

SECTION 4.070: DEVELOPMENT REQUIREMENTS FOR GEOLOGIC HAZARD AREAS

- (1) The following are GEOLOGIC HAZARD AREAS to which the standards of this Section apply:
 - (a) Active landslides identified in Oregon Department of Geology and Mineral Industries (DOGMI) Bulletins 74 and 79;
 - (b) Inactive landslides, landslide topography and mass movement topography identified in DOGMI bulletins 74 and 79 where slopes are greater than 19 percent;
 - (c) Areas prone to mudflows identified in DOGMI Bulletin 79;
 - (d) Brallier Peat soils identified in Soil Survey, Tillamook Area, Oregon (USDA, Soil Conservation Service, 1964) and the unpublished Soil Conservation Service soils survey for coastal Tillamook County;
 - (e) Ocean front lots on bluffs in areas where erosion and sliding are identified as problems in the Goal 18 element of the Comprehensive Plan;
 - (f) Other locally known areas of GEOLOGIC HAZARD based on evidence of past occurrences.
 - (g) As required for development.
- (2) All development within GEOLOGIC HAZARD areas shall comply with the following standards:
 - (a) Vegetation removal shall be the minimum necessary to accommodate the use.
 - (b) Temporary measures shall be taken to control runoff and erosion of soils during construction. Such measures include temporary stabilization (mulching or sodding) sediment basins or other performance equivalent structures required by the Planning Department.
 - (c) Exposed areas shall be planted in permanent cover as soon as possible after construction.
 - (d) Storm water shall be directed into drainages with adequate capacity so as not to flood adjacent or downstream properties. Finished grades should preferably be designed to direct water flows along natural drainage courses.
 - (e) Additional requirements contained in a Geologic report required by this Section shall be followed.

- (3) A GEOLOGIC HAZARD report is required prior to approval of planned developments, coast resorts, subdivisions and partitions governed by the Land Division Ordinance, building permits, mobile home permits, sand mining, occurring in areas identified in (1) with the following exception:
 - (a) For building or mobile home or manufactured home permits in areas identified in (1) (b), reports are needed for lots 20,000 square feet or larger only where the proposed structure is to be situated on slopes greater than 29 percent or if (1) (f) applies.
- (4) A report prepared for a subdivision, planned development or partition pursuant to the requirements of this Section, may be used to satisfy these requirements for subsequent building, mobile home or manufactured home permits providing that the original report provided recommendations on building placement and construction and that these recommendations are followed.
- (5) The GEOLOGIC HAZARD report shall be prepared, stamped and signed by both an Oregon Registered Geologist and a qualified Oregon Registered Engineer or by an Oregon Certified Engineering Geologist. Structural recommendations shall be prepared, stamped and signed by an Oregon Registered Engineer trained and proficient in preparing structural calculations and diagrams. The Planning Director or his designee shall determine the boundary limits of the study area. The GEOLOGIC HAZARD report shall be prepared and submitted on forms deemed acceptable by the County and shall include plan and sectional diagrams of the area showing property boundaries and the geographic information required by (6) below.
- (6) The GEOLOGIC HAZARD analysis shall include the following:
 - (a) In landslide areas [(1) (a) and (1) (b)];
 - (1) Soils and bedrock types,
 - (2) Slope,
 - (3) Orientation of bedding planes in relation to the dip of the surface slope,
 - (4) Soil depth,
 - (5) Other relevant soils engineering data,
 - (6) Water drainage patterns, and
 - (7) Identification of visible landslide activity in the immediate area.

- (b) In areas prone to mudflow [(1) (c)];
 - (1) History of mud or debris flow, and
 - (2) Areas likely to be affected by future mudflow.
- (c) In Brallier peat soils [(1) (d)];
 - (1) Boring log,
 - (2) Bearing capacity, and
 - (3) Drainage patterns.
- (d) Ocean front bluffs subject to coastal erosion and sliding [(1) (e)];
 - (1) Information required by (6) (a) above, and
 - (2) History of coastal erosion in the area.
- (7) The GEOLOGIC HAZARDS report shall recommend development standards that will protect development on the property and surrounding properties. These should include standards for:
 - (a) Development density (when more than one use is possible),
 - (b) Locations for structures and roads,
 - (c) Land grading practices, including standards for cuts and fills,
 - (d) Vegetation removal and re-vegetation practices,
 - (e) Foundation design (if special design is necessary),
 - (f) Road design (if applicable), and
 - (g) Management of storm water runoff during and after construction.

- (8) The GEOLOGIC HAZARD report shall include the following summary findings and conclusions:
- (a) The type of use proposed and the adverse effects it might have on adjacent areas;
 - (b) Hazards to life, public and private property, and the natural environment which may be caused by the proposed use;
 - (c) Methods for protecting the surrounding area from any adverse effects of the development;
 - (d) Temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation;
 - (e) The proposed development is adequately protected from any reasonably foreseeable hazards including but not limited to GEOLOGIC HAZARDS, wind erosion, undercutting, ocean flooding and storm waves; and
 - (f) The proposed development is designed to minimize adverse environmental effects.