

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

ORDINANCE NO. 1120

Amending MCC Chapter 29, Relating to County Flood Hazard Regulations

(Language stricken is deleted; double underlined language is new.)

The Multnomah County Board of Commissioners Finds:

- a. The Planning Commission is authorized by Multnomah County Code Chapter 37 to recommend to the Board of County Commissioners the adoption, revision, or repeal of regulations intended to carry out all or part of a plan adopted by the Board. The Planning Commission recommended adoption of the proposed amendments June 2nd, 2008.
- b. Flood Hazard regulations implement Policy 14 of the County Comprehensive Framework Plan, for Development Limitations, and related provisions of the County's Rural Area Plans. The regulations apply to certain rural unincorporated lands that are generally within the 100 year flood boundary as identified by the Federal Emergency Management Agency (FEMA).
- c. Flood Hazard standards are necessary to promote the public health, safety and general welfare, to minimize public and private losses due to flood conditions, and to allow property owners to participate in the National Flood Insurance Program (NFIP).
- d. The Flood Hazard regulations applicable in the West of the Sandy River Rural Plan Area were last amended in 2003 by Ordinance 996. The Flood Hazard regulations applicable in all other areas were last updated in 1999 by Ordinance 931.
- e. In 2007, Multnomah County was informed by the Department of Land Conservation and Development (DLCD) through a Community Assistance Visit that the Flood Hazard regulations must be amended for the county to remain in compliance with the minimum participation requirements of the National Flood Insurance Program.
- f. Additional changes recommended by DLCD will assist the county in enrolling in the FEMA sponsored Community Rating System, a voluntary program that encourages community floodplain management activities that exceed minimum NFIP requirements. Enrollment can result in reduced flood insurance premiums for citizens.
- g. Updating the Flood Hazard standards is an opportunity to bring remaining lands into compliance with Metro Title 3 and to combine the two Flood Hazard ordinances to achieve administrative efficiencies.
- h. Proposed changes are necessary to ensure that the building codes limit risk of flood related hazards as envisioned in Policy 14, to fully implement Title 3, and to ensure property owners maintain eligibility for insurance through the NFIP.
- i. Optional changes are also appropriate as they further protect public and private development from flood loss and may help to reduce flood insurance rates.

Multnomah County Ordains as follows:

Section 1. **MCC § 29.600- is amended as follows:**

FLOOD HAZARD REGULATIONS (~~Excluding West of Sandy River Plan Area~~)

29.600- Purposes.

The purposes of the Flood Hazard Standards are to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas and to allow property owners within unincorporated Multnomah County to participate in the National Flood Insurance Program and to comply with Metro Title 3 Requirements.

Section 2. **MCC § 29.601 is amended as follows:**

29.601 Definitions.

For the purpose of this subchapter, the following definitions shall apply:

ALTERATION. To modify, change or make different.

AREAS OF SPECIAL FLOOD HAZARD. All lands contained within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps (FIRM) as published by the Federal Emergency Management Agency (FEMA), and the area of inundation for the February, 1996 flood when located outside of the flood areas identified on the Flood Insurance Rate Maps.

The Areas of Special Flood Hazard identified by the Federal Insurance Administration in the most recent scientific and engineering report entitled "The Flood Insurance Study, Multnomah County Oregon Unincorporated Areas", with accompanying Flood Insurance Rate Maps (FIRM), are hereby adopted by reference. Maps produced by the Metro Data Regional Center that identify the area of inundation for the February 1996 flood are also adopted by reference. The Flood Insurance Study is on file at the Multnomah County Planning Office. The best available information for flood hazard area identification as outlined in MCC 29.608 shall be the basis for regulation until a new FIRM is issued.

These maps may be periodically revised or modified by FEMA in accordance with prescribed procedures pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 92-234). In order to employ the best available information and maintain compliance with Federal Flood Insurance Program regulations, Multnomah County shall utilize any such revisions or modifications upon their effective date.

BASE FLOOD. 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 the FIRM maps always includes the letter A to identify a zone of specified risk. (Zone A is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study by approximate methods of analysis).

BASEMENT. Any area of the building having its floor sub grade (below ground level) on all sides.

CRITICAL FACILITY. A facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals police, fire and emergency response installations, and installations which produce, use or store hazardous materials or hazardous waste.

DESIGN FLOOD ELEVATION. The elevation of the base flood elevation, or in areas without maps, the elevation of the 25-year storm, or the edge of mapped flood prone soils or similar methodologies.

DEVELOPMENT. Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the areas shown within 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA) ~~and or within any~~ watercourse.

ELEVATED BUILDING. For insurance purposes, a non basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

ELEVATION CERTIFICATE. The document used to certify the FIRM Zone and base flood elevation of the development area of a property, and to determine the required elevation or floodproofing requirements of new and substantially improved structures.

ENCROACHMENT. To fill, construct, improve, or develop beyond the original bank line of the watercourse. Bank stabilization or restoration of a watercourse which does not protrude beyond the original banks line and does not protrude above the topography at the time the Flood Insurance Rate Map was developed is not considered an encroachment ~~by this subdistrict.~~

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

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

FLOOD INSURANCE RATE MAP (FIRM). The official map on which the Federal Insurance Administration has delineated both the areas of the special flood hazards and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY. The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

FLOODPROOFING CERTIFICATE. Documentation of certification by an Oregon registered professional engineer or architect that the design and methods of construction of a non-residential building are in accordance with accepted practices for meeting the floodproofing requirements of this subchapter.

FLOODWAY. The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

LOWEST FLOOR. The lowest floor of the lowest enclosed area (including basement).

MANUFACTURED HOME. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

NEW CONSTRUCTION. Structures for which the "start of construction" commenced on or after the effective date of this ordinance.

RECREATIONAL VEHICLE. A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, self-propelled or permanently towable by a light duty truck and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

START OF CONSTRUCTION. Includes substantial improvement to existing structures, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include the land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement to an existing structure, 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. A walled and/or roofed building including a gas or liquid storage tank that is principally above ground. A building with only one wall and no roof or a building with no walls and a roof, for example, is considered a structure.

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

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- (1) Before the improvement or repair is started; or
- (2) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The costs to repair must be calculated for full repair to "before-damage" condition, even if the owner elects to do less. The total costs to repair include both structural and finish materials and labor including donated labor and materials.

(3) The value of these alterations to an existing structure is measured cumulatively to avoid exempting a substantial improvement implemented in phases over time..

(34) Substantial Improvement does not, however, include either:

(a) The portion of any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by local building officials and which are the minimum necessary to assure safe living conditions or

(b) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

WATERCOURSE. A channel in which a flow of water occurs, either continuously or intermittently with some degree of regularity. Watercourses may be either natural or artificial. Natural and artificial features which transport surface water. Watercourse includes a river, stream, creek, slough, ditch, canal, or drainageway.

Section 3. MCC § 29.602 is amended as follows:

29.602 Areas Affected.

~~————(A) The provisions of MCC 29.600 - 29.611 shall apply to all areas of special flood hazard, within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA) and any watercourse as defined by MCC 29.601. The provisions of 29.609 shall also apply to any relocation, encroachment or alteration of a watercourse.~~

~~————(1) These maps may be periodically revised or modified by FEMA in accordance with prescribed procedures pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 92-234). In order to employ the best available information and maintain compliance with Federal Flood Insurance Program regulations, Multnomah County shall utilize any such revisions or modifications upon their effective date.~~

~~(2) On the Multnomah County Zoning Map, all areas depicted as being Flood Fringe (FF), Floodway (FW) or Flood Hazard (FH) with this ordinance are repealed from requiring a Flood Hazard Permit.~~

Section 4. MCC § 29.603 is amended as follows:

29.603 Permits.

(A) No structure, dwelling or manufactured home shall be erected, located, altered, improved, repaired or enlarged and no other new development including but not limited to grading, mining, excavation and filling (see “Development” under MCC 29.601) shall occur in areas of special flood hazard ~~on lands within the 100-year flood boundary~~ unless a Floodplain Development Permit specifically

authorizing the proposal has been obtained from Multnomah County. Variances to the Flood Hazard regulations are not allowed.

(1) Improvements to a structure, dwelling or mobile home or other development, which does not meet the definition of "Development" under MCC 29.601 require a land use permit, grading permit or building permit, are exempted from obtaining a Floodplain Development Hazard Permit.

(B) Alterations, modifications or relocations to any watercourse as defined in MCC 29.601 are subject to a Floodplain Development Hazard permit and the Watercourse Relocation and Alteration standards requirements of MCC 29.609.

~~(1) Regular maintenance of ditches and dikes within the Sauvie Island Drainage District is exempted from obtaining a Flood Hazard Permit.~~

(C) Transportation maintenance activities may be evaluated in an annual Flood Hazard permit. This permit will confirm that the typical Best Management Practices used to accomplish routine transportation maintenance projects meet applicable Flood Hazard regulations. Eligible activities include routine cleaning and maintenance of ditches and culverts, replacement culverts, unanticipated emergency response activities and the permitting of new driveway culverts crossing a county maintained ditch. After the fact notification of the location and scope of all transportation maintenance activities is required.

Section 5. MCC § 29.604 is amended as follows:

29.604 Exemption from Development Standards.

The following are exempt:

(A) Land may be exempted from the requirements of MCC 29.606 upon review and approval by the Director of an acceptable elevation certificate or survey, certified by a State of Oregon registered Professional Engineer or land surveyor, which demonstrates that the entire subject parcel is at least one foot above the base flood levelelevation. This exemption is only possible when flood elevation data is available. If a critical facility is proposed, the entire parcel must be at least three feet above the base flood elevation (or above the 500-year flood elevation, which ever is higher) in order to be considered exempt from the requirements of MCC 29.606.

(B) The reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Historic Sites Inventory may be permitted without regard to the requirements of MCC 29.606 (B) through (D).

(C) Forest practices ~~conducted~~ approved under the Forest Practices Act are not regulated by this subchapter.

(D) The following drainage district maintenance activities are not regulated by this subchapter when regulated by an Army Corps of Engineers Nationwide 31 permit - Routine operations, repair, maintenance, alteration, rehabilitation, or replacement of existing drainage, flood control, and related facilities, including any structures, pump stations, water control structures, culverts, irrigation systems, roadways, utilities, accessory uses (such as off-load facilities that facilitate water-based maintenance), erosion control projects, levees, soil and bank stabilization projects, dredging and ditch

clearing within the hydraulic cross-section in existing storm water conveyance drainageways, habitat restoration and enhancement projects, or other water quality and flood storage projects required to be undertaken pursuant to ORS chapters 547 or 554 or Titles 33 or 44 of the Code of Federal Regulations, provided that:

(1) The project is consistent with Division of State Lands, five-year renewable general authorization permit, five-year renewable Army Corps of Engineers Nationwide 31 permit and all other applicable local, regional, county and state laws and regulations. The preconstruction notification and annual reporting required by the Army Corp's Nationwide 31 permit must also be submitted to Multnomah County planning by the drainage districts for review and comment.

(2) The project does not encroach closer to a water feature than existing operations and development; and

(3) Vegetation native to the metro area is maintained, enhanced and restored, if disturbed; other vegetation is replaced, if disturbed, with non-invasive vegetation; and the planting of native vegetation and the removal of invasive non- native vegetation is encouraged.

Section 6. MCC § 29.605 is amended as follows:

29.605 Application Information Required.

An application for development subject to a Floodplain Development Permit shall include the following:

(A) A map showing the property line locations, the surveyed boundaries of the 100 year floodplain on the parcel, roads, and driveways, existing structures, watercourses and the location of the proposed development(s), topographic elevations for the proposed development and areas of grading or filling required for the project. The FIRM map and panel number shall also be provided on the map.

(B) Detailed construction drawings showing compliance with the development standards specified in MCC 29.606. A State of Oregon registered professional~~licensed~~ engineer or architect shall stamp the plans and include a statement that the plans meet the applicable requirements of MCC 29.606.

(C) An elevation certificate based on construction drawings which have been signed by a State of Oregon registered professional land surveyor, or a floodproofing certificate signed by a State of Oregon registered professional engineer or architect, -depending on the type of development proposed. The certificate shall be accompanied by a plan of the property which shows the location and elevation of a benchmark on the property.

(D) A written narrative specifying building materials and methods that will be utilized to comply with the requirements of the floodplain development permit and this subchapter.

(E) Evidence that the applicant has obtained, when necessary, prior approval from those Federal, State and/or local governmental agencies with jurisdiction over the proposed development.

Section 7. **MCC § 29.606 is amended as follows:**

29.606 Development Standards.

Unless otherwise stated below, The following development standards shall apply within all portions of unincorporated Multnomah County to all new construction, substantial improvement or other development in areas of special flood hazard, as defined in 29.601 within the 100-year flood boundary: (The General Development Standards of 29.606(A) are only applicable in the West of Sandy River Rural Plan area and/or within the Metro Jurisdictional Boundary)

(A) General Development Standards - Applicable only in the West of Sandy River Rural Plan Area and/or within the Metro Jurisdictional Boundary.

(1) Development, excavation and fill shall be performed in a manner that maintains or increases flood storage and conveyance capacity and does not increase the design flood elevation.

(2) All fill placed at or below the design flood elevation in areas of special flood hazard shall be balanced with at least an equal amount of soil material removal.

(3) Excavation shall not be counted as compensating for fill if such areas will be filled with water in non-storm winter conditions.

(4) Temporary fills permitted during construction shall be removed and not be allowed in the floodway during the wet weather season.

(5) Uncontained areas of hazardous materials as defined by the Oregon Department of Environmental Quality shall be prohibited in areas of special flood hazard.

(AB) All Structures Except as provided in subsection (A) above, this subsection applies to all structures within areas of special flood hazard in unincorporated Multnomah County as defined in 29.601.

(1) All new construction and substantial improvement shall:

(a) Comply with Oregon State Building Codes.

(b) Have the electrical, heating, ventilation, duct systems, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located a minimum of one foot above the base flood elevation so as to prevent water from entering or accumulating within the components during conditions of flooding.

(c) Use materials and utility equipment resistant to flood damage.

(d) Using methods and practices that minimize flood damage.

(e) For areas that are fully enclosed below the lowest floor and 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. (Note: this requirement is not applicable for floodproofed nonresidential structures).

1. Designs for meeting this requirement must either be certified by a State of Oregon registered professional engineer or architect and must meet or exceed the following minimum criteria:

a. 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.

b. The bottom of all openings shall be no higher than one foot above the lowest adjacent exterior grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters and the covering device does not reduce the minimum required total net area of the opening.

(2) Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures. Positive drainage away from a structure's foundation shall also be provided to avoid ponding of water adjacent to the foundation after floodwaters recede.

(3) Below-grade crawlspace construction (see figure 2 below).

In addition to meeting the previous development standards for all structures, all below-grade crawlspaces shall meet the following standards. Below-grade crawlspace construction in accordance with the requirements listed below will not be considered a basement.

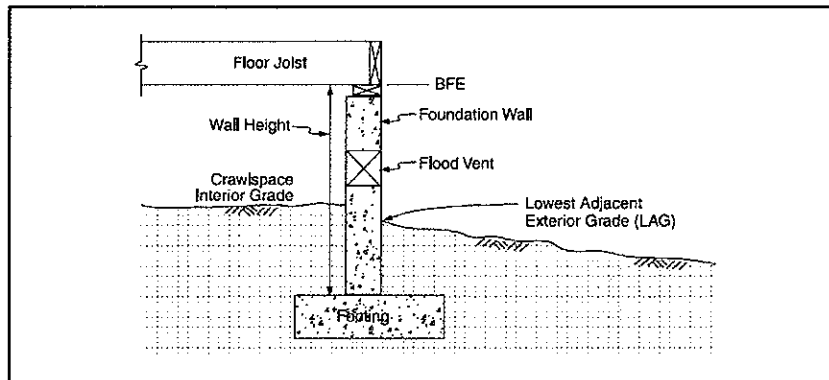


Figure 1 Preferred crawlspace construction.

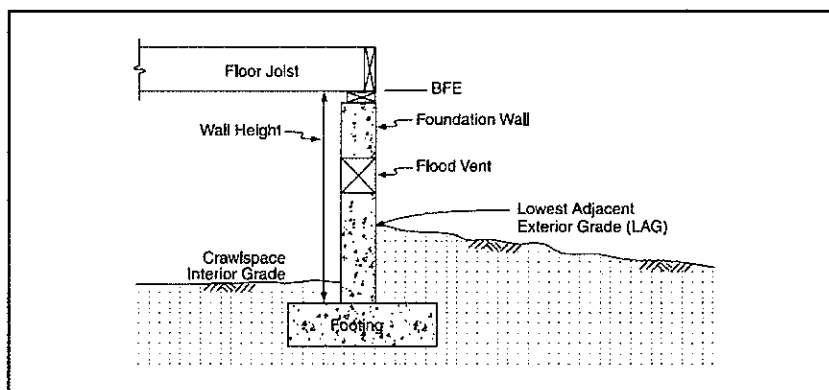


Figure 2 Below-grade crawlspace construction.

(a) The interior grade of a crawlspace below the base flood elevation shall not be more than two-feet below the lowest adjacent exterior grade.

(b) 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 feet at any point.

(c) There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. Drainage examples include natural drainage through porous well drained soils, perforated pipes, drainage tiles, or gravel/crushed stone drainage by gravity or mechanical means.

(d) The velocity of floodwaters shall not exceed five-feet per second for any proposed below grade crawlspace location. The Multnomah County Flood Insurance Study contains Floodway Data Tables presenting information on mean floodway velocities at each cross section along the river or stream. Other types of foundations, such as open pile or column foundations, that allow floodwaters to flow freely beneath the building, are recommended for areas exceeding five-feet per second flood velocities.

(e) The below-grade crawlspace area should be designed so that it is easily accessible for physical post-flood clean-up and ventilation. The land owner must record a notice acknowledging below-grade crawlspace construction is not recommended by the Federal Emergency Management Agency and that this type of construction can increase flood insurance premiums for homeowners.

(4) When applicable, the horizontal line of the base flood elevation shall be surveyed and clearly marked and labeled, by a State of Oregon registered professional land surveyor, on an inside wall of any structure or inside foundation wall when a crawlspace is proposed to provide a visual reference for the building inspector. This reference line is not intended to be permanent and can be removed, covered or painted over at the conclusion of all building inspections. This marking is not applicable when the entire structure, including above grade foundation walls, will be elevated above the base flood elevation.

(BC) Residential Structures.

New construction and substantial improvement of any residential structure, including manufactured homes not considered a Critical Facility, shall:

(1) Have the lowest floor, including basement, elevated to at least one foot above the base elevation flood level as indicated on the Elevation Certificate. Floating dwellings do not need to be elevated but must be able to rise with flood waters to the design flood elevation required by this section. This will require consideration of the piling heights. The lowest floor, including basement, shall be elevated to at least two feet above the base flood elevation where flood elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative federal, state or other source. Where flood elevation data is not available, a State of Oregon registered professional engineer or architect shall also verify that the proposed construction will be reasonably safe from flooding.

A garage attached to a residential structure can be constructed with the garage floor slab below the base flood elevation but must be designed to allow for the automatic entry of flood waters. Openings must meet the requirements of 29.606(B) and are required in two different exterior

walls of the garage (two different walls or one wall and one garage door). For purposes of this section, an unfinished garage (either attached or detached) may be considered a non-residential structure.

In addition to allowing the automatic entry of flood waters, the areas of the garage below the base flood elevation must be constructed with flood resistant materials. Garage doors without openings specifically designed to allow for the free flow of floodwaters do not meet these opening requirements. Gaps that may be present between the door segments and between the garage door and the garage door jam do not guarantee the automatic entry and exist of floodwaters. The human intervention necessary to open garage doors is not an acceptable means of meeting the opening requirements.

(2) Be placed on a permanent foundation and shall be anchored to ~~resist prevent~~ flotation, collapse and lateral movement by providing tie downs (anchor bolts, seismic tie-downs) and anchoring as specified in OAR 814-23-005 through 080 and State of Oregon 1 and 2 Family Dwelling Specialty Code, as appropriate to the construction type.

(3) Have structural components capable of withstanding hydrostatic and hydrodynamic loads, effects of buoyancy, flood depths, pressures, velocities and other factors associated with the base flood.

(34) Conduct a ~~finished construction~~ as-built elevation survey of the lowest floor. This survey shall be completed by a State of Oregon registered ~~professional engineer or land surveyor~~ and must certify that the structure's lowest floor was elevated to at least one foot above the base flood ~~level~~ elevation. The lowest floor, including basement, shall be elevated to at least two feet above the base flood elevation where flood elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative federal, state or other source. Where flood elevation data is not available, a State of Oregon registered professional engineer or architect shall also verify that the proposed construction will be reasonably safe from flooding.

(a) ~~The as-built~~ finished construction elevation ~~survey~~ certificate and stamped documentation certifying that the structure has been built in compliance with the applicable provisions of 29.606 shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.

(b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the ~~as-built~~ finished construction elevation ~~survey~~ certificate is submitted. The deposit/bond may be used to obtain the elevation ~~survey~~ certificate, without notice, if it is not completed and submitted prior to occupancy of the dwelling. The performance bond or cash deposit shall be released upon submittal of the ~~as-built~~ finished construction elevation ~~survey~~ certificate, unless utilized to obtain compliance.

(C) Nonresidential Structures.

New construction and substantial improvement of any commercial, industrial or other non-residential structure, including a detached garage, shall:

(1) Have the lowest floor including basement, elevated at least one foot above the base flood elevation and be anchored to prevent flotation, collapse, or lateral movement of the structure. ~~level~~ Floating nonresidential structures do not need to be elevated but must be able to rise with flood waters to the design flood elevation required by this section. This will require consideration of the piling heights. The lowest floor, including basement, shall be elevated to at least two feet above the base flood

elevation where flood elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative federal, state or other source. Where flood elevation data is not available, a State of Oregon registered professional engineer or architect shall also verify that the proposed construction will be reasonably safe from flooding; or, together with attendant utility and sanitary facilities, shall:

(a) Be floodproofed such that the structure, including the attendant utility and sanitary facilities, shall be substantially impermeable to the passage of water to an elevation at least one foot above the base flood ~~levelelevation~~; and

(b) Have structural components capable of withstanding hydrostatic and hydrodynamic loads, effects of buoyancy, flood depths, pressures, velocities and other factors associated with the base flood; and

(c) Be certified by a State of Oregon registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans~~standards of this subsection are satisfied.~~

(2) The applicant shall provide either an as-built finished construction elevation survey certificate prepared by a State of Oregon land surveyor for an elevated non-residential structure or a flood proofing certificate prepared of the lowest floor completed by a State of Oregon Registered professional engineer or land surveyor/architect for a non-elevated, non-residential structure certifying that the structure's lowest floor was elevated to at least one foot above the base flood level; or submit a stamped documentation by a State of Oregon Registered Professional Engineer certifying the structure has been built in compliance with MCC 29.606(C)(1)(a) though (e).

(a) The as-built finished construction elevation certificate/floodproofing certificatesurvey or and stamped documentation certifying the structure has been built in compliance with the applicable provisions of MCC 29.606 shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.

(b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as-built finished construction elevation survey certificate or and stamped documentation is submitted. The bond/deposit may be used to obtain the elevation survey certificate or documentation, without notice, if it is not completed and submitted prior to occupancy or use of the structure or development. The performance bond or cash deposit shall be released upon submittal of the as-built finished construction elevation survey certificate or stamped documentation, unless utilized to obtain compliance.

(DE) On Site Waste Disposal Systems, Wells, Water Systems and Sewer Systems.

All new and replacement water and sewer systems, including on-site waste disposal systems, shall be designed to:

- (1) Minimize infiltration of floodwaters into the system;
- (2) Minimize discharge from systems into floodwaters;
- (3) Avoid impairment or contamination during flooding.

(EF) ~~Recreational Vehicles in Campground or Recreational Development~~

Recreational vehicles utilized on sites within Zones A1-A30, AH and AE on the community's FIRM shall either:

- (1) Be on the site for fewer than 180 consecutive days, or
- (2) Be fully licensed and ready for highway uses, 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
- (3) Meet the requirements of section 29.606(AB) and (BC).

(G) Critical Facilities

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the areas of special flood hazard. Construction of new critical facilities shall be permissible within the special flood hazard area if:

- (1) No feasible alternative is available.
- (2) The lowest floor is elevated three feet above the base flood elevation, or to the elevation of the 500-year flood, whichever is higher.
- (3) At least one access route to the critical facility shall be either located or elevated at or above the flood elevation referenced above to assure the route will remain passable during flood events.
- (4) Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced or released into floodwaters.
- (5) The construction meets the requirements of MCC 29.606(D) except the lowest floor elevation shall meet (G)(2) above.

(H) Land Division Proposals

County review of proposed land divisions are subject to separate criteria in the county zoning code titled "Land Divisions" which are designed to minimize flood damage.

Section 8. MCC § 29.607 is amended as follows:

29.607 Floodway Requirements.

In areas identified as a floodway in MCC 29.602 on the Flood Boundary and Floodway Maps, the following restrictions, in addition to the requirements of MCC 29.606, shall apply:

- (A) No development shall be permitted that would result in any measurable increase in base flood levels.

(1) Encroachment into the floodway, including fill, new construction, substantial improvements and other development, is prohibited, unless a detailed step backwater analysis and conveyance compensation calculations, certified by a State of Oregon registered professional engineer, are provided which demonstrates that the proposed encroachment will cause no measurable increase in flood levels (water surface elevations) during a base flood discharge.

(2) If Section (A) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of MCC 29.606.

(B) In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the communities FIRM, unless:

(1) 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, and

(2) The applicable requirements of 29.606 are met.

Section 9. MCC § 29.609 is amended as follows:

29.609 Watercourse Relocation and Alteration.

Prior to approving any relocation, encroachment or alteration of a watercourse, the Land Use Planning Division shall provide mailed notice of the proposal to adjoining communities and to the Department of Land Conservation and Development Floodplain Coordinator. Copies of such notice shall also be provided to the Federal Insurance Administration.

(A) No relocation, encroachment or alteration of a watercourse shall be permitted unless a detailed hydraulic analysis, certified by a State of Oregon registered professional engineer, is provided which demonstrates that:

- (1) The flood carrying capacity for the altered or relocated portion of the watercourse will be maintained;
- (2) The area subject to inundation by the base flood discharge will not be increased;
- (3) The alteration or relocation will cause no measurable increase in base flood levels.

Section 10. MCC § 29.610 is amended as follows:

29.610 County Records.

Multnomah County or its designee shall obtain and maintain on file the actual-final construction elevation (in relation to the National Geodetic Vertical Datum (NGVD) 1929 or NAVD 1988) of the

lowest floor, including basement, of all new or substantially improved structures in areas subject to the provisions of this Section.

(A) For all new or substantially improved floodproofed structures in areas subject to the provisions of this Section, Multnomah County shall obtain and maintain on file the actual elevation (in relation to NGVD 1929 or NAVD 1988) of to which the structure was floodproofed and shall also maintain the floodproofing certifications required pursuant to MCC 29.606(C)(1)(b)-(d).

Section 11. MCC §§ 29.620- through 29.630 are repealed as follows:

~~29.620* WEST OF SANDY RIVER FLOOD HAZARD REGULATIONS~~

~~29.620- Purposes.~~

~~———— The purposes of the Flood Hazard Standards are to promote the public health, safety and general welfare, to reduce the risk of flooding and maintain the functions and values of floodplains such as allowing for the storage and conveyance of stream flows through existing and natural flood conveyance systems, and to minimize public and private losses due to flood conditions in specific areas and to allow property owners within the West of Sandy River Plan Area of unincorporated Multnomah County to participate in the National Flood Insurance Program.(Title 3)~~

~~29.621 Definitions.~~

~~———— For the purpose of this subchapter, the following definitions shall apply:~~

~~———— **ALTERATION.** To modify, change or make different.~~

~~———— **DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the areas shown within 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA), the area of inundation for the February 1996 flood, and any watercourse.~~

~~———— **DESIGN FLOOD ELEVATION.** The elevation of the 100-year flood as defined by FEMA Flood Insurance Rate Maps, or in areas without maps, the elevation of the 25-year storm, or the edge of mapped flood prone soils or similar methodologies.~~

~~———— **ELEVATION CERTIFICATE.** The document used to certify the FIRM Zone and base flood elevation of the development area of a property, and to determine the required elevation or floodproofing requirements of new and substantially improved structures.~~

~~———— **ENCROACHMENT.** To fill, construct, improve, or develop beyond the original bank line of the watercourse. Bank stabilization or restoration of a watercourse which does not protrude beyond the original banks line is not considered an encroachment by this subdistrict.~~

~~———— **FLOOD MANAGEMENT AREA.** All lands contained within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published~~

by the Federal Emergency Management Agency (FEMA), and the area of inundation for the February 1996 flood.(Title 3)

~~———— **FLOODWAY.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.~~

~~———— **RECREATIONAL VEHICLE.** A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, self-propelled or permanently towable by a light duty truck and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.~~

~~———— **SUBSTANTIAL DAMAGE.** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.~~

~~———— **SUBSTANTIAL IMPROVEMENT.** Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:~~

~~———— (1) ——— Before the improvement or repair is started; or~~

~~———— (2) ——— If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The costs to repair must be calculated for full repair to "before damage" condition, even if the owner elects to do less. The total costs to repair include both structural and finish materials and labor.~~

~~———— (3) ——— Substantial Improvement does not, however, include either:~~

~~———— (a) ——— The portion of any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by local building officials and which are the minimum necessary to assure safe living conditions or~~

~~———— (b) ——— Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.~~

~~———— **WATERCOURSE.** Natural and artificial features which transport surface water. Watercourse includes a river, stream, creek, slough, ditch, canal, or drainageway.~~

29.622 Areas Affected.

~~———— (A) ——— The provisions of MCC 29.620 – 29.630 shall apply within the West of Sandy River Plan Area to all areas within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA), the area of inundation for the February 1996 flood, and any watercourse as defined by MCC 29.621.(Title 3)~~

~~———— (1) ——— These maps may be periodically revised or modified by FEMA in accordance with prescribed procedures pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 92-~~

234). In order to employ the best available information and maintain compliance with Federal Flood Insurance Program regulations, Multnomah County shall utilize any such revisions or modifications upon their effective date.

~~(2) On the Multnomah County Zoning Map, all areas depicted as being Flood Fringe (FF), Floodway (FW) or Flood Hazard (FH) with this ordinance are repealed from requiring a Flood Hazard Permit.~~

29.623 Permits.

~~(A) No structure, dwelling or manufactured home shall be erected, located, altered, improved, repaired or enlarged and no other new development including but not limited to grading, mining, excavation and filling shall occur on lands within Flood Management Areas unless a Floodplain Development Permit specifically authorizing the proposal has been obtained from Multnomah County.~~

~~(1) Improvements to a structure, dwelling or mobile home, which does not require a land use permit, grading permit or building permit, are exempted from obtaining a Flood Hazard Permit.~~

~~(B) Alterations, modifications or relocations to any watercourse as defined in MCC 29.621 are subject to a Flood Hazard permit and the Watercourse Relocation requirements of MCC 29.629.~~

~~(1) Regular maintenance of ditches and dikes within the Sauvie Island Drainage District is exempted from obtaining a Flood Hazard Permit.~~

29.624 Exemption from Development Standards.

~~The following are exempt:~~

~~(A) Land may be exempted from the requirements of MCC 29.626 upon review and approval by the Director of an acceptable elevation survey, certified by a State of Oregon Registered Professional Engineer or Land Surveyor, which demonstrates that the entire subject parcel is at least one foot above the base flood level.~~

~~(B) The reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Historic Sites Inventory may be permitted without regard to the requirements of MCC 29.626.~~

~~(C) Forest practices conducted under the Forest Practices Act.~~

29.625 Application Information Required.

~~An application for development subject to a Floodplain Development Permit shall include the following:~~

~~(A) A map showing the property line locations, the boundaries of the 100-year floodplain on the parcel, roads, and driveways, existing structures, watercourses and the location of the proposed development(s), topographic elevations for the proposed development and areas of grading or filling required for the project.~~

~~———— (B) — Detailed construction drawings showing compliance with the development standards specified in MCC 29.626. A licensed engineer or architect shall stamp the plans and include a statement that the plans meet the requirements of MCC 29.626.~~

~~———— (C) — An elevation certificate signed by a Registered Professional Land Surveyor, Engineer or Architect. The certificate shall be accompanied by a plan of the property which shows the location and elevation of a benchmark on the property.~~

~~———— (D) — A written narrative specifying building materials and methods that will be utilized to comply with the requirements of the Floodplain Permit.~~

~~———— (E) — Evidence that the applicant has obtained, when necessary, prior approval from those Federal, State and/or local governmental agencies with jurisdiction over the proposed development.~~

29.626 Development Standards.

~~———— The following standards shall apply to all new construction, substantial improvement or other development in Flood Management Areas:—~~

~~———— (A) — General Development Standards~~

~~———— (1) — Development, excavation and fill shall be performed in a manner to maintain or increase flood storage and conveyance capacity and not increase design flood elevations.~~

~~———— (2) — All fill placed at or below the design flood elevation in Flood Management Areas shall be balanced with at least an equal amount of soil material removal.~~

~~———— (3) — Excavation shall not be counted as compensating for fill if such areas will be filled with water in non-storm winter conditions.~~

~~———— (4) — Temporary fills permitted during construction shall be removed.~~

~~———— (5) — Uncontained areas of hazardous materials as defined by DEQ shall be prohibited in Flood Management Areas. (Title 3)~~

~~———— (B) — All Structures:~~

~~———— (1) — All new construction and substantial improvement shall:~~

~~———— (a) — Comply with Oregon State Building Codes.~~

~~———— (b) — Have the electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.~~

~~———— (c) — Use materials resistant to flood damage.~~

~~———— (d) — Using methods and practices that minimize flood damage.~~

~~_____ (c) _____ For areas that are fully enclosed below the lowest floor and 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.~~

~~_____ 1. _____ Designs for meeting this requirement must either be certified by a registered professional engineer or architect and must meet or exceed the following minimum criteria:~~

~~_____ a. _____ 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.~~

~~_____ b. _____ The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.~~

~~_____ (C) _____ Residential Structures.~~

~~_____ New construction and substantial improvement of any residential structure, including manufactured homes, shall:~~

~~_____ (1) _____ Have the lowest floor, including basement, elevated to at least one foot above the base flood level as indicated on the Elevation Certificate. For purposes of this section, an unfinished garage (either attached or detached) may be considered a non-residential structure.~~

~~_____ (2) _____ Be placed on a permanent foundation and shall be anchored to resist flotation, collapse and lateral movement by providing tie downs (anchor bolts, seismic tie downs) and anchoring as specified in OAR 814-23-005 through 080 and State of Oregon 1 and 2 Family Dwelling Specialty Code, as appropriate to the construction type.~~

~~_____ (3) _____ Conduct an as-built elevation survey of the lowest floor. This survey shall be completed by a State of Oregon Registered Professional Engineer or Land Surveyor and must certify that the structure's lowest floor was elevated to at least one foot above the base flood level.~~

~~_____ (a) _____ The as-built elevation survey shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.~~

~~_____ (b) _____ Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as-built elevation survey is submitted. The deposit/bond may be used to obtain the elevation survey, without notice, if it is not completed and submitted prior to occupancy of the dwelling. The performance bond or cash deposit shall be released upon submittal of the as-built elevation survey, unless utilized to obtain compliance.~~

~~_____ (D) _____ Nonresidential Structures.~~

~~_____ New construction and substantial improvement of any commercial, industrial or other non-residential structure shall:~~

~~_____ (1) _____ Have the lowest floor including basement, elevated at least one foot above the base flood level; or, together with attendant utility and sanitary facilities, shall:~~

~~_____ (a) Be floodproofed such that the structure, including the attendant utility and sanitary facilities, shall be substantially impermeable to the passage of water to an elevation at least one foot above the base flood level; and~~

~~_____ (b) Have structural components capable of withstanding hydrostatic and hydrodynamic loads, effects of buoyancy, flood depths, pressures, velocities and other factors associated with the base flood; and~~

~~_____ (c) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.~~

~~_____ (2) Provide an as built elevation survey of the lowest floor completed by a State of Oregon Registered Professional Engineer or Land Surveyor certifying that the structure's lowest floor was elevated to at least one foot above the base flood level; or submit a stamped documentation by a State of Oregon Registered Professional Engineer certifying the structure has been built in compliance with MCC 29.626(D)(1)(a) through (e).~~

~~_____ (a) The as built elevation survey or stamped documentation shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.~~

~~_____ (b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as built elevation survey or stamped documentation is submitted. The bond/deposit may be used to obtain the elevation survey or documentation, without notice, if it is not completed and submitted prior to occupancy or use of the structure or development. The performance bond or cash deposit shall be released upon submittal of the as built elevation survey or stamped documentation, unless utilized to obtain compliance.~~

~~_____ (E) On Site Waste Disposal Systems, Wells, Water Systems and Sewer Systems.~~

~~_____ All new and replacement water and sewer systems, including on-site waste disposal systems, shall be designed to:~~

~~_____ (1) Minimize infiltration of floodwaters into the system;~~

~~_____ (2) Minimize discharge from systems into floodwaters;~~

~~_____ (3) Avoid impairment or contamination during flooding.~~

~~_____ (F) Recreational Vehicles in Campground or Recreational Development~~

~~_____ Recreational vehicles utilized on sites within Zones A1 A30, AH and AE on the community's FIRM shall either:~~

~~_____ (1) Be on the site for fewer than 180 consecutive days, or~~

~~_____ (2) Be fully licensed and ready for highway uses, 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~~

~~_____ (3) Meet the requirements of MCC 29.626(B) and (C).~~

29.627 Floodway Requirements.

~~_____ In areas identified as floodway on the Flood Boundary and Floodway Maps, the following restrictions, in addition to the requirements of MCC 29.626, shall apply:~~

~~_____ (A) No development shall be permitted that would result in any measurable increase in base flood levels.~~

~~_____ (1) Encroachment into the floodway is prohibited, unless a detailed step backwater analysis and conveyance compensation calculations, certified by a Registered Professional Engineer, are provided which demonstrates that the proposed encroachment will cause no measurable increase in flood levels (water surface elevations) during a base flood discharge.~~

29.628 Procedure When Base Flood Elevation Data is Not Available.

~~_____ (A) For the purposes of administering MCC 29.626 in areas where detailed base flood elevation data has not been provided by FEMA, the Land Use Planning Division shall obtain, review and utilize any base flood elevation and floodway data available from federal, state or local sources to assure that the proposed construction will be reasonably safe from flooding and may exercise local judgment based on historical data.~~

~~_____ (B) In areas where detailed base flood elevation data has not been provided by FEMA, all proposals for subdivisions or other new developments greater than 50 lots or five acres, whichever is less, shall provide detailed base flood elevation data and floodway data.~~

29.629 Waterecourse Relocation and Alteration.

~~_____ Prior to approving any relocation, encroachment or alteration of a waterecourse, the Land Use Planning Division shall provide mailed notice of the proposal to adjoining communities and to the Department of Land Conservation and Development Floodplain Coordinator. Copies of such notice shall also be provided to the Federal Insurance Administration.~~

~~_____ (A) No relocation, encroachment or alteration of a waterecourse shall be permitted unless a detailed hydraulic analysis, certified by a Registered Professional Engineer, is provided which demonstrates that:~~

~~_____ (1) The flood carrying capacity for the altered or relocated portion of the waterecourse will be maintained;~~

~~_____ (2) The area subject to inundation by the base flood discharge will not be increased;~~

~~_____ (3) The alteration or relocation will cause no measurable increase in base flood levels.~~

29.630 County Records.

~~_____ Multnomah County or its designee shall obtain and maintain on file the actual elevation (in relation to NGVD) of the lowest floor, including basement, of all new or substantially improved structures in areas subject to the provisions of this Section.~~

~~— (A) — For all new or substantially improved floodproofed structures in areas subject to the provisions of this Section, Multnomah County shall obtain and maintain on file the actual elevation (in relation to NGVD) of the floodproofing and shall also maintain the floodproofing certifications required pursuant to MCC 29.626(D)(1)(b) and (c).~~

Section 12. **MCC § 36.6183 is amended as follows**

36.6183 Approval Criteria for lands not zoned Exclusive Farm Use.

To be approved all applications for Planning Director Review, Community Service Review or Building Permit Review of a wireless communications facility (WCF) shall demonstrate compliance with the following:

(A) General and Operating Requirements

* * *

(4) Environmental Resource Protection. All wireless communication facilities shall be sited so as to minimize the effect on environmental resources. To that end, the following measures shall be implemented for all WCFs:

(a) The facility shall comply with Significant Environmental Concern regulations when applicable, including the conditions of an SEC permit for any excavation or removal of materials of archaeological, historical, prehistorical or anthropological nature;

(b) The facility shall comply with Grading and Erosion Control regulations of MCC 29.350 through 29.365 when applicable;

(c) The facility shall comply with Flood Hazard regulations of MCC 29.620-600 through 29.630-611 when applicable; and

(d) Alteration or disturbance of native vegetation and topography shall be minimized.

* * *

Section 13. **MCC § 37.0915 is hereby amended to read as follows**

37.0915 Violations

Any use of land, land division, adjustment to property boundaries, work within a County right-of-way, or other activity by a person in violation of any provision of:

(A) MCC Chapters 33, 34, 35, 36 and 38; §§ 29.001 through 29.365 and 29.500 through 29.630-611; Multnomah County Road Rules or the terms and conditions of any permit issued under those code provisions; or

(B) Any statute adopted by the Oregon Legislature and those land use planning goals and rules of the Land Conservation and Development Commission (LCDC) that apply directly to the County through ORS 197.646

may be subject to enforcement and fines as provided in this subchapter.

FIRST READING:

August 21 2008

SECOND READING:

September 4, 2008

THIRD READING AND ADOPTION:

September 11, 2008



BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON


Ted Wheeler, Chair

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