administrator shall inform it upon 30 days prior written notice and upon publication in the FEDERAL REGISTER under part 64 of this subchapter of its loss of eligibility for the sale of flood insurance. In the event of impending suspension, the Federal Insurance Administrator shall issue a press release to the local media explaining the reasons and effects of the suspension. The community's eligibility shall only be reinstated by the Federal Insurance Administrator upon his receipt of a local legislative or executive measure reaffirming the community's formal intent to adequately enforce the flood plain management requirements of this subpart, together with evidence of action taken by the community to correct Program deficiencies and remedy to the maximum extent possible those violations which caused the suspension. In certain cases, the Federal Insurance Administrator, in order to evaluate the community's performance under the terms of its submission, may withhold reinstatement for a period not to exceed one year from the date of his receipt of the satisfactory submission or place the community on probation as provided for in paragraph (b) of this section.

(d) A community eligible for the sale of flood insurance which repeals its flood plain management regulations, allows its regulations to lapse, or amends its regulations so that they no longer meet the minimum requirements set forth in §§ 60.3, 60.4 and/or 60.5 shall be suspended from the Program. If a community is to be suspended, the Federal Insurance Administrator shall inform it upon 30 days prior written notice and upon publication in the FEDERAL REGISTER under part 64 of this subchapter of its loss of eligibility for the sale of flood insurance. The community eligibility shall remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Federal Insurance Administrator.

(e) A community eligible for the sale of flood insurance may withdraw from the Program by submitting to the Federal Insurance Administrator a copy of a legislative action that explicitly states its desire to withdraw from the National Flood Insurance Program. Upon receipt of a certified copy of a final legislative action, the Federal Insurance Administrator shall withdraw the community from the Program and publish in the FEDERAL REGISTER under part 64 of this subchapter its loss of eligibility for the sale of flood insurance. A community that has withdrawn from the Program may be reinstated if it submits the application materials specified in § 59.22(a).

(f) If during a period of ineligibility under paragraphs (a), (d), or (e) of this section, a community has permitted actions to take place that have aggravated existing flood plain, mudslide (i.e., mudflow) and/or flood related erosion hazards, the Federal Insurance Administrator may withhold reinstatement until the community submits evidence that it has taken action to remedy to the maximum extent possible the increased hazards. The Administrator may also place the reinstated community on probation as provided for in paragraph (b) of this section.

(g) The Federal Insurance Administrator shall promptly notify the servicing company and any insurers issuing flood insurance pursuant to an arrangement with the Federal Insurance Administrator of those communities whose eligibility has been suspended or which have withdrawn from the program. Flood insurance shall not be sold or renewed in those communities. Policies sold or renewed within a community during a period of ineligibility are deemed to be voidable by the Federal Insurance Administrator whether or not the parties to sale or renewal had actual notice of the ineligibility.

**§ 60.3 Flood plain management criteria for flood-prone areas.**

The Federal Insurance Administrator will provide the data upon which flood plain management regulations shall be based. If the Federal Insurance Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Federal Insurance Administrator. However, when special flood hazard area designations and water surface elevations have been furnished by the Federal Insurance Administrator, they shall apply. The symbols defining such special flood hazard designations are set forth in § 64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-prone areas adopted by a particular community depend on the amount of technical data formally provided to the community by the Federal Insurance Administrator. Minimum standards for communities are as follows:

(a) When the Federal Insurance Administrator has not defined the special flood hazard areas within a community, has not provided water surface elevation data, and has not provided sufficient data to identify the floodway or coastal high hazard area, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall:

(1) Require permits for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(4) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

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(b) When the Federal Insurance Administrator has designated areas of special flood hazards (A zones) by the publication of a community's FHBM or FIRM, but has neither produced water surface elevation data nor identified a floodway or coastal high hazard area, the community shall:

(1) Require permits for all proposed construction and other developments including the placement of manufactured homes, within Zone A on the community's FHBM or FIRM;

(2) Require the application of the standards in paragraphs (a) (2), (3), (4), (5) and (6) of this section to development within Zone A on the community's FHBM or FIRM;

(3) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;

(4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;

(5) Where base flood elevation data are utilized, within Zone A on the community's FHBM or FIRM:

(i) Obtain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and

(ii) Obtain, if the structure has been floodproofed in accordance with paragraph (c)(3)(ii) of this section, the elevation (in relation to mean sea level) to which the structure was floodproofed, and

(iii) Maintain a record of all such information with the official designated by the community under § 59.22 (a)(9)(iii);

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Federal Insurance Administrator;

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

(8) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

(c) When the Federal Insurance Administrator has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:

(1) Require the standards of paragraph (b) of this section within all A1-30 zones, AE zones, A zones, AH zones, and AO zones, on the community's FIRM;

(2) Require that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Federal Insurance Administrator for the allowance of basements in accordance with § 60.6 (b) or (c);

(3) Require that all new construction and substantial improvements of non-residential structures within Zones A1-30, AE and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure 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;

(4) Provide that where a non-residential structure is intended to be made watertight below the base flood level, (i) a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of paragraph (c)(3)(ii) or (c)(8)(ii) of this section, and (ii) a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the official designated by the community under § 59.22(a)(9)(iii);

(5) Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(6) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites

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

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

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

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist floatation collapse and lateral movement.

(7) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified);

(8) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of nonresidential structures (i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's

FIRM (at least two feet if no depth number is specified), or (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in § 60.3(c)(3)(ii);

(9) Require within any A99 zones on a community's FIRM the standards of paragraphs (a)(1) through (a)(4)(i) and (b)(5) through (b)(9) of this section;

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

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(12) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A-1-30, AH, and AE on the community's FIRM that are not subject to the provisions of paragraph (c)(6) of this section be elevated so that either

(i) The lowest floor of the manufactured home is at or above the base flood elevation, or

(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

(13) Notwithstanding any other provisions of § 60.3, a community may approve certain development in Zones A1-30, AE, and AH, on the community's FIRM which increase the water surface elevation of the base flood by more than one foot, provided that the community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of § 65.12, and receives the approval of the Federal Insurance Administrator.

(14) Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE 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, or

(iii) Meet the permit requirements of paragraph (b)(1) of this section and the elevation and anchoring requirements for "manufactured homes" in paragraph (c)(6) of this section.

A recreational vehicle is ready for highway use if it is 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.

(d) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

(1) Meet the requirements of paragraphs (c) (1) through (14) of this section;

(2) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge;

(4) Notwithstanding any other provisions of § 60.3, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a conditional FIRM and floodway revision, fulfills the requirements for such revisions as established under the provisions of § 65.12, and receives the approval of the Federal Insurance Administrator.

(e) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified on the community's FIRM coastal high hazard areas by designating Zones V1-30, VE, and/or V, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) of this section;

(2) Within Zones V1-30, VE, and V on a community's FIRM, (i) 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, and (ii) maintain a record of all such information with the official designated by the community under § 59.22(a)(9)(iii);

(3) Provide that all new construction within Zones V1-30, VE, and V on the community's FIRM is located landward of the reach of mean high tide;

(4) Provide that all new construction and substantial improvements in Zones V1-30 and VE, and also Zone V if base flood elevation data is available, on the community's FIRM, are elevated on pilings and columns so that (i) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or 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. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. 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 paragraphs (e)(4) (i) and (ii) of this section.

(5) Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM 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 purposes 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:

Federal Emergency Management Agency, DHS

(i) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,

(ii) 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 non-structural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards.

Such enclosed space shall be useable solely for parking of vehicles, building access, or storage.

(6) Prohibit the use of fill for structural support of buildings within Zones V1-30, VE, and V on the community's FIRM;

(7) Prohibit man-made alteration of sand dunes and mangrove stands within Zones V1-30, VE, and V on the community's FIRM which would increase potential flood damage.

(8) Require that manufactured homes placed or substantially improved within Zones V1-30, V, and VE on the community's FIRM on sites

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

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

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

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, meet the standards of paragraphs (e)(2) through (7) of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the community's FIRM meet the requirements of paragraph (c)(12) of this section.

(9) Require that recreational vehicles placed on sites within Zones V1-30, V, and VE 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, or

(iii) Meet the requirements in paragraphs (b)(1) and (e) (2) through (7) of this section.

A recreational vehicle is ready for highway use if it is 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.

(f) When the Federal Insurance Administrator has provided a notice of final base flood elevations within Zones A1-30 or AE on the community's FIRM, and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified flood protection restoration areas by designating Zones AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) and (d)(1) through (4) of this section.

(2) Adopt the official map or legal description of those areas within Zones AR, AR/A1-30, AR/AE, AR/AH, AR/A, or AR/AO that are designated developed areas as defined in § 59.1 in accordance with the eligibility procedures under § 65.14.

(3) For all new construction of structures in areas within Zone AR that are designated as developed areas and in other areas within Zone AR where the AR flood depth is 5 feet or less:

(i) Determine the lower of either the AR base flood elevation or the elevation that is 3 feet above highest adjacent grade; and

(ii) Using this elevation, require the standards of paragraphs (c)(1) through (14) of this section.

(4) For all new construction of structures in those areas within Zone AR that are not designated as developed areas where the AR flood depth is greater than 5 feet:

(i) Determine the AR base flood elevation; and

(ii) Using that elevation require the standards of paragraphs (c)(1) through (14) of this section.

(5) For all new construction of structures in areas within Zone AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the applicable elevation for Zone AR from paragraphs (a)(3) and (4) of this section;

(ii) Determine the base flood elevation or flood depth for the underlying A1-30, AE, AH, AO and A Zone; and

(iii) Using the higher elevation from paragraphs (a)(5)(i) and (ii) of this section require the standards of paragraphs (c)(1) through (14) of this section.

(6) For all substantial improvements to existing construction within Zones AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the A1-30 or AE, AH, AO, or A Zone base flood elevation; and

(ii) Using this elevation apply the requirements of paragraphs (c)(1) through (14) of this section.

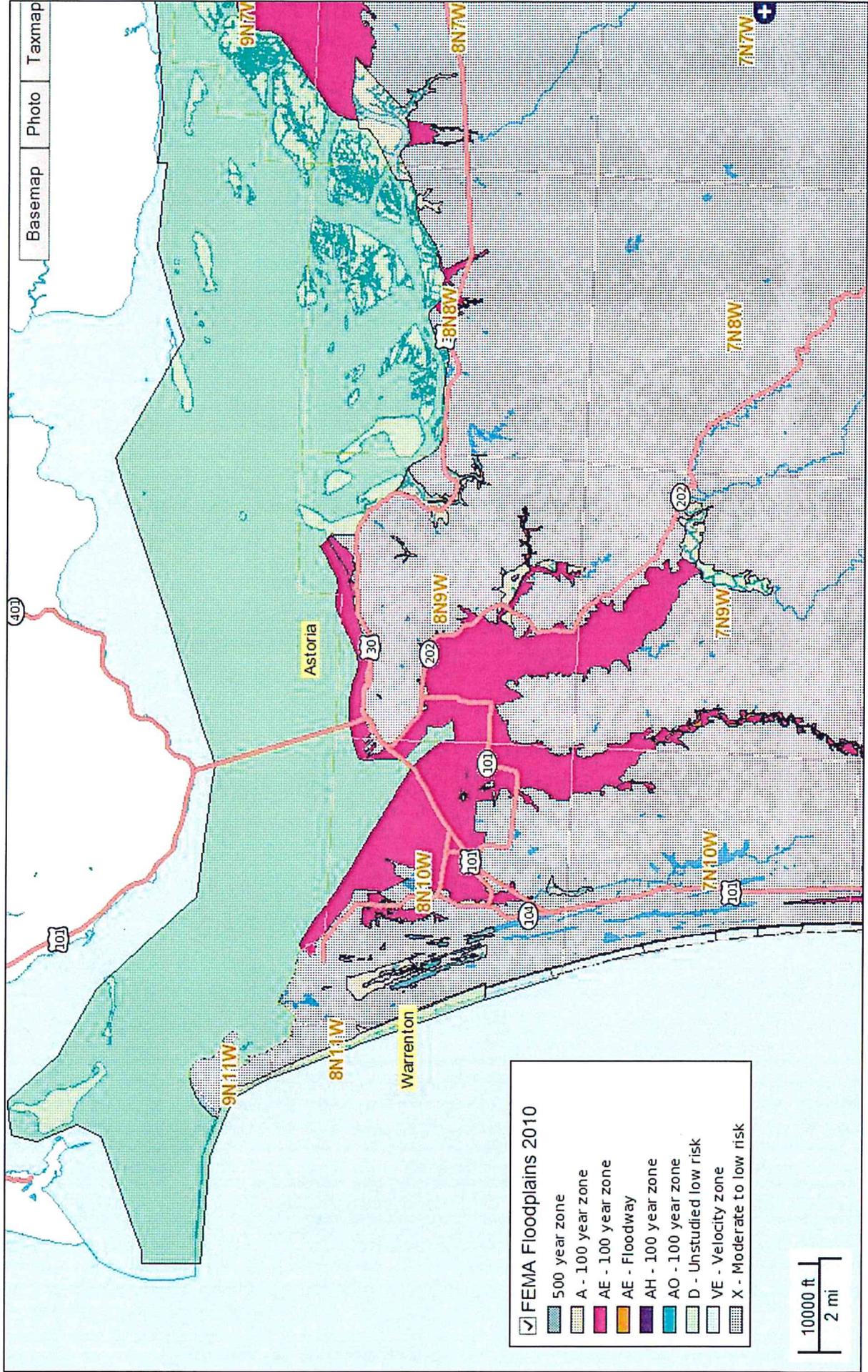
(7) Notify the permit applicant that the area has been designated as an AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A Zone and whether the structure will be elevated or protected to or above the AR base flood elevation.

[41 FR 46975, Oct. 26, 1976]

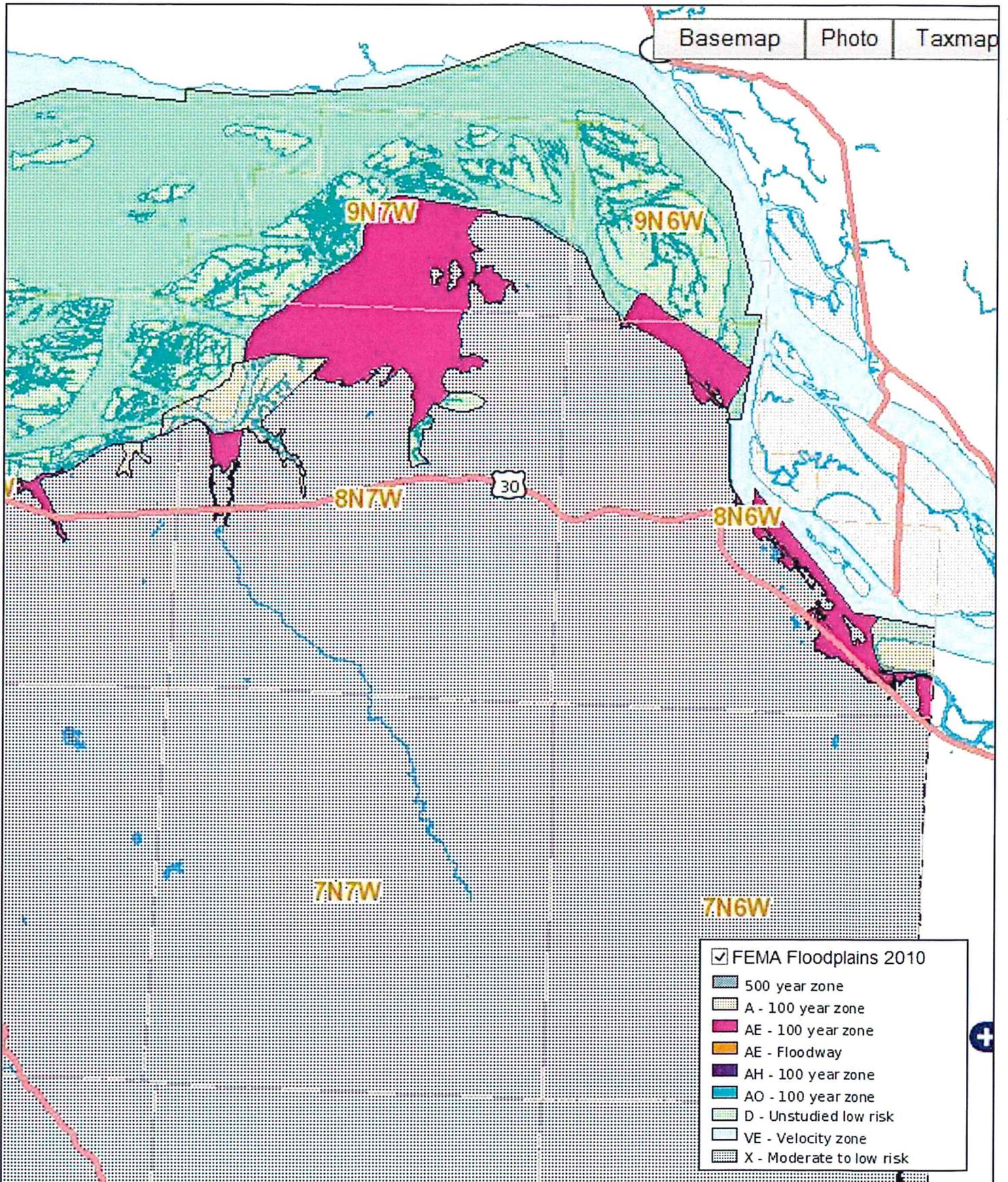
EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 60.3, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at [www.fdsys.gov](http://www.fdsys.gov).

# EXHIBIT 2

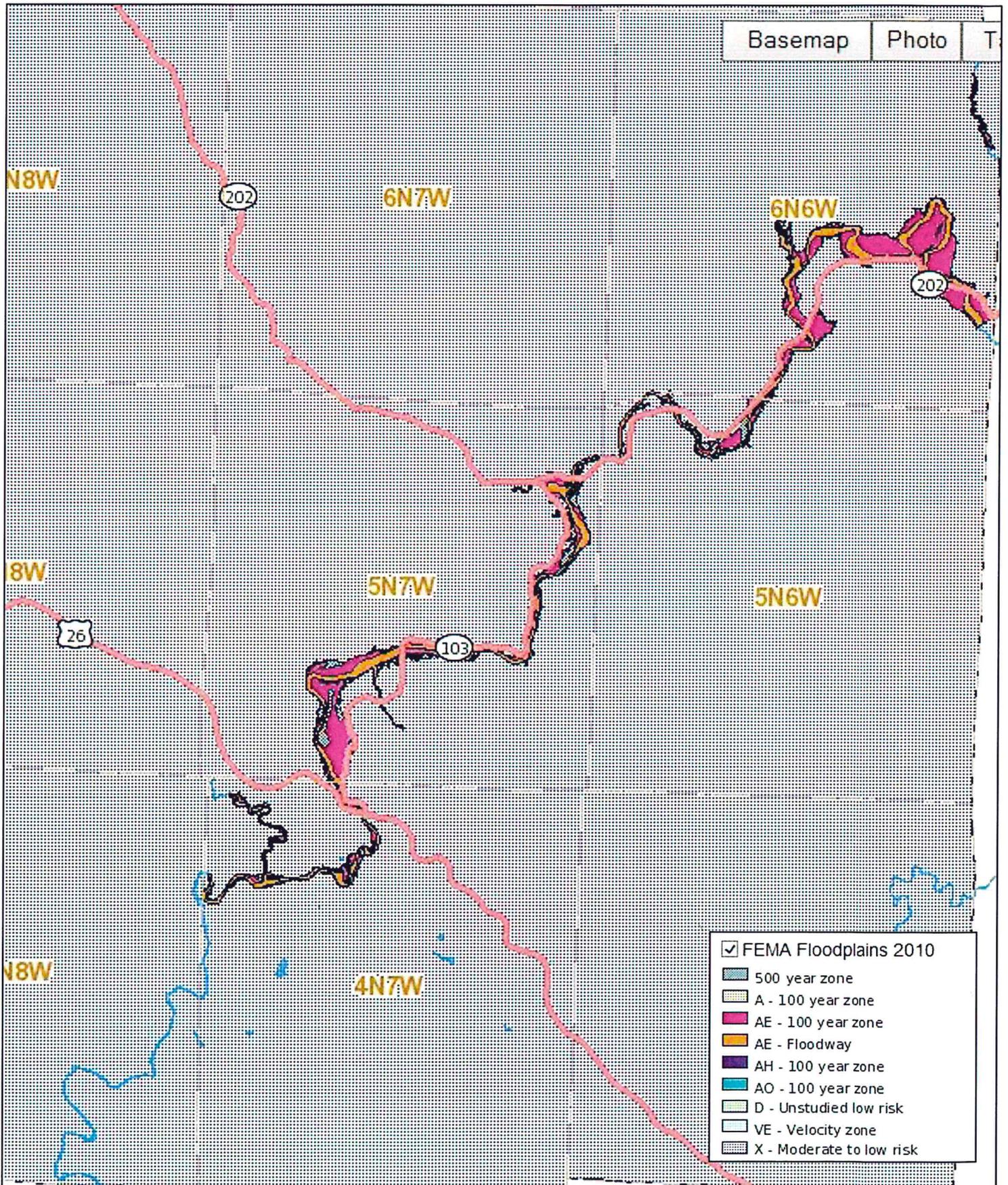
# Clatsop County – Northwest Quadrant



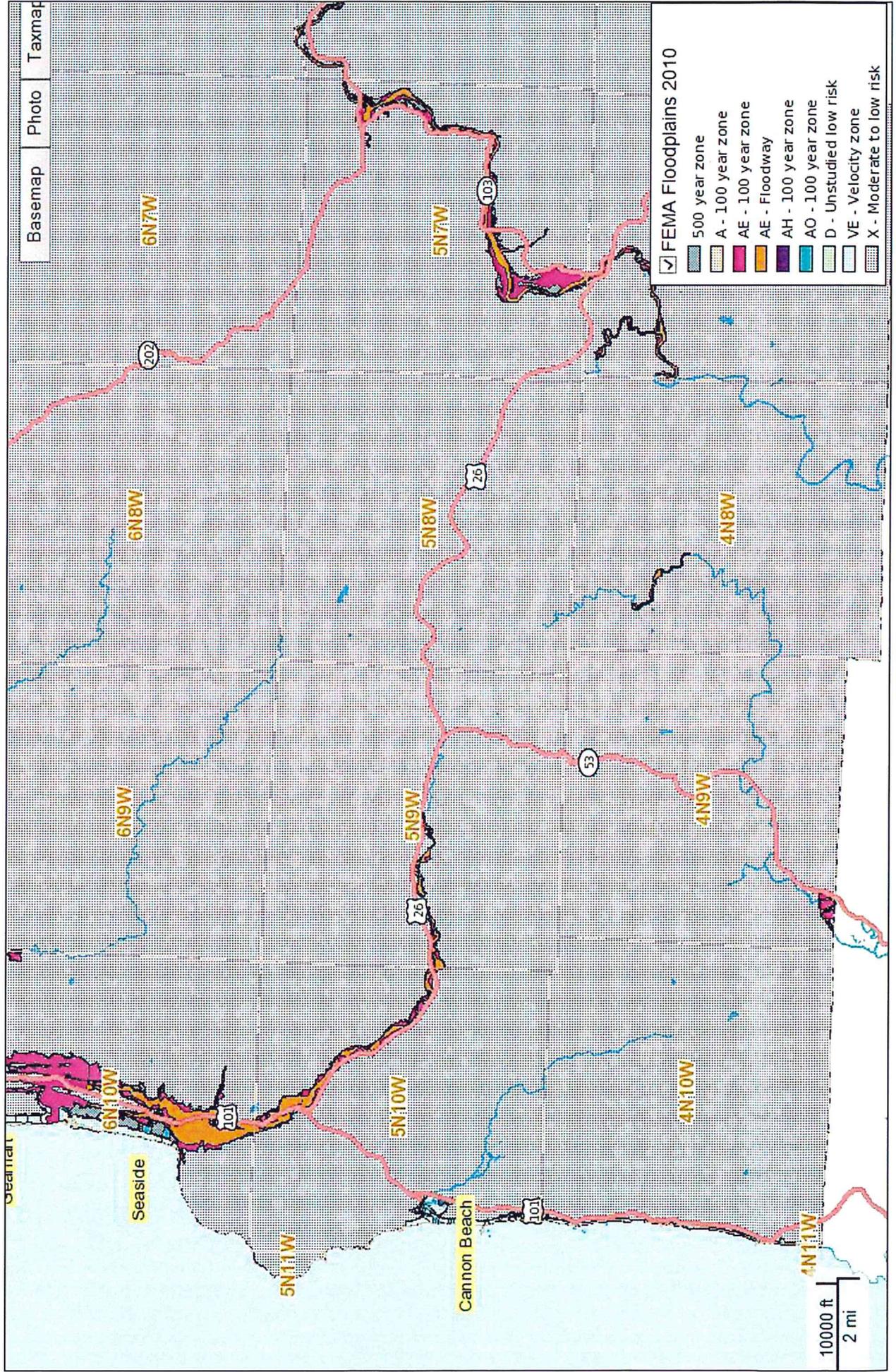
# Clatsop County – Northeast Quadrant



# Clatsop County – Southeast Quadrant



# Clatsop County – Southwest Quadrant



# EXHIBIT 3

## **ARTICLE 4. SPECIAL DISTRICTS**

### **SECTION 4.000. FLOOD HAZARD OVERLAY DISTRICT (/FHO).**

#### **Section 4.010. Purpose**

The purpose of the flood hazard overlay district is to identify those areas of the County subject to the hazards of periodic flooding and establish standards and regulations to reduce flood damage or loss of life in those areas. This district shall apply to all areas of special flood hazards within the unincorporated areas of Clatsop County as identified on Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps. In advancing these principles and the general purposes of the Clatsop County Comprehensive Plan, the specific objectives are:

- (1) To promote the general health, welfare and safety of the County;
- (2) To prevent the establishment of certain structures and land uses unsuitable for human habitation because of the danger of flooding, unsanitary conditions or other hazards;
- (3) To minimize the need for rescue and relief efforts associated with flooding;
- (4) To help maintain a stable tax base by providing for sound use and development in flood-prone areas and to minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities located in flood hazard areas;
- (6) To insure that potential home and business buyers are notified that property is in a flood area.

#### **Section 4.011. Definitions**

The following words and phrases shall be interpreted so as to give them the meanings they have in common usage and to give this chapter its most reasonable application:

“**ACCESSORY STRUCTURE**” means a structure on the same or adjacent parcel as a principal structure, the use of which is incidental and subordinate to the principal structure. A separate insurable building should not be classified as an accessory or appurtenant structure

“**ALTERATION OF A WATERCOURSE**” includes, but is not limited to, any dam, culvert, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area or capacity, which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

“**AREA OF SHALLOW FLOODING**” means a designated AO or AH zone on the Flood Insurance Rate Map (FIRM). The base flood depth range is from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. AO is characterized as sheet flow and AH indicates ponding.

“**AREA OF SPECIAL FLOOD HAZARD**” is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Zone designations on FIRMs include the letters A or V. Also known as the Special Flood Hazard Area (SFHA)

“**BASE FLOOD**” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood”. Designation on maps always includes the letters A or V.

**“BASE FLOOD ELEVATION (BFE)”** means the water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation (BFE) is depicted on the FIRM to the nearest foot and in the FIS to the nearest 0.1-foot.

**“BASEMENT”** means any area of the building having its floor subgrade (below ground level) on all sides.

**“BELOW-GRADE CRAWLSPACE”** 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.

**“BREAKAWAY WALL”** means a wall that is not a 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.

**“BUILDING”** means a building or structure subject to building codes.

**“BUILDING CODES”** means the combined specialty codes adopted under ORS 446.062, 446.185, 447.020 (2), 455.020 (2), 455.496, 455.610, 455.680, 460.085, 460.360, 479.730 (1) or 480.545, but does not include regulations adopted by the State Fire Marshal pursuant to ORS chapter 476 or ORS 479.015 to 479.200 and 479.210 to 479.220.

**“COASTAL HIGH-HAZARD AREA”** means the area subject to high velocity waters, including but not limited to, storm surge or tsunamis. The map is designated on a FIRM (Flood Insurance Rate Map) as a “V” zone. 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. The area is designated in the FIRM as Zone V1-V30, VE or V.

**“CRITICAL FACILITIES”** means those structures or facilities which produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials; hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood; police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and public and private facilities that are vital to maintaining or restoring normal services to flooded areas before, during and after a flood.

**“DATUM”** is a base measurement point (or set of points) from which all elevations are determined. Historically, that common set of points has been the National Geodetic Vertical Datum of 1929 (NAVD29). The vertical datum currently adopted by the federal government as a basis for measuring heights is the North American Vertical Datum of 1988 (NAVD88).

**“DEVELOPMENT”** means any manmade change to improved or unimproved real property, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving,

excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard. Development does not include:

- (1) Signs, markers, aids, etc. placed by a public agency to serve the public
- (2) Driveways, parking lots, or other open space use areas where no alteration of topography occurs;
- (3) Minor repairs or improvements to existing structures provided that the alterations do not increase the size or intensity of use, and do not constitute repair of substantial damage, or substantial improvement as defined in this section;
- (4) Customary dredging associated with routine channel maintenance consistent with State or Federal laws and permits;
- (5) Replacement of utility facilities necessary to serve established and permitted uses;
- (6) Accessory residential or noncommercial structures less than 200 square feet in area;
- (7) Storage of equipment and material associated with residential uses.

“**DIGITAL FIRM (DFIRM)**,” means Digital Flood Insurance Rate Map. It depicts flood risk and zones and flood risk information. The DFIRM presents the flood risk information in a format suitable for electronic mapping applications.

“**ENCROACHMENT**” means the advancement or infringement of uses, fill, excavation, buildings, permanent structures or other development into a floodway which may impede or alter the flow capacity of a floodplain.

“**ELEVATED BUILDING**” means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

“**EXISTING BUILDING OR STRUCTURE**” means a structure for which the “start of construction” commenced before 1980.

“**EXISTING MANUFACTURED HOME PARK OR SUBDIVISION**” means one in which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed is completed before the effective date of Clatsop County’s floodplain management regulations (1980). The “construction of facilities includes, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

“**FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)**” means the agency with the overall responsibility for administering the National Flood Insurance Program.

“**FLOOD**” or “**FLOODING**” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

“**FLOOD HAZARD BOUNDARY MAP**” means the official map used by the Federal Emergency Management Agency (FEMA) where the boundaries of the areas of special flood hazard have been designated.

**“FLOOD INSURANCE RATE MAP (FIRM)”** means the official map on which the Federal Emergency Management Agency (FEMA) has delineated areas of special flood hazards.

**“FLOOD INSURANCE STUDY (FIS)”** means the official report provided by the Federal Emergency Management Agency (FEMA) that includes flood profiles, the flood boundary-floodway map and the water surface elevation of the base flood.

**“FLOOD PROOFING”** means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**“FLOODPLAIN ADMINISTRATOR”** means the Director of Transportation and Development Services Community Development Director, or an individual or committee that is designated by the Director, to implement and administer the provisions of this ordinance.

**“FLOODWAY (~~Regulatory Floodway~~)”** means the channel of a river or other watercourse and those portions of the floodplain adjoining the channel required to discharge and store the floodwater or flood flows associated with the regulatory flood. the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

**“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”** means a structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register, or;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or to a district preliminarily determined by the Secretary to qualify as a registered historic district, or;
- (3) Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior, or;
- (4) Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the Secretary of the Interior, or
  - b. Directly by the Secretary of the Interior in states without approved programs.

**“LATERAL ADDITION”** means an addition that requires a foundation to be built outside of the foundation footprint of the existing building.

**“LETTER OF MAP CHANGE (LOMC)”** means an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. LOMCs are issued in the following categories:

**Letter of Map Amendment (LOMA)**

A revision based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a special flood hazard area.

**Letter of Map Revision (LOMR)**

A revision based on technical data showing that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination that a structure of parcel has been elevated by fill above the base flood elevation and is excluded from the special flood hazard area.

**Letter of Map Revision Based on Fill – (LOMR-F)**

A modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM), based on the placement of fill outside the existing regulatory floodway.

**Conditional Letter of Map Revision (CLOMR)**

A formal review and comment by FEMA as to whether a proposed project complies with the minimum National Flood Insurance Program floodplain management criteria. A CLOMR does NOT amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

**“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 this chapter.

**“MANUFACTURED DWELLING”** (aka manufactured housing) 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 connected to the required utilities. The term “manufactured dwelling” 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 SEA LEVEL (MSL)”** means the North American Vertical Datum (NGVD) of 1988 or other datum, to which base flood elevations shown on the flood insurance rate map are referenced.

**“NATURAL ELEVATION”** means the elevation of natural grade, or the grade in existence before September 17, 2010.

**“NEW CONSTRUCTION”** means a structure for which the “start of construction” commenced after 1980 and includes subsequent substantial improvements to the structure.

**“NEW MANUFACTURED HOME PARK OR SUBDIVISION”** means a manufactured home park or subdivision for which the construction of facilities for serving 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 the adoption of this chapter.

**“RECREATION 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 towed by a light-duty truck, and (4) primarily designed as temporary living quarters for recreational, camping, travel or seasonal use.

**“SPECIAL FLOOD HAZARD AREA (SFHA)”** means areas subject to inundation from the waters of a one-hundred-year flood.

**“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 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 a 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 walkways; nor does it include excavation for a basement, footings, piers or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**“STRUCTURE”** means a walled and roofed building, a manufactured dwelling, a modular or temporary building, or a gas or liquid storage tank that is principally above ground.

**“SUBSTANTIAL DAMAGE”** means the damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50-percent of the market value of the structure before the damage occurred.

“SUBSTANTIAL IMPROVEMENT” means any repair 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 “repetitive loss” or “substantial damage,” regardless of the actual repair work performed. The market value of the structure should be:

- (1) the appraised value of the structure prior to the start of the initial repair or improvement, or
- (2) in the case of damage, the value of the structure prior to the damage occurring. This term includes structures which have incurred “substantial damage”, regardless of the actual amount of repair work performed. The term does not include either:
  - (a) A 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
  - (b) Alteration of an Historic Structure, provided that the alteration will not preclude the structure's continued designation as an Historic Structure.

“VERTICAL ADDITION” means the addition of a room or rooms on top of an existing building.

“WATERCOURSE” means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

“WATER-DEPENDENT” means a use or use and activity which can only be carried out on, in or adjacent to water areas because the use requires access to the waterbody for water-borne transportation, recreation, energy production, or source of water.

“WATER SURFACE ELEVATION” means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

#### **Section 4.015 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 governing body, and;
- 3) Deemed neither to limit nor repeal any other powers granted under state statutes, including state building codes.

#### **Section 4.016 Floodplain Administrator Duties and Responsibilities**

##### **1. Permit Review**

~~1)~~—The Floodplain Administrator duties shall include, but not be limited to, the following:

- ~~A) 2)~~—Review all development permit applications to determine whether proposed new development will be located in Areas of Special Flood Hazard and to determine that all new development complies with the requirements of this ordinance ;

- ~~B) 3)~~—Review applications for modifications of any existing development in Areas of Special Flood Hazard for compliance with the requirements of this ordinance;
- 4) — Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
- ~~C) 5)~~—Review proposed development to assure that necessary permits have been received from governmental agencies from which approval is required by federal, state and local law, including but not limited to section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334; the Endangered Species Act of 1973, 16 U.S.C. 1531-1544; and State of Oregon Removal Fill permits those Federal, State or local governmental agencies from which prior approval is required. Copies of such permits shall be provided and maintained on file.
- ~~D) 6)~~—Review all development permit applications for property in a Special Flood Hazard Area to determine if the proposed development is located in the floodplain or floodway, and if so located in a floodway, ensure that the encroachment standards of Section 4.026 are met.
- E) Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;
- F) Coordinate with the Building Official to assure that applications for buildings permits comply with the requirements of this ordinance.

## 2. Use of Base Flood Data

- A) Interpret flood hazard area boundaries, provide available flood hazard information, and provide base flood elevations, where they exist;
- ~~B) 7)~~—When Base Flood Elevation data or floodway data are not available, then 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 the provisions of this ordinance.
- ~~C) 8)~~—When Base Flood Elevations or other current engineering data are not available, the Floodplain Administrator shall take into account the flood hazards, to the extent they are known, to determine whether a proposed building site will be reasonably safe from flooding.

## 3. Interpretation of FIRM Boundaries

- ~~A) 9)~~ Where interpretation is ~~Make interpretations, as~~ needed, of the exact location of boundaries of the Areas of Special Flood Hazard, including regulatory floodways (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) ~~the Floodplain Administrator shall make the interpretation.~~ Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.021.
- 10) Issue floodplain development permits when the provisions of this ordinance have been met, or disapprove the same in the event of noncompliance;
- 11) Coordinate with the Building Official to assure that applications for building permits comply with the requirements of this ordinance.

## 4. Obtain and Maintain Information

- ~~A) 12)~~ Obtain, verify and record the actual elevation in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, of the lowest floor level, including basements s and below-grade crawlspaces, of all new construction or substantially improved buildings and structures.
- ~~B) 13)~~ Obtain, verify and record the actual elevation, in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, to which any new or substantially improved buildings or structures have been flood-proofed. When flood-proofing is utilized for a structure, the Floodplain Administrator shall obtain certification of design criteria from a registered professional engineer or architect;
- ~~C) 14)~~ Ensure that all records pertaining to the provisions of this ordinance are permanently maintained in the office of Transportation and Development Services Community Development and shall be open for public inspection.
- ~~D) 15)~~ Make inspections in Areas of Special Flood Hazard to determine whether development has been undertaken without issuance of a floodplain development permit, ensure that development is undertaken in accordance with this ordinance, and verify that existing buildings and structures maintain compliance with this ordinance;
- ~~E) 16)~~ Coordinate with the Building Official to inspect areas where buildings and structures in flood hazard areas have been damaged, regardless of the cause of damage, and notify owners that permits may be required prior to repair, rehabilitation, demolition, relocation, or reconstruction of the building or structure;
- ~~F) 17)~~ Make Substantial Damage or Substantial Damage determinations based on criteria set forth in Section 4.023 of this ordinance.

#### **Section 4.017 Alteration of Water Courses**

- 1) The bankfull flood carrying capacity of the altered or relocated portion of the water course shall not be diminished. Prior to issuance of a floodplain development permit, the applicant must submit a description of the extent to which any water course will be altered or relocated as a result of the proposed development and submit certification by a registered professional engineer that the bankfull flood carrying capacity of the water course will not be diminished.
- 2) The applicant shall notify adjacent communities, the U.S. Army Corps of Engineers, Oregon Department of State Lands, and Oregon Department of Land Conservation and Development prior to any alteration or relocation of a water source. Evidence of notification must be submitted to the floodplain administrator and to the Federal Emergency Management Agency.
- 3) The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished.
- 4) The applicant shall meet the requirements to submit technical data in Section 4.032 when the alteration of a watercourse, including the placement of culverts, results in the relocation or elimination of the special flood hazard area.

#### **Section 4.018 Non-Conversion of Enclosed areas below the Lowest Floor**

To ensure that the areas below the BFE continue to be used solely for parking vehicles, limited storage, or access to the building and not be finished for use as human habitation without first becoming fully compliant with the floodplain management ordinance in effect at the time of conversion, the Floodplain Administrator shall:

- 1) Determine which applicants for new construction and/or substantial improvements have fully enclosed areas below the lowest floor that are 5 feet or higher;
- 2) Enter into a “NON-CONVERSION AGREEMENT FOR CONSTRUCTION WITHIN FLOOD HAZARD AREAS” or equivalent with Clatsop County. The agreement shall be recorded with the Clatsop County Clerk as a deed restriction. The non-conversion agreement shall be in a form acceptable to the Floodplain Administrator and County Counsel; and
- 3) Have the authority to inspect any area of a structure below the base flood elevation to ensure compliance upon prior notice of at least 72 hours.

#### **Section 4.019 Floodplain Inspection and Enforcement**

- 1) The Administrator or designee shall make periodic inspections of floodplain areas to establish that development activities within the floodplain are being performed in compliance with an approved floodplain development permit. The Administrator or designee shall prepare a field report listing non-complying conditions to be delivered to the Code Compliance Officer within 5 business days.
- 2) Upon receipt of the report:
  - (A) The Code Compliance Officer shall take action in accordance with Clatsop County Code of Regulations to effect the abatement of such violation; or
  - (B) The property owner shall apply for a variance in accordance with the provisions of Section 4.024 (Variance Procedures) herein.
- 3) If the violation is not resolved through the code enforcement or variance procedure the Floodplain Administrator shall request to the Administrator of Federal Insurance Administration a declaration for denial of insurance, stating that the property is in violation of a cited statute or local law, regulation or ordinance, pursuant to section 1316 of the National Flood Insurance Act of 1968 as amended.

#### **Section 4.020 Warning and Disclaimer of Liability**

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific 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 a liability on the part of Clatsop County or by an officer, or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made there under.

### **Section 4.021 Appeals**

An appeal of a Floodplain Administrator decision pursuant to this chapter may be appealed in accordance with Section 2.230. Appeals of a decision by the Code Enforcement Hearings Officer pursuant to this chapter may be appealed in accordance with Clatsop County Code of Regulations.

### **Section 4.022 Permit Procedures**

A Floodplain Development Permit shall be obtained before construction or development begins within any area of special flood hazard. Application for a Floodplain Development Permit shall be made to the Floodplain Administrator on forms furnished by the Administrator or the Administrator's designee prior to starting development activities. Specifically, the following information is required:

- 1) Application Stage:
  - (A) Plans in duplicate drawn to scale with elevations of the project area and the nature, location, dimensions of existing and proposed structures, earthen fill placement, storage of materials or equipment and drainage facilities.
  - (B) Delineation of flood hazard areas, floodway boundaries including base flood elevations, or flood depth in AO zones, where available;
  - (C) For all proposed structures, elevation in relation to the highest adjacent grade and the base flood elevation, or flood depth in AO zones, of the:
    - 1) lowest enclosed area, including crawlspace or basement floor;
    - 2) bottom of the lowest horizontal structural member in coastal high hazard areas (V Zones);
    - 3) top of the proposed garage slab, if any, and;
    - 4) next highest floor
  - (D) Locations and sizes of all flood openings;
  - (E) Elevation to which any non-residential structure will be flood-proofed;
  - (F) Certification from a registered professional engineer or architect that any proposed non-residential flood-proofed structure will meet the flood-proofing criteria of the NFIP and building codes;
  - (G) Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development;
- 2) Construction Stage:
  - (A) For all new construction and substantial improvements, the permit holder shall provide to the Floodplain Administrator an as-built certification of the floor elevation or flood-proofing level immediately after the lowest floor or flood-proofing is placed and prior to further vertical construction .
  - (B) Any deficiencies identified by the Floodplain Administrator shall be corrected by the permit holder immediately and prior to work proceeding. Failure to submit certification or failure to make the corrections shall be cause for the Floodplain Administrator to issue a stop-work order for the project.
- 3) Certificate of Occupancy
  - (A) In addition to the requirements of the building codes pertaining to certificate of occupancy, prior to the final inspection the owner or authorized agent shall submit the following documentation that has been prepared and sealed by a registered surveyor or engineer;

- 1) For elevated buildings and structures in non-coastal Areas of Special Flood Hazard (A zones), the elevation of the lowest floor, including basement or where no base flood elevation is available the height above highest adjacent grade of the lowest floor;
- 2) For buildings and structures in coastal Areas of Special Flood Hazard (V zones), the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor.
- (B) Failure to submit certification or failure to correct violations shall be cause for the Building Official to withhold a certificate of occupancy or delay a final building inspection until such deficiencies are corrected.
- 4) Expiration of Floodplain Development Permit
  - (A) Floodplain development permit shall expire 180 days after issuance unless the permitted activity has been substantially begun and thereafter is pursued to completion.
  - (B) Commencement of work includes start of construction, when the permitted work requires a building permit.

**Section 4.023 Substantial Damage and Substantial Improvement Determination**

For applications for permits to improve buildings and structures, including additions, repairs, renovations, and alterations, the Floodplain Administrator, shall:

- 1) Estimate the market value, or require the applicant to obtain a professional appraisal of the market value, of the building or structure before the proposed work is performed; when repair of damage is proposed, the market value of the building or structure shall be the market value before the damage occurred;
- 2) Compare the cost of improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
  - (A) Except as indicated in subsections (D) and (E) below, all costs to repair substantial damage, including emergency repairs, must be included;
  - (B) The costs associated with the correction of pre-existing violations of state or local health, sanitary, or safety code specifications that were identified by the building official, the director of environmental health, or any other local code enforcement official prior to the improvement or repair and that are the minimum necessary to ensure safe living conditions shall not be included;
  - (C) Except as indicated in subsections (d) and (e) below, the costs of complying with any county, state, or federal regulation other than those described in subsection (b) must be included;
  - (D) Costs associated with the following items are not included:
    - 1) The preparation and approval of all required plans, calculations, certifications, and specifications;
    - 2) The performance of surveys or other geotechnical or engineering studies and resulting reports;
    - 3) Permit and review fees;

- 4) The construction, demolition, repair, or modification of outdoor improvements, including landscaping, fences, swimming pools, detached garages and sheds, etc.;
- (E) Proposed alterations of a designated historic building or structure is not to be considered substantial improvement unless the alteration causes a loss of said designation.
- 3) The Floodplain Administrator shall make the final determination of whether the proposed improvement and/or repair constitutes a substantial improvement or substantial damage;
- 4) The Floodplain Administrator shall notify the applicant of the results of the determination by letter,
- 5) Applicant has the right to appeal the determination pursuant to Section 4.021.

#### **Section 4.024 Variances**

A request for a variance from a standard contained in this chapter shall be reviewed in accordance with the procedures of Sections ~~5.130-5.131 - and 5.133 -~~5.134. The burden to show that the variance is warranted and meets the criteria ~~set out herein~~ is on the applicant.

When considering a variance application, the deciding body shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

- 1) The danger that materials may be swept onto other lands to the injury of others;
- 2) The danger to life and property due to flooding or erosion damage;
- 3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- 4) The importance of the services provided by the proposed facility to the community;
- 5) The necessity to the facility of a waterfront location, where applicable;
- 6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- 7) The compatibility of the proposed use with existing and anticipated development;
- 8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- 9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- 10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
- 11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Upon consideration of the factors identified above and the purposes of this ordinance, the deciding body may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

The floodplain administrator shall maintain a permanent record of all variances and report any variances to the Federal Emergency Management Agency upon request.

The following standards are applicable to a variance request, not those of Section 5.132:

1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items A-K-1-11 in Section 4.204-4.024 have been fully considered. As the lot size increases the technical justification required for issuing the variance increases

2) A) Variances shall only be issued upon:

A) B) A showing of good and sufficient cause,

B) C) A determination that failure to grant the variance would result in exceptional hardship to the applicant, and

C) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

2) 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.

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

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

5) Variances may be issued for a water dependent use provided that

(A) The criteria of paragraphs (1) through (4) of this section are met, and;

(B) 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.

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

7) 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.

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

9) When a variance is granted, the county shall give written notice to the property owner within five days after the decision is final. The notice shall state that:

(A) The structure or manufactured home will be allowed to be built or placed with the lowest floor elevation at or below the base flood elevation, and

(B) That the issuance of the variance to construct a structure below the base flood level will result in increased premium rates for flood insurance as high as twenty-five dollars for every one hundred dollars of insurance coverage, and

- (C) Such construction below the base flood level increases the risk to life and property.
  - (D) The above notification shall be maintained with a record of all variance actions.
- 10) Variance Time Limit. Authorization of a variance shall conform to the requirements of Section 5.134.

### **Section 4.025 Development Standards**

#### **1. General Standards**

In all areas of special flood hazards as presented on the FIRM, the following standards shall apply for all new construction and substantial improvements:

#### **A. Site Improvements and Subdivisions:**

- 1) All proposed new development and subdivisions shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding.
- 2) ~~A)~~ Residential building lots shall have adequate buildable area outside of floodways.
- 3) ~~B)~~ All new development proposals and subdivision preliminary plats/development plans shall include the mapped flood hazard zones from the effective FIRM.
- 4) ~~C)~~ Base flood elevation data shall be generated and/or provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions, greater than fifty lots or five acres, whichever is less.
- 5) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated and/or provided for subdivision proposals and all other proposed developments that contain at least 50 lots or five acres, whichever is less.
- 6) ~~D)~~ All new development and subdivision shall have public utilities and facilities such as sewer, gas, electric and water systems located and constructed to minimize flood damage.
- E) ~~On-site waste disposal systems shall be located and constructed to avoid functional impairment, or contamination from them, during flooding.~~
- 7) ~~F)~~ All subdivisions shall have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.

#### **B) ~~G)~~ Coastal High Hazard Area:**

In coastal high hazard areas (V Zones), alteration of sand dunes shall be prohibited unless it has been demonstrated by engineering analysis that the alteration will not increase potential flood damage.

#### **C) ~~H)~~ Tsunami Inundation Zone:**

New essential and new special occupancy structures shall not be constructed in the Tsunami Inundation Zone. The Tsunami Inundation Zone may include V, A, and potentially other flood zones. If an exception is granted then the Coastal High Hazard Area construction standards in the model this ordinance shall apply to the building of these new structures in the Tsunami Inundation Zone.

D) ↗ Building Design and Construction:

Buildings and structures, including manufactured dwellings, within the scope of the building codes, including repair of substantial damage and substantial improvement of such existing buildings and structures, shall be designed and constructed in accordance with the flood-resistant construction provisions of these codes, including but not limited to Section R324 R322 of the Residential Specialty Code and Section 1612 of the Structural Specialty Code.

E) Construction Materials and Methods:

- (A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (B) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (C) Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.

F) Review of Development Permits:

Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.

G) Anchoring:

- (A) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- (B) All manufactured dwellings 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.

H) Utilities:

- (A) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and
- C) ↗) On-site waste disposal systems shall be located and constructed to avoid functional impairment, or contamination from them, during flooding.

I) ↗) Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted

practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.

## 2. Specific Standards

In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-A30, AH and AE) as set forth in this ordinance, the following provisions are required:

### A) 2) Manufactured Dwellings:

- 1) A) New and replacement manufactured dwellings are within the scope of the building codes; and,
- 2) B) All new manufactured dwellings and replacement manufactured dwellings shall be installed using methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist prevent flotation, collapse and lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
- 3) Manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with Section 4.025(1)(E), above.
- 4) Electrical crossover connections shall be a minimum of 12 inches above BFE.

### 3) Construction Materials and Methods:

- (A) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (B) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (C) Electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be elevated to one foot above flood level so as to prevent water from entering or accumulating within the components during conditions of flooding.

### B) 4) Critical Facilities:

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the area of special flood hazard Special Flood Hazard Area (SFHA). Construction of new critical facilities shall be permissible within the area of special flood hazard SFHA if no feasible alternative site is available. Critical facilities constructed within the area of special flood hazard SFHA shall have the lowest floor elevated three feet above BFE (or depth number in AO zones) or to the height of the 0.2 percent (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 or persistent organic pollutants as defined by the Oregon Department of Environmental Quality 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.

- 5) Review of Development Permits: Where elevation data is not available, either through the flood insurance study or from other administrative source, applications for development permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and

~~includes use of historical data, high water marks, photographs of past flooding, etc. where available. Failure to elevate to at least two feet above grade in these zones may result in higher insurance rates.~~

C) 6) Residential Construction:

- 1) New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to **a minimum of** one foot above the base flood elevation.
- 2) Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - (A) A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
  - (B) The bottom of all openings shall be no higher than one (1) foot above grade; and
  - (C) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic flow of floodwaters in both directions.

D) 7) Non-Residential Construction:

New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall either have the lowest floor, including basement, elevated to **a minimum of** one (1) foot above the base flood elevation or, together with attendant utility and sanitary facilities, shall:

- 1) (A) Be flood proofed so that below **this the base flood** level the structure is water tight with walls substantially impermeable to the passage of water;
- 2) (B) Have structural components **having the capability capable** of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; **and**
- 3) (C) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with standards of practice for meeting provisions of this section based on their development and/or review of the structural design, specifications and plans. Such certification shall be provided as set forth in Section 4.018(2).
- 4) (D) **If construction will be elevated instead of floodproofed. Fully fully** enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
  - a) 1) A minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
  - b) 2) The bottom of all openings shall be no higher than one (1) foot above grade; and

- ~~c) 3)~~ Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic flow of floodwaters in both directions.
- 8) ~~Foundation Protection: A registered professional civil engineer shall develop or review the structural design, specifications and plans for the foundation of the building and shall certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the base flood.~~
- ~~E) 9) Crawlspace:~~
- ~~1) (A)~~ Crawlspace construction shall meet the standards for space below the lowest floor as described for residential construction in Section ~~4.025(7) 4.025(2)(C)~~.
  - ~~2) (B)~~ 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 but also any joists, insulation, or other materials that extend below the BFE.
  - ~~3) (C)~~ Any ductwork, or other building utility system, within the crawlspace must be elevated above the BFE or sealed from floodwaters.
  - ~~4) (D)~~ Below-grade crawlspaces (i.e., where the interior grade of the crawlspace is below the building's lowest adjacent exterior grade) must be constructed in accordance with Figure 1 below:

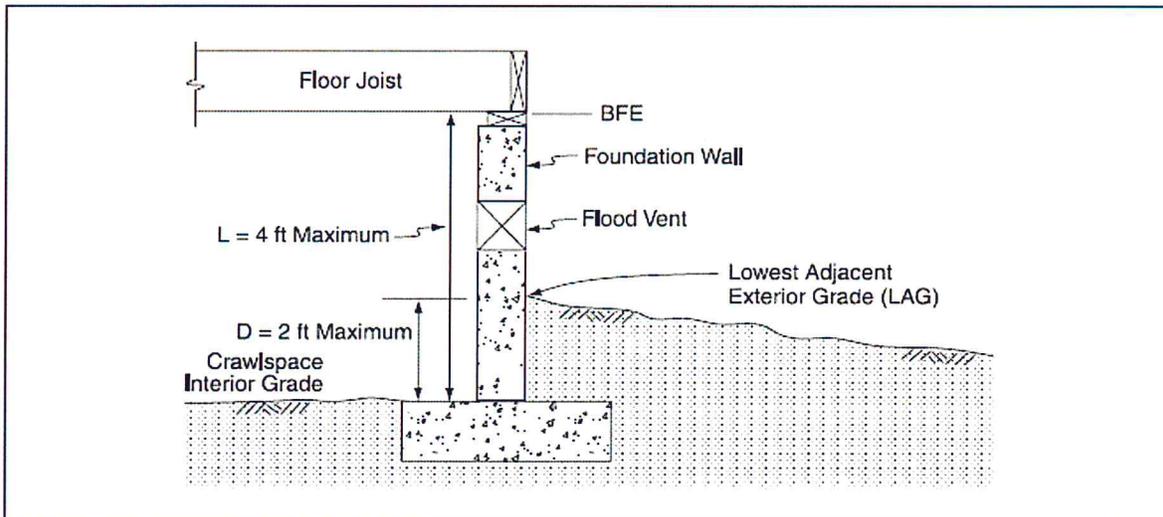


Figure 1: Requirements for below-grade crawlspace construction. (Provided by FEMA)

- ~~5) (E)~~ The crawlspace must be provided with an adequate drainage system that removes floodwaters from the interior of the crawlspace within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage considerations, 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.

**F) 10) Fences and Walls:**

New fencing shall be designed to collapse under conditions of the base flood or to allow the passage of water by having flaps or openings in the areas at or below the base flood elevation sufficient to allow flood water and associated debris to pass freely.

**G) 11) On-site Sewage Systems:**

**1) (A)** Soil absorption systems shall be located outside of flood hazard areas. Where suitable soil absorption sites outside of the flood hazard area are not available, the soil absorption site is permitted to be located within the flood hazard area provided it is located to minimize the effects of inundation under conditions of the base flood.

**2) (B)** Mound systems in flood hazard areas shall be prohibited.

**H) 12) Tanks:**

**1) (A)** Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the design flood.

**2) (B)** Above-ground tanks in flood hazard areas shall be:

**3) (C)** Attached to and elevated to or above the base flood elevation (or depth number in AO zones) on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood; or be

**4) (D)** Anchored or otherwise designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the design flood.

**5) (E)** Tank inlets, fill openings, outlets and vents shall be:

**a) 1) (A)** A minimum of 2 feet above BFE or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tank during conditions of the design flood; and

**b) 2) (B)** Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

**I) 13) Recreation Vehicle:**

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

**1) (A)** Be on the site for fewer than 180 consecutive days, and

**2) (B)** Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached structures or additions; or

**3) (C)** Meet the elevation and anchoring requirements for manufactured homes listed in Section 4.025.

**J) 14) Accessory Structures:**

- ~~1)~~(A) Relief from the elevation or dry flood-proofing standards may be granted for an accessory structure containing no more than 200 square feet. Such a structure must meet the following standards:
- ~~2)~~(B) The accessory structure is not subject to building codes;
- ~~3)~~(C) The accessory structure shall be located on property with a dwelling;
- ~~4)~~(D) The accessory structure shall not be used for human habitation and shall be used solely for parking of vehicles or storage of items having low damage potential when submerged.
- ~~5)~~(E) Toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall not be stored below BFE, or where no BFE is available lower than three feet above grade, unless confined in a tank installed in compliance with this ordinance;
- ~~6)~~(F) The accessory structure shall be constructed of flood resistant materials.
- ~~7)~~(G) The accessory structure shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters;
- ~~8)~~(H) The accessory structure shall be firmly anchored to prevent flotation;
- ~~9)~~(I) All service facilities, such as electrical and heating equipment associated with the accessory structure, shall be elevated or flood proofed to or above the flood protection elevation, and;
- ~~10)~~(J) It shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for complying with this requirement must be certified by a licensed professional engineer or architect, or
  - ~~a)~~J Provide a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
  - ~~b)~~J The bottom of all openings shall be no higher than one foot above the higher of the exterior or interior grade or floor immediately below the opening;
  - ~~c)~~J 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.

~~K)~~+5) Temporary Structures, Storage, and Bridges:

- ~~1)~~(A) A floodplain development permit is required for construction or placement of temporary structures, temporary storage associated with non-residential uses, and temporary bridges located in areas of special flood hazard:
- ~~2)~~(B) Temporary structures, not including bridges, shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the structure. Temporary structures shall be anchored to prevent flotation, collapse, or lateral movement.
- ~~3)~~+6) Temporary storage of materials shall be limited as to time of service, but shall not be permitted for more than 90 days. The Floodplain Administrator is authorized to grant a one-time extension, not to exceed 45 days, for demonstrated cause; such cause shall reaffirm the temporary nature of the storage. Stored material shall be anchored or contained to prevent flotation or release outside the assigned storage area. Hazardous materials or materials deemed to be persistent organic pollutants

by the Oregon Department of Environmental Quality shall not be stored in the floodway.

- ~~4)~~ (17) Temporary encroachments in the floodway for the purposes of capital improvement projects (including bridges) require a floodplain development permit. No CLOMR/LOMR is required.

#### **Section 4.026 Development in Floodways**

- 1) Except as provided in paragraphs (3) and (4), encroachments, including fill, new construction, substantial improvements, and other development are prohibited unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- 2) Any fill allowed to be placed in the floodway shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour.
- 3) Applicants shall obtain a Conditional Letter of Map Revision (CLOMR) before an encroachment in the floodway is permitted that will cause any increase in the base flood elevation.
- 4) Projects for stream habitat restoration may be permitted in the floodway provided:
  - (A) The project qualifies for a Department of the Army, Portland District Regional General Permit for Stream Habitat Restoration (NWP-2007-1023); and,
  - (B) A qualified professional (a Registered Professional Engineer; or staff of NRCS; the county; or fisheries, natural resources, or water resources agencies) has provided a feasibility analysis and certification that the project was designed to keep any rise in 100-year flood levels as close to zero as practically possible given the goals of the project; and,
  - (C) No structures would be impacted by a potential rise in flood elevation; and,
  - (D) An agreement to monitor the project, correct problems, and ensure that flood carrying capacity remains unchanged is included as part of the local approval.
- 5) Construction of new fencing is prohibited, unless the fencing is designed to collapse or break-away, and is anchored at one end and cabled together so as to not create debris. As an alternative to a break-away design, a new fence may be designed to allow the passage of water by having a flap or opening in the areas at or below the base flood elevation sufficient to allow floodwaters to pass freely.

#### **Section 4.027 Zones with Base Flood Elevation but no Floodway**

- 1) In areas within Zones A1-30 and AE on the community's FIRM with a base flood elevation, or where a base flood elevation is developed according to Section 4.025(2) but where no regulatory floodway has been designated, new construction, substantial improvements, or other development (including fill) shall be prohibited, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

- 2) Applicants of proposed projects that increase the base flood elevation more than one foot should obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted.

#### **Section 4.028 Zones Without Base Flood Elevations**

- 1) These standards apply in riverine areas of special flood hazard where no base flood elevation data have been provided (A Zones):
- 2) When base flood elevation or floodway data have not been identified by FEMA in a Flood Insurance Study and /or Flood Insurance Rate Maps, the Floodplain Administrator shall obtain, review, and reasonably utilize scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer this ordinance. If data are not available from any source, only then subsection 3 shall apply.
- 3) Where the floodplain administrator has obtained base flood elevation data, applicants of proposed projects that increase the base flood elevation more than one foot shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted.
- 4) In special flood hazard areas without base flood elevation data, no encroachments, including structures or fill, shall be located in an Area of Special Flood Hazard within an area equal to the width of the stream or fifty feet, whichever is greater, measured from the ordinary high water mark, unless a base flood elevation is developed by a licensed professional engineer.

#### **Section 4.029 Coastal High Hazard Area**

All other development **and substantial improvements** in coastal high hazard areas (V Zones) for which specific provisions are not specified in this ordinance or building codes, shall:

- 1) Be located outside the footprint of, and not structurally attached to, buildings and structures, and be permitted only if analysis by a registered design professional demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection onto adjacent buildings and structures.  
**Exception:** A deck that is structurally attached to a building or structure is allowed if the bottom of the lowest horizontal structural member is one (1) foot above the base flood elevation and any supporting members that extend below the base flood elevation comply with the foundation requirements that apply to the building or structure and a registered design professional demonstrates that the potential loads generated by the deck on the building will be mitigated.
- 2) Have nonstructural fill no steeper than one unit vertical to five units horizontal unless an engineering analysis demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection on adjacent development;
- 3) Not alter, or cause to be altered, sand dunes in such a way to cause increased potential flood damage.
- 4) Be anchored to prevent flotation, **collapse** or lateral movement resulting from wind and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;
- 5) Be constructed of flood damage- and corrosion-resistant materials;
- 6) Be designed to limit creation of debris, and;

- 7) Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.

#### **Section 4.030 Non-Coastal High Hazard Areas**

- 1) All development in non-coastal high hazard areas (A zones) for which specific provisions are not specified in this ordinance or building codes, shall:
- 2) Be located and constructed to minimize flood damage;
- 3) Be designed so as not to impede flow of flood waters under base flood conditions;
- 4) If located in a floodway, meet the limitations of Section 4.027 of this ordinance;
- 5) Be anchored to prevent flotation or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- 6) Be constructed of flood damage-resistant materials; and
- 7) Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.

#### **Section 4.031 Specific Standards for Areas of Shallow Flooding (AO and AH Zone)**

In all areas of special flood hazards designated as areas of shallow flooding, the following provisions shall apply:

- 1) All new construction and substantial improvements of residential structures and manufactured homes shall have the lowest floor, including basement, elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade.
- 2) All new construction and substantial improvement of non-residential structures shall:
  - (A) Have the lowest floor, including basement, elevated to one foot plus the depth number specified on the FIRM above the highest adjacent grade on the property. The adjacent grade is defined to be the natural or existing grade of the site prior to the proposed site alteration. If no depth number is specified on the FIRM, the lowest floor including basement shall be elevated to at least two feet above the highest adjacent grade; or
  - (B) Together with attendant utility and sanitary facilities be completely flood proofed to meet the flood proofing standard of Section 4.025 General Standards (§ 9).
- 3) Provide adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

#### **Section 4.032 Requirement to Submit New Technical Data**

- 1) Within six months of project completion, an applicant who obtains an approved Conditional Letter of Map Revision (CLOMR) from FEMA, or whose development modifies floodplain boundaries, or modifies base flood elevations, or alters a watercourse, shall obtain from FEMA a Letter of Map Revision (LOMR) reflecting the as-built changes to the FIRM.

- 2) It is the responsibility of the applicant to have technical data prepared in a format required for a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) and to submit such data to FEMA on the appropriate application forms. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
- 3) ~~Applicants shall be responsible for all costs associated with obtaining a Conditional Letter of Map Amendment (CLOMR) or Letter of Map Revision from FEMA.~~
- 4) Clatsop County 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.



**Clatsop County**  
Community Development – Planning

800 Exchange St., Suite 100  
Astoria, OR 97103  
(503) 325-8611 phone  
(503) 338-3606 fax  
[www.co.clatsop.or.us](http://www.co.clatsop.or.us)

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# EXHIBIT 4

WOLLAM, VICKI  
1256 AVENUE B  
SEASIDE, OREGON 97138

2/22/2018

CLATSOP COUNTY COMMUNITY DEVELOPMENT

**ADOPTING ORDINANCE 18-03, AMENDING LAND AND WATER  
DEVELOPMENT AND USE SECTION 4,000 FLOOD HAZARD OVERLAY AND  
ADOPTING NEW FEMA FLOOD INSURANCE RATE MAPS AND FLOOD  
INSURANCE STUDY**

Please take this as my formal notice that I protest the idea of anything that would adversely affect the value of my property due adopting new Flood Hazard Overlay District.

Our house was built in 1988 and not been flooded. Since the house went through the 1996 flood and did not receive flood it is inappropriate to change our property.

Seaside has had many floods and storms since we purchased the property in 2003 but have not had any high water on the property. Not only have we not had any high water on our property but our neighbors have not had any high water on their property.

We try to do the right thing and due carry FEMA Flood Insurance but cannot see how they could change our area since we have already had the 100 year flood in 1996

Please do not make any changes to the ordinance!

*Sincerely*

**VICKI WOLLAM**

## Gail Henrikson

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**From:** Bill Smith <wgsmithiii@yahoo.com>  
**Sent:** Wednesday, February 21, 2018 11:25 AM  
**To:** Gail Henrikson; Clatsop Development  
**Subject:** Tax lot 71021BAO1600

Good morning Gail,

I just received a post card stating proposed changes in the current FEMA map. I am very anxious to see how this ruling pans out.

We bought our current home in 1993. It is next to Beaverton Creek (305 SW Seminole Drive, Aloha). When FEMA changed their maps, we had to purchase flood insurance even though only a small portion of our property was in the flood plain. For years we have no choice as to this payment while our neighbors on all sides of us (at the same elevation) did not have to pay this tax. Why? because a very small portion of our land (20 or 30 square feet?) is actually part of the creek!

We purchased our property at surf pines in 1994. I just retired after 34 years of teaching and we are just completing our beach house now. Today I receive a map which shows a similar pattern - a very small sliver of land about a hundred yards away from our new house and on the other side of a sand dune is in the latest FEMA flood plain. This designated flood plain presents no danger to me house.

I pray that common sense will prevail and we will not be tasked with an unnecessary expenditure that my family did not count on and that is truly not needed.

Thank you for your time.

Bill and Chrisite Smith  
89858 Ocean Drive  
Warrenton  
503 764 5276

**COASTAL HIGH  
HAZARD AREA  
LANGUAGE  
PROVIDED TO THE  
PLANNING  
COMMISSION,  
DATED  
MARCH 20,  
2018**



# Clatsop County

Community Development – Planning

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**TO:** Clatsop County Planning Commission Members

**FROM:** Gail Henrikson, Community Development Director

**DATE:** March 20, 2018

**RE:** Additional Language to the Coastal High Hazard Area

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The revisions to Section 4.000 included in the staff report, did not include the referenced changes to Section 4.029 Coastal High Hazard Area. The amended language is attached to this memo. The proposed changes address required construction methods in the V zones along the coastline. The changes include:

1. Requiring all new construction or substantial improvements to be constructed on pilings or columns.
2. Requiring a registered engineer or architect to certify the proposed construction methods.
3. Providing an elevation certificate for new structures and document whether structures contain a basement.
4. Requiring all new construction to be located landward of the mean high tide.
5. Requiring walls that are below the lowest structural member of the structure to be breakaway walls.
6. Restricting the use of areas behind breakaway walls to vehicle parking, building access or storage.
7. Prohibiting the use of fill to structurally support buildings.
8. Prohibit man-made alteration of dunes that would increase potential flood damage.
9. Including requirements for the siting of manufactured homes.
10. Including requirements for the siting of recreational vehicles.

The proposed changes only apply to new construction and substantial improvements to structures within the V zones. The changes do not prohibit new construction. These changes are being requested by FEMA to ensure that the County's codes are in compliance with FEMA requirements. This will ensure the County's continued eligibility to participate in the National Flood Insurance Program.

#### **Section 4.029 Coastal High Hazard Area**

All other development in coastal high hazard areas (V Zones) for which specific provisions are not specified in this ordinance or building codes, shall:

- 1) All new construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:
  - (A) 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
  - (B) 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 any given year (100-year mean recurrence interval).
- 2) 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 1(A) and 1(B) of this section.
- 3) 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 in Zones V1-30, VE and V, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.
- 4) All new construction shall be located landward of the reach of mean high tide.
- 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:
  - (A) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
  - (B) 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 non-structural). 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).
- 6) 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.
- 7) Prohibit the use of fill for structural support of buildings.

- 8) Prohibit man-made alteration of sand dunes which would increase potential flood damage.
- 9) All manufactured homes to be placed or substantially improved within Zones V1-V30, V and VE that are:
  - (A) Outside of a manufactured home park or subdivision;
  - (B) In a new manufactured home park or subdivision;
  - (C) In an expansion to an existing manufactured home park or subdivision, or
  - (D) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood

Shall comply with the requirements of Section 4.029(1)-(8). Manufactured homes placed or substantially improved on all other sites in an existing manufactured home park or subdivision shall comply with the requirements of Section 4.025(2)(A).

- 10) Recreational vehicles placed on sites within Zones V1-V30, V and VE shall:
  - (A) Be on the site for fewer than 180 consecutive days;
  - (B) Be fully licensed and ready for highway use, on its wheels or jacking systems and attached to the site only by quick disconnect type utilities and security devices, and have to permanently attached additions; or
  - (C) Meet the requirements of Section 4.029(1)-(8).
- 1) Be located outside the footprint of, and not structurally attached to, buildings and structures, and be permitted only if analysis by a registered design professional demonstrates no harmful diversion of floodwaters or wave runup and wave reflection onto adjacent buildings and structures.

**Exception:** A deck that is structurally attached to a building or structure is allowed if the bottom of the lowest horizontal structural member is one (1) foot above the base flood elevation and any supporting members that extend below the base flood elevation comply with the foundation requirements that apply to the building or structure and a registered design professional demonstrates that the potential loads generated by the deck on the building will be mitigated.
- 2) Have nonstructural fill no steeper than one unit vertical to five units horizontal unless an engineering analysis demonstrates no harmful diversion of floodwaters or wave run-up and wave reflection on adjacent development;
- 3) Not alter, or cause to be altered, sand dunes in such a way to cause increased potential flood damage.
- 4) Be anchored to prevent flotation or lateral movement resulting from wind and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;
- 5) Be constructed of flood damage and corrosion resistant materials;
- 6) Be designed to limit creation of debris, and;
- 7) Have electric service and or mechanical equipment elevated above the base flood elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.