

Geologically Hazardous Areas

ENVIRONMENTALLY CRITICAL AREAS

WHAT IS A GEOLOGICALLY HAZARDOUS AREA?

In general, geologically hazardous areas are those that are susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible commercial, residential, or industrial development is sited in areas of significant hazard.

- Some geological hazards can be reduced or mitigated by engineering, design, or modified construction or mining practices so that risks to public health and safety are minimized. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas must be avoided.

Areas that are susceptible to one or more of the following hazards are classified as geologically hazardous areas:

1. Erosion
2. Landslides
3. Seismic activity
4. Steep slopes

1. EROSION HAZARD AREAS

Erosion hazard areas are areas with soil characteristics that, according to the USDA Soil Conservation Service Soil Classification System, may experience severe to very severe erosion hazard, including slopes greater than 15 percent with erodible soils that are exposed. Any activity which exposes erodible soils to rainfall or running water will create erosion hazard conditions on slopes greater than 15 percent.

Soils which are particularly susceptible to erosion include:

- Fill constructed of virtually all soil types
- Loose sandy native soils such as Vashon recessional outwash (Qvr), Esperance sand (Qe), Vashon till (weathered Qvt), and the dense fine-grained clay (Qcl).

Note: Improper fill methods, especially near flowing water, can produce an erosion hazard in areas not identified as hazard areas.

2. LANDSLIDE HAZARD AREAS

Landslide hazard areas occur where the land has certain characteristics that contribute to the risk of the downhill movement of material including soil, rock or snow.

Landslide hazard areas are slopes that are greater than 15 percent, that meet one or more of the criteria listed on the Landslide Hazard Areas Help Topic.

- Landslide hazard areas located on slopes of 40 percent or more, with a vertical height of greater than 10 feet are also regulated as Steep Slope Hazard Areas.

(See [Landslide Hazard Area Help Topic](#))

3. SEISMIC HAZARD AREAS

Seismic hazard areas are areas underlain by low-strength fill and floodplain deposits with soil and groundwater conditions that are more susceptible to seismic hazards than other areas.

- Development proposals for developments other than single-family residences may require review standards of critical facilities based on larger earthquake recurrence intervals and implementation of measures to mitigate the risk are implemented that meet accepted engineering standards for safety.

4. STEEP SLOPE HAZARD AREAS

A steep slope hazard area is an area that is not composed of consolidated rock with slope gradients that inclines 40 percent or more and has a vertical elevation rise of 10 feet or more.

- By definition, all steep slopes are also considered landslide hazards.

(See [Steep Slope Hazard Area Help Topic](#))

GEOTECHNICAL REPORTS

Geotechnical reports may be required by the Planning Department if development is proposed that may affect or be impacted by a geologically hazardous area, as defined within [LFPMC 16.16](#).

As specified in [LFPMC 16.16.040](#)-Q, geotechnical reports shall be prepared by either:

- A qualified professional engineer licensed in the State of Washington, with expertise in soils sciences and slope stability analysis, or
- A qualified engineering geologist.
- If it is determined that stabilization methods are necessary for the slope, buffer, or the proposed alterations, the report must contain the signature and stamp of a licensed professional engineer.

(See [Geotechnical Reports Checklist Help Topic](#))

Questions?

For more information, please contact the Planning Department
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206-957-2837

Access to Information

Electronic versions of all forms, permits, applications, and codes
are available on the Lake Forest Park website:
<http://www.cityofflp.com/>

Paper copies of all of the above are available at City Hall:
17425 Ballinger Way Northeast, Lake forest Park, WA 98155

DISCLAIMER: The information contained herein is meant to provide general information about Geologically Hazardous Areas. This summary is not a substitute for the actual codes or regulations, and does not include information pertaining to other land use and building permit requirements and procedures. Additionally, the conditions and regulations described in this bulletin do not address any state or federal regulations. Environmentally Critical Area requirements can and do sometimes change after action by the City Council. Interested parties should always verify current requirements with the City Planning Department.