

## **Chapter 30.50 GEOLOGICALLY HAZARDOUS AREAS**

### **30.50.010 Designation of geologically hazardous areas.**

Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Such incompatible development may not only place itself at risk, but also may increase the hazard to surrounding development and use. Areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area: (See WAC 365-190-080(4(a).)

- (a) Erosion hazard;
- (b) Landslide hazard;
- (c) Seismic hazard;
- (d) Mine hazard;
- (e) Volcanic hazard; and
- (f) Other geological events including tsunamis, mass wasting, debris flows, rock falls, and differential settlement.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.020 Designation of specific hazard areas.**

- (a) Erosion Hazard Areas. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard. Erosion hazard areas are also those areas impacted by shore land and/or stream bank erosion and those areas within a river's channel migration zone.
- (b) Landslide Hazard Areas. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to, the following:
  - (1) Areas of historic failures such as:
    - (A) Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development;
    - (B) Those areas mapped by the Washington State Department of Ecology (Coastal Zone Atlas) or the Washington State Department of Natural Resources (slope stability mapping) as unstable (U or class 3), unstable old slides (UOS or class 4), or unstable recent slides (URS or class 5); or
    - (C) Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the U.S. Geological Survey or Washington State Department of Natural Resources.
  - (2) Areas with all three of the following characteristics:
    - (A) Slopes steeper than 15 percent;

- 
- (B) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
  - (C) Springs or groundwater seepage.
- (3) Areas that have shown movement during the Holocene epoch (from 10,000 years ago to the present) or that are underlain or covered by mass wastage debris of that epoch (See WAC 365-190-080(4)(d)(iii).);
  - (4) Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
  - (5) Slopes having gradients steeper than 80 percent subject to rock fall during seismic shaking;
  - (6) Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;
  - (7) Areas that show evidence of, or are at risk from, snow avalanches;
  - (8) Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding;
  - (9) Any area with a slope of 40 percent or steeper and with a vertical relief of ten or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten feet of vertical relief.
- (c) Seismic Hazard Areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by:
- (1) The magnitude of an earthquake;
  - (2) The distance from the source of an earthquake;
  - (3) The type of thickness of geologic materials at the surface; and
  - (4) The type of subsurface geologic structure.
- Settlement and soil liquefaction conditions occur in areas underlain by cohesion less, loose, or soft-saturated soils of low density, typically in association with a shallow groundwater table.
- (d) Mine Hazard Areas. Mine hazard areas are those areas underlain by or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of probable sink holes, gas releases, or subsidence due to mine workings. Factors that should be considered include: proximity to development, depth from ground surface to the mine working, and geologic material.
  - (e) Volcanic Hazard Areas. Volcanic hazard areas are areas subject to pyroclastic flows, lava flows, debris avalanche, and inundation by debris flows, lahars, mudflows, or related flooding resulting from volcanic activity.
  - (f) Tsunami Hazard Areas. Tsunami hazard areas are coastal areas and large lake shoreline areas susceptible to flooding and inundation as the result of excessive wave action derived from seismic or other geologic events.
  - (g) Other Hazard Areas. Geologically hazardous areas shall also include areas determined by the Planning Director to be susceptible to other geological events including mass wasting, debris flows, rock falls, and differential settlement.

(Ord. 1456 § 6, Dec. 20th, 2016).

---

### **30.50.030 Classification of geologically hazardous areas.**

All geologic hazard areas should be classified according to the following categories for each geologic hazard type:

Classification.

Documentation and data sources.

Known or suspected risk.

Documentation or projection of the hazard by a qualified professional exists.

Risk unknown.

Documentation or projection of the lack of hazard by a qualified professional exists, or data are not available to determine the presence or absence of a geologic hazard.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.040 Mapping of geologically hazardous areas.**

- (a) The approximate location and extent of geologically hazardous areas are shown on the City's environmentally sensitive areas map which was adopted with this chapter. In addition, the adopted critical areas maps include:
  - (1) Coastal Zone Atlas (for marine bluff hazards);
  - (2) U.S. Geological Survey landslide hazard, seismic hazard, and volcano hazard maps;
  - (3) Washington State Department of Natural Resources seismic hazard maps for Western Washington;
  - (4) Washington State Department of Natural Resources slope stability maps;
  - (5) National Oceanic and Atmospheric Administration tsunami hazard maps;
  - (6) Federal Emergency Management Administration flood insurance maps; and
  - (7) Locally adopted maps. (Ruston Environmentally Sensitive Areas Map.)
- (b) These maps are to be used as a guide for the City, project applicants and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.050 Activities allowed in geologically hazardous areas.**

The following activities are allowed in geologically hazardous areas pursuant to Allowed Activities, Section 30.10.160, and do not require submission of a critical area report:

- (a) Erosion and Landslide Hazard Areas. Except as otherwise provided for in this title, only those activities approved and permitted consistent with an approved critical area report in accordance with this title shall be allowed in erosion or landslide hazard areas.
- (b) Seismic Hazard Areas. The following activities are allowed within seismic hazard areas:

- 
- (1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
  - (2) Additions to existing single-story residences that are 250 square feet or less; and
  - (3) Installation of fences.
- (c) Mine Hazard Areas. The following activities are allowed within mine hazard areas:
- (1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
  - (2) Additions to existing residences that are 250 square feet or less; and
  - (3) Installation of fences.
- (d) Volcanic Hazard Areas. The following activities are allowed within volcanic hazard areas:
- (1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
  - (2) Additions to existing residences that are 250 square feet or less; and
  - (3) Installation of fences.
- (e) Tsunami Hazard Areas. The following activities are allowed within tsunami hazard areas:
- (1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
  - (2) Additions to existing residences that are 250 square feet or less; and
  - (3) Installation of fences.
- (f) Other Hazard Areas. The Planning Director may allow the following activities within other geologically hazardous areas, if the activity will not increase the risk of the hazard:
- (1) Construction of new buildings with less than 2,500 square feet of floor area or roof area, whichever is greater, and which are not residential structures or used as places of employment or public assembly;
  - (2) Additions to existing residences that are 250 square feet or less; and
  - (3) Installation of fences.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.060 Critical area report—Additional requirements for geologically hazardous areas.**

- (a) Preparation by a Qualified Professional. A critical areas report for a geologically hazardous area shall be prepared by an engineer or geologist, licensed in the State of Washington, with experience analyzing geologic, hydrologic, and groundwater flow systems, and who has experience preparing reports for the relevant type of hazard.
- (b) Area Addressed in Critical Area Report. The following areas shall be addressed in a critical area report for geologically hazardous areas:

- 
- (1) The project area of the proposed activity; and
  - (2) All geologically hazardous areas within 200 feet of the project area or that have potential to be affected by the proposal;
- (c) Geological Hazards Assessment. A critical area report for a geologically hazardous area shall contain an assessment of geological hazards including the following site- and proposal-related information at a minimum:
- (1) Site and Construction Plans. The report shall include a copy of the site plans for the proposal showing:
    - (A) The type and extent of geologic hazard areas, any other critical areas, and buffers on, adjacent to, within 200 feet of, or that are likely to impact the proposal;
    - (B) Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain, if available;
    - (C) The topography, in two-foot contours, of the project area and all hazard areas addressed in the report; and
    - (D) Clearing limits.
  - (2) Assessment of Geological Characteristics. The report shall include an assessment of the geologic characteristics of the soils, sediments, and/or rock of the project area and potentially affected adjacent properties, and a review of the site history regarding landslides, erosion, and prior grading. Soils analysis shall be accomplished in accordance with accepted classification systems in use in the region. The assessment shall include, but not be limited to:
    - (A) A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;
    - (B) A detailed overview of the field investigations, published data, and references; data and conclusions from past assessments of the site; and site specific measurements, test, investigations, or studies that support the identification of geologically hazardous areas; and
    - (C) A description of the vulnerability of the site to seismic and other geologic events.
  - (3) Analysis of Proposal. The report shall contain a hazards analysis including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties; and
  - (4) Minimum Buffer and Building Setback. The report shall make a recommendation for the minimum no-disturbance buffer and minimum building setback from any geologic hazard based upon the geotechnical analysis.
- (d) Incorporation of Previous Study. Where a valid critical areas report 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, said report may be incorporated into the required critical area report. The applicant shall submit a hazards assessment detailing any changed environmental conditions associated with the site.
- (e) Mitigation of Long-Term Impacts. When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the pre-existing conditions following abandonment of the activity.

(Ord. 1456 § 6, Dec. 20th, 2016).

---

### **30.50.070 Critical area report—Additional technical information requirements for specific hazards.**

In addition to the general critical area report requirements of Sections 30.10.210 and 30.50.060, critical area reports for geologically hazardous areas must meet the requirements of this section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

- (a) Erosion and Landslide Hazard Areas. In addition to the basic critical area report requirements, the technical information for an erosion hazard or landslide hazard area shall include the following information at a minimum:
  - (1) Site Plan. The critical area report shall include a copy of the site plan for the proposal showing:
    - (a) The height of slope, slope gradient, and cross-section of the project area;
    - (b) The location of springs, seeps, or other surface expressions of groundwater on or within 200 feet of the project area or that have potential to be affected by the proposal; and
    - (c) The location and description of surface water runoff features.
  - (2) Hazards Analysis. The hazards analysis component of the critical areas report shall specifically include:
    - (A) A description of the extent and type of vegetative cover;
    - (B) A description of subsurface conditions based on data from site-specific explorations;
    - (C) Descriptions of surface and groundwater conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements;
    - (D) An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;
    - (E) An estimate of the bluff retreat rate that recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm event;
    - (F) Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on down-slope properties.
    - (G) A study of slope stability including an analysis of proposed cuts, fills, and other site grading;
    - (H) Recommendations for building siting limitations; and
    - (I) An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion.
  - (3) Geotechnical Engineering Report. The technical information for a project within a landslide hazard area shall include a geotechnical engineering report prepared by a licensed engineer that presents engineering recommendations for the following:
    - (A) Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations, and estimates of settlement performance;
    - (B) Recommendations for drainage and sub-drainage improvements;

- 
- (C) Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary; and
    - (D) Mitigation of adverse site conditions including slope stabilization measures and seismically unstable soils, if appropriate.
  - (4) Erosion and Sediment Control Plan. For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in the Ruston Municipal Code;
  - (5) Drainage Plan. The technical information shall include a drainage plan for the collection, transport, treatment, discharge, and/or recycle of water prepared in accordance with the City's storm water management requirements. The drainage plan should consider on-site septic system disposal volumes where the additional volume will affect the erosion or landslide hazard area;
  - (6) Mitigation Plans. Hazard and environmental mitigation plans for erosion and landslide hazard areas shall include the location and methods of drainage, surface water management, locations and methods of erosion control, a vegetation management and/or replanting plan, and/or other means for maintaining long-term soil stability; and
  - (7) Monitoring Surface Waters. If the Planning Director determines that there is a significant risk of damage to downstream receiving waters due to potential erosion from the site, based on the size of the project, the proximity to the receiving waters, or the sensitivity of the receiving waters, the technical information shall include a plan to monitor the surface water discharge from the site. The monitoring plan shall include a recommended schedule for submitting monitoring reports to the City.
- (b) Seismic Hazard Areas. In addition to the basic report requirements, a critical area report for a seismic hazard area shall also meet the following requirements:
- (1) The site map shall show all known and mapped faults within 200 feet of the project area or that have potential to be affected by the proposal.
  - (2) The hazards analysis shall include a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement).
  - (3) A geotechnical engineering report shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented.
- (c) Mine Hazard Areas. In addition to the basic report requirements, a critical area report for a mine hazard critical area shall also meet the following requirements:
- (1) Site Plan. The site plan shall delineate the following found within 200 feet of or directly underlying the project area, or that have potential to be affected by the proposal:
    - (A) The existence of mines, including all significant mine features, such as mine entries, portals, adits, mine shafts, air shafts, and timber shafts;
    - (B) The location of any nearby mines that may impact or be affected by the proposed activities;
    - (C) The location of any known sinkholes, significant surface depressions, trough subsidence features, coal mine spoil piles, and other mine-related surface features; and

- 
- (D) The location of any prior site improvements that have been carried out to mitigate abandoned coal mine features.
  - (2) Hazards Analysis. The hazards analysis shall include a discussion of the potential for subsidence on the site and classify all mine hazards areas within 200 feet of the project area, or that have potential to be affected by the proposal, as either low, moderate, or severe. The hazards analysis shall include a mitigation plan containing recommendations for mitigation of the potential for future trough subsidence, as appropriate, for the specific proposed alteration and recommendations for additional study, reports, and development standards if warranted.
  - (d) Volcanic Hazard Areas. In addition to the basic report requirements, a critical area report for a volcanic hazard area shall also meet the following requirements:
    - (1) Site Plan. The site plan shall show all areas within 200 feet of the project area that have potential to be affected by pyroclastic flows, lahars, or mud and debris flows derived from volcanic events;
    - (2) Hazards Analysis. The hazards analysis shall include a complete discussion of the potential impacts of volcanic activity on the site (for example, inundation by mud flows resulting from volcanic activity); and
    - (3) Emergency Management Plan. The emergency management plan shall include plans for emergency building exit routes, site evacuation routes, emergency training, notification of local emergency management officials, and an emergency warning system.
  - (e) Tsunami Hazard Areas. In addition to the basic report requirements, a critical area report for a tsunami hazard area shall also meet the following requirements:
    - (1) Site Plan. The site plan shall show all areas within 200 feet of the project area that have potential to be inundated by wave action derived from a seismic event;
    - (2) Hazards Analysis. The hazards analysis shall include a complete discussion of the potential impacts of the tsunami hazard on the site; and
    - (3) Emergency Management Plan. The emergency management plan shall include plans for emergency building exit routes, site evacuation routes, emergency training, notification of local emergency management officials, and an emergency warning system.
  - (f) Other Geologically Hazardous Areas. In addition to the basic requirements, the Planning Director may require additional technical information to be submitted when determined to be necessary to the review the proposed activity and the subject hazard. Additional technical information that may be required, includes, but is not limited to:
    - (1) Site Plan. The site plan shall show all hazard areas located within 200 feet of the project area or that have potential to be affected by the proposal; and
    - (2) Hazards Analysis. The hazards analysis shall include a complete discussion of the potential impacts of the hazard on the project area and of the proposal on the hazard.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.080 Performance standards—General requirements.**

- (a) Alterations of geologically hazardous areas or associated buffers may only occur for activities that:
  - (1) Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;
  - (2) Will not adversely impact other critical areas;



- 
- (3) Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and
  - (4) Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the State of Washington.
- (b) Critical Facilities Prohibited. Critical facilities shall not be sited within geologically hazardous areas unless there is no other practical alternative.

Each jurisdiction may want to customize the restrictions it places on the siting of critical facilities. For example, if a city is entirely within a hazard area, such as volcano hazard, it may not be practical to locate the critical facility outside of the hazard. However, if options exist, it is advisable to restrict critical facilities from locating within hazard areas.

(Ord. 1456 § 6, Dec. 20th, 2016).

### **30.50.090 Performance standards—Specific hazards.**

- (a) Erosion and Landslide Hazard Areas. Activities on sites containing erosion or landslide hazards shall meet the standards of Performance Standards—General Requirements, Section 30.50.080, and the specific following requirements:
- (1) Buffer Requirement. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the Planning Director to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.
    - (A) Minimum Buffer. The minimum buffer shall be equal to the height of the slope or 50 feet, whichever is greater.
    - (B) Buffer Reduction. The buffer may be reduced to a minimum of ten feet when a qualified professional demonstrates to the Planning Director's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area.
    - (C) Increased Buffer. The buffer may be increased where the Planning Director determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.
  - (2) Alterations. Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:
    - (A) The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
    - (B) The development will not decrease slope stability on adjacent properties; and
    - (C) Such alterations will not adversely impact other critical areas.
  - (3) Design Standards. Development within an erosion or landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design that deviates from one or more of these standards provides greater long-term slope stability while meeting all other provisions of this title. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. The basic development design standards are:
    - (A) The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. Analysis of dynamic

---

conditions shall be based on a minimum horizontal acceleration as established by the current version of the Uniform Building Code;

- (B) Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;
  - (C) Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;
  - (D) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
  - (E) The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
  - (F) The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and
  - (G) Development shall be designed to minimize impervious lot coverage.
- (4) Vegetation Retention. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited;
- (5) Seasonal Restriction. Clearing shall be allowed only from May 1 to October 1 of each year provided that the City may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practice permit issued by the City or the Washington State Department of Natural Resources (Rainy-season restrictions are applicable to communities in Western Washington);
- (6) Utility Lines and Pipes. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Storm water conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior;
- (7) Point Discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:

Adoption of cluster, planned unit development, and density averaging regulations may make it more feasible for developers to meet the design standards listed here.

- (A) Conveyed via continuous storm pipe downslope to a point where there are no erosion hazards areas downstream from the discharge;
  - (B) Discharged at flow durations matching pre-developed conditions, with adequate energy dissipation, into existing channels that previously conveyed storm water runoff in the pre-developed state; or
  - (C) Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed buffer demonstrated to be adequate to infiltrate all surface and storm water runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope.
- (8) Subdivisions. The division of land in landslide hazard areas and associated buffers is subject to the following:
- (A) Land that is located wholly within a landslide hazard area or its buffer may not be subdivided. Land that is located partially within a landslide hazard area or its buffer may be divided provided

---

that each resulting lot has sufficient buildable area outside of, and will not affect, the landslide hazard or its buffer.

- (B) Access roads and utilities may be permitted within the landslide hazard area and associated buffers if the City determines that no other feasible alternative exists.
- (9) Prohibited Development. On-site sewage disposal systems, including drain fields, shall be prohibited within erosion and landslide hazard areas and related buffers.
- (b) Seismic Hazard Areas. Activities proposed to be located in seismic hazard areas shall meet the standards of Performance Standards—General Requirements, Section 30.50.080.
- (c) Mine Hazard Areas. Activities proposed to be located in mine hazard area shall meet the standards of Performance Standards—General Requirements, Section 30.50.080, and the specific following requirements:
  - (1) Alterations. Alterations of a mine hazard area and/or buffer are allowed, as follows:
    - (A) All alterations are permitted within a mine hazard area with a low potential for subsidence;
    - (B) Within a mine hazard area with a moderate potential for subsidence and at coal mine by-product stockpiles, all alterations are permitted subject to a mitigation plan to minimize risk of structural damage using appropriate criteria to evaluate the proposed use, as recommended in the hazard analysis; and
    - (C) Within a mine hazard area with a severe potential for subsidence only those activities allowed in accordance with Section 30.50.050 will be allowed.
  - (2) Subdivisions. The division of land in mine hazard areas and associated buffers is subject to the following:
    - (A) Land that is located within 200 feet of a mine hazard area with a severe potential for subsidence may not be subdivided. Land that is located partially within a mine hazard area may be divided provided that each resulting lot has sufficient buildable area that is 200 feet away from the mine hazard area with a severe potential for subsidence. Land that is located within a mine hazard area with a low or moderate potential for subsidence may be subdivided.
    - (B) Access roads and utilities may be permitted within 200 feet of a mine hazard area with a moderate or severe potential for subsidence if the City determines that no other feasible alternative exists.
  - (3) Reclamation Activities. For all reclamation activities, including grading, filling, and stockpile removal, as-built drawings shall be submitted to the City in a format specified by the Planning Director.
- (d) Volcanic and Tsunami Hazard Areas. Activities on sites containing areas susceptible to inundation due to volcanic or tsunamis hazards shall require an evacuation and emergency management plan. The City may use the performance standards for coastal high hazard areas (see Chapter 30.40, Frequently Flooded Areas) as guidance in reviewing new structures proposed in volcanic and tsunami hazard areas.
- (e) Other Hazard Areas. Activities on sites containing or adjacent to volcanic, tsunamis, or other geologically hazardous areas, shall meet the standards of Performance Standards—General Requirements, Section 30.50.080.

(Ord. 1456 § 6, Dec. 20th, 2016).