

**CHAPTER 17.182
GEOLOGICALLY HAZARDOUS AREAS OVERLAY ZONE**

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17.182.010 PURPOSE. The purpose of this chapter is to implement the development limitations goal and policies of the rural development section of the Marion County Comprehensive Land Use Plan, and Statewide Land Use Planning Goal 7 - Areas Subject to Natural Disasters and Hazards. This chapter implements the strategy for reviewing development applications for properties within identified slide hazard and excessive slope areas to address the risk that a proposed land use activity may adversely affect the stability and landslide susceptibility of an area. The provisions of this chapter are intended to manage the risk of a landslide within identified slide hazard and excessive slope areas by requiring geological and/or geotechnical reports, but not act as a guarantee that the landslide hazard risk will be eliminated.

Landslide hazard and excessive slope areas constitute geologically hazardous areas of special concern to residents of the county. The intent of this chapter is to protect these hazard areas of the county by requiring professional evaluation and establishing requirements for development of sites which are identified in hazard areas, and thus promote the public health, safety, and welfare.

17.182.020 DEFINITIONS. The following definitions apply to this chapter only, and have no applicability to the same terms used in other chapters of this title, unless specifically stated.

- A. “Certified engineering geologist” is any registered geologist who is certified in the specialty of engineering geology under provisions of ORS 672.505 to 672.705.
- B. “Clearing” is the cutting, moving on the site, or removal of standing or fallen timber; the removal or moving on site of stumps; or the cutting and removal of brush, grass, ground cover, or other vegetative matter from a site in a way which exposes the earth’s surface of the site. In addition to the above, clearing is an activity which does not require reforestation per an approved forest practices application and/or notification issued by the Department of Forestry.
- C. “Development area” is the total area of alteration of the naturally occurring ground surface resulting from construction activities whether permanent or temporary.
- D. “Engineering geology report” is a report prepared by a certified engineering geologist. An engineering geology report must provide a detailed description of the geology of the site, professional conclusions and recommendations regarding the effect of geological conditions on the proposed development, and opinions and recommendations covering the adequacy of the site to be developed. An engineering geology report must be prepared in accordance with the “Guidelines for Preparing Engineering Geology

Reports in Oregon” adopted by the Oregon State Board of Geologist Examiners. The engineering geology report may be incorporated into or included as an appendix to the geotechnical report.

- E. “Erosion” is the wearing away of the earth’s surface as a result of the movement of wind, water, or ice.
- F. “Excavation” is any act by which earth, sand, gravel, rock or any similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated, or bulldozed, including the conditions resulting therefrom.
- G. “Excessive slope area” is an area with slopes greater than 20 percent.
- H. “Fill” or “backfill” is a deposit of earth or other natural or manmade material placed by artificial means. Filling means the act of placing fill on any geologically hazardous area including temporary stockpiling of fill.
- I. “Geological assessment” is an assessment prepared and stamped by a certified engineering geologist detailing the surface and subsurface conditions of a site, delineating areas of a property that may be subject to specific geologic hazards, and furnish professional analysis of information to assess the suitability of the site for development. Geological assessment must be prepared in accordance with the report requirements identified in this chapter. The geological assessment may be incorporated into or included as an appendix to the geotechnical report.
- J. “Geologically hazardous areas” are areas identified on the county zone maps that, because of their susceptibility to landslide, erosion or other geological events, may have inherent geologic constraints relevant to the siting of commercial, industrial, or residential development consistent with public health or safety concerns. These concerns may be mitigated by special considerations in siting, design, or construction.
- K. “Geotechnical engineer” is a professional engineer registered in the State of Oregon as provided by ORS 672.002 to 672.325, who by training, education, and experience, is qualified in the practice of geotechnical or soils engineering practices.
- L. “Geotechnical report” is a report prepared and stamped by a geotechnical engineer evaluating the site conditions and recommending design measures necessary to reduce the risks associated with development and to facilitate a safe and stable development. A geotechnical report must be prepared in accordance with the report requirements identified in this chapter. A geological assessment or engineering geology report may be incorporated into or included as an appendix to the geotechnical report.
- M. “Grading” is the act of excavating and filling of the earth’s surface.
- N. “Landslide” is the downslope movement of soil, rocks, or other surface matter on a site. Landslides may include, but are not limited to, slumps, mudflows, earthflows, debris flows, and rockfalls.
- O. “Landslide hazard areas” are areas identified on county zone maps that are susceptible ground movement due to a combination of geologic, topographic, and hydrologic factors.
- P. “Mitigation” is action designed to reduce risk posed by geologic hazards through specific design, siting or avoidance.
- Q. “Registered geologist” is a person who is registered as a geologist under the provisions of ORS 672.505 to 672.705.

- R. “Regulated activities” are activities occurring in a geologically hazardous area that are subject to the provisions of this chapter. Regulated activities generally include but are not limited to any filling, dredging, dumping or stockpiling, draining, excavation, flooding, and construction or reconstruction.
- S. “Slope” is an inclined earth surface, the inclination of which is expressed as the ratio of horizontal (H) distance to vertical (V) distance. In these regulations, slopes are expressed as a percentage, with percentage of slope referring to a given rise in elevation over a given run in distance, multiplied by 100. A forty percent slope, for example, refers to a forty-foot rise in elevation over a distance of one hundred feet ($H/V \times 100$). A 100 percent slope equals a 45-degree angle. Slopes are measured across a horizontal rise and run calculation within any horizontal twenty-five foot distance.

17.182.030 APPLICABILITY. The provisions of this chapter shall apply to all phases of development altering the physical landscape of lands within the landslide hazard and excessive slope areas as shown on the official county zoning maps and as designated or identified as landslide hazard areas by the county where information provided by a licensed geologist, geological report, hazard inventory, or landslide hazard studies indicate an elevated hazard risk exists.

The presence of landslide hazard and excessive slope areas and the applicability of the provisions of this chapter are determined by the classification criteria and categories established for these hazard areas as detailed on the maps adopted as part of this chapter. The maps indicate the location of areas susceptible to landslides, areas of known landslide hazards, and excessive slope areas. These maps are based on the best available information and may be amended based upon receipt of corrected, updated or refined data, or upon the revision of studies upon which the maps were initially based.

In the event of any conflict between the location, designation, or classification of a landslide hazard area shown on the county maps and the classification categories of this chapter, the categories and the determination of the geological assessment or report shall prevail. The county shall make the final decision as to whether a lot or parcel is within or outside the mapped hazard areas. A lot or parcel that is both in and out of the hazard area shall be subject to the provisions of this chapter only if the proposed development on the lot or parcel is within the mapped hazard area. Within the mapped hazard areas, an applicant may demonstrate through submittal of a geological assessment that the proposed development will not occur within an identified landslide hazard or excessive slope area, then the requirements of this chapter may be waived.

17.182.040 REGULATED ACTIVITIES AND USES; EXEMPTIONS

- A. Regulated Activities and Uses. The county shall grant approval to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement including, but not limited to, the following regulated activities within identified landslide hazard and excessive slope areas and as permitted in the underlying zone and applicable overlay zones, after receipt of an approved site assessment, engineering geology report, or geotechnical report as required by this chapter that concludes development does not pose an elevated hazard risk to property.
1. Building permits: buildings customarily provided in conjunction with farm use, residential, commercial, or industrial;
 2. Excavation;
 3. Filling;
 4. Subdivisions, partitions, planned unit developments (PUDs), mobile home parks, and recreational vehicle (RV) parks;
 5. Construction, reconstruction, or alteration of the size of any structure of public infrastructure;

6. Location, construction, reconstruction, and maintenance of on-site sewage disposal systems including drainage, where there is a need to review and investigate test pits;
7. Construction of any new public or private road or driveway;
8. Construction or enlargement of ponds;
9. Grading activities for all phases of development pursuant to provisions of the Uniform Building Code - the Oregon Structural Specialty Code adopted and applied by the county.

B. Exemptions. The following activities and uses are exempt from provisions of this chapter:

1. Activities and uses conducted pursuant to the Oregon State Forest Practices Act and its rules and regulations, where state law specifically limits local authority, except with regard to development and conversions requiring local approval when the County is the lead agency for environmental review and permits;
2. Existing and on-going agricultural activities and uses;
3. Maintenance, operation, reconstruction of existing public and private roads, streets, driveways, utility lines, and existing structures, provided that reconstruction of any such facilities does not extend outside the previously disturbed area;
4. Installation, construction or replacement of utility lines in improved county rights-of-way, not including electric substations;
5. Maintenance of ground cover or other vegetation in a landslide hazard area that was disturbed prior to the adoption of this chapter, provided that no further disturbance is created outside the previously disturbed area;
6. Site investigative work required by a city, county, state or federal agency, or any other applicant such as surveys, test borings, percolation tests, and other related activities provided disturbed areas are restored to the pre-existing conditions promptly after tests are concluded;
7. Passive recreational uses, hunting, scientific or educational review, or similar minimum impact, non-development activities;
8. Emergency actions which must be undertaken immediately or for which there is insufficient time for full compliance with this chapter when it is necessary to:
 - a. Prevent an imminent threat to public health or safety, or
 - b. Prevent imminent danger to public or private property, or
 - c. Prevent an imminent threat of serious environmental degradation;
9. A residential building permit for a lot or parcel which was subject to previous reports and assessments as required under the ordinance provisions in effect at the time;
10. Existing development, activities and uses involving permit or land use approvals prior to the adoption of the provisions of this chapter.

17182.050 APPROVAL REQUIREMENTS. The level of geological review and procedural requirements for regulated development activities and uses are related to geologic and physiographic conditions and the type of development activity for a property. Development activities and uses having the greatest potential for impacting

public safety and property, and that are located on lands with an elevated landslide hazard, have the strictest review and development requirements.

The Graduated Response Table 17.182-1 (Parts I to VI) shall be used to determine the level of site investigation for various types of regulated activity on property, any portion of which is shown on the landslide hazard and excessive slope area maps. Using a rating system, slope and physiographic conditions at the site are evaluated in relationship to a proposed activity. If a rating meets or exceeds quantified thresholds provided in the table, a geological assessment, engineering geology report, or geotechnical report or a combination thereof shall be provided by the applicant and actions specified in the report(s) undertaken and ensured before any regulated activity may be permitted or approved. Where any portion of the property on which regulated activities are proposed is identified under two slope conditions or two or more physiographic and geologic categories, the highest condition or category will apply.

The Graduated Response Table (Part VI) provides the following landslide risk assessment, investigation, and review requirements for identified hazard areas and regulated activities:

1. For low landslide risk assessments (Category A), all regulated activities may proceed without further investigation, permitting, or approval requirements of this chapter.
2. For moderate landslide risk assessments (Category B), a geological assessment shall be submitted. If the geological assessment indicates landslide hazards pose an elevated risk on the site or where mitigation measures are necessary to safely undertake a regulated activity, the high landslide risk assessment (Category C) requirements shall be met. If the geological assessment indicates that no mitigation measures are necessary to safely undertake the regulated activity, the activity may proceed without further requirements of this chapter.
3. For high landslide risk assessments (Category C), an engineering geology report and/or a geotechnical report shall be submitted for all regulated activity. The geological assessment or engineering geology report may be incorporated into or included as an appendix to the geotechnical report.

TABLE 182-1 GRADUATED RESPONSE TABLE

Directions:

Step 1. Select one assigned point value from Part I and proceed to Part II

<p>PART I.</p> <p><u>References:</u></p> <p>Interpretive Map Series (IMS-17) - Earthquake Induced Slope Instability: Relative Hazard Map Western Portion of Salem Hills, Marion County</p>	<p>Earthquake-Induced Landslide Susceptibility Ratings</p>
<p>Physiographic and Geologic Categories</p>	<p>Assigned Point Value</p>
<p>Property identified under Very Low or Low Categories on IMS-17 or outside the boundaries of the map.</p>	<p>0 Points</p>
<p>Property identified under a Moderate Category on IMS-17.</p>	<p>2 Points</p>
<p>Property identified under a High Category on IMS-17.</p>	<p>3 Points</p>

Step 2. Select one assigned point value from PART II and Proceed to PART III.

PART II.	Slope Ratings
<u>References:</u> Excessive Slope Areas within Marion County (map)	
Slope Conditions	Assigned Point Value
Slopes 20% or less and properties outside the boundaries of excessive slope areas.	0 Points
Slopes over 20%	3 Points

Step 3. Select one assigned point value from PART III and Proceed to PART IV.

PART III.	Water-Induced Landslide Susceptibility Ratings
<u>References:</u> Interpretive Map Series (IMS-6) - Water Induced Landslide Hazards, Western Portion of the Salem Hills, Marion County Active/Inactive Slide Hazard Areas Map (DOGAMI Open File Report 0-77-4) Excessive Slope Areas within Marion County (map)	
Physiographic and Geologic Categories	Assigned Point Value
Property identified under Category 1 on IMS-6 Report.	0 Points
Property identified under Categories 2 or 3 on IMS-6 Report.	2 Points
Property identified under Categories 4, 5a, 5b, or 6 on IMS-6 Report.	3 Points
Property outside the boundaries of IMS-6 and excessive slope areas, but within identified active/inactive slide hazard areas mapped in DOGAMI 0-77-4 Report .	3 Points

Step 4. Select one assigned point value from PART IV. Select the development activity with the greatest potential for impacting public safety and property and Proceed to PART V.

PART IV.	Activity Ratings For Potential Site Impact
Type of Activity	Assigned Point Value
Residential Single Family, Duplex, and Buildings Customarily Provided in Conjunction with Farm Use Building Permits (including Structural Expansions and Additions and Accessory Structures)	1 Point
On-site Sewage Disposal Systems and Ponds (Construction or Enlargement)	1 Point
Infrastructure, Including Roads and Driveways	1 Point
Multiple Family Building Permits (including Structural Expansions and Additions)	2 Points
Partition	2 Points
Subdivision, Planned Unit Development, Manufactured Dwelling Park	3 Points
Schools, Hospital and Public Building Permits (including Structural Expansion and Additions)	3 Points
Commercial and Industrial Building Permits (including Structural Expansion and Additions)	3 Points
Grading (as Independent Activity) as Regulated by Uniform Building Code	3 Points

Step 5. Add Sub-totals From PARTS I, II, III, and IV. Proceed to PART V.

PART V. Cumulative Score			
Part I. Earthquake-Induced Landslide Susceptibility Ratings	Part II. Slope Ratings	Part III. Water-Induced Landslide Susceptibility Ratings	Part IV. Type of Activity
Points	_____ Points	Points	Points

Step 6. Determine Landslide Hazard Risk

PART VI.	Total Risk Assessment	
	Policy Provision	
Category A - Low Landslide Risk (4 or less point value)	Category B - Moderate Landslide Risk (5 - 8 point value)	Category C - High Landslide Risk (9 or greater point value)
No Requirements.	Geologic Assessment * * If the geologic assessment indicates landslide hazards on the site, the planning director or building inspection official shall specify the requirements of a high landslide risk assessment.	Engineering Geology Report Geotechnical Report

17.182.060 REVIEW PROCEDURE AND PEER REVIEW. Development permits for regulated activities and uses within identified landslide hazard and excessive slope areas shall be reviewed for compliance with this chapter. Applications for regulated activity permits or approvals required by the zoning code shall be deemed complete upon the submittal and approval of a geological assessment, engineering geology report or geotechnical report as required by this chapter.

In order for the county to accept a geological assessment, engineering geology report, or a geotechnical report from an applicant pursuant to this chapter, the assessment or report shall be prepared and stamped by a licensed professional with the necessary expertise to prepare a report meeting the requirements of this chapter.

The required geological assessment, engineering geology report or geotechnical report for regulated activities and uses within risk assessment categories B and C of the graduated response table shall be reviewed and

accepted through the peer review process before any regulated activity will be allowed. The review will be conducted by a professional or professional firm of the county's choice that meets the qualifications listed in this chapter. The review will be at the applicant's expense.

The board will establish a fee for the review of geological and geotechnical reports for regulated activities and uses

Review of report submittals shall include examination to ensure that the following criteria are met:

- A. Required elements are completed;
- B. Geologic report procedures and assumptions are accepted;
- C. All conclusions and recommendations are supported and reasonable.

Conclusions and recommendations stated in an approved assessment or report shall then be directly incorporated as permit conditions or provide the basis for conditions of approval for the regulated activity or use.

Where an approved assessment or report as defined and required by this chapter has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, that report may be utilized and a new report is not required. Should environmental conditions associated with the site or surrounding the site change, or if the proposed land use activity or development has materially changed, the applicant shall submit an amendment to the required assessment or report, which shall be reviewed and approved through the peer review process.

17.182.070 ASSESSMENT OR REPORT APPEALS PROCESS. A geological assessment, engineering geology report, or geotechnical report under the provisions of this chapter is a privately funded report created at the request of a property owner to meet a development requirement, and is not a land use action. As such, the assessment or report has no appeal process associated with its publication or acceptance by the county.

17.182.080 DECLARATORY STATEMENT. Before a building permit is issued for property in a landslide hazard or excessive slope area as identified and regulated in this chapter, the property owner shall record a declaratory statement with the county clerk that the property and the approved development lies within a landslide hazard or excessive slope area as defined by this chapter. The statement shall indicate that restrictions on use or the alteration of the site may exist due to natural conditions of the site and resulting regulation, and that all approved assessments or reports for such property are on file with the county.

17.182.090 COMPLIANCE. No regulated activity or use requiring an engineering geology report or geotechnical report shall receive final approval and/or occupancy until the county receives a written statement from the professional preparing the report that all performance, mitigation, or monitoring measures contained in the approved report are completed, in place, and operable.

17.182.100 ENFORCEMENT. The county is authorized to make site inspections and take such actions as necessary to enforce the provisions of this chapter. A county representative may enter onto private property with the consent of the owner or occupant or pursuant to warrant. The county shall have the authority to order restoration, rehabilitation or replacement measures to compensate for the destruction or degradation of identified landslide hazard and excessive slope area lands at the property owner's expense. Any development carried out contrary to the provisions of this chapter shall constitute a public nuisance and pose a risk to the public health, safety and welfare.

17.182.110 SEVERABILITY. If any provision of this chapter or its application to any person or circumstance is held invalid, the remainder of this regulation or the application of the provision to other persons or circumstances shall not be affected.