



KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

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Geologically Hazardous Areas – BAS Review

The attached materials will provide a basis for discussion of Best Available Science relative to Geologically Hazardous Areas at the next Technical Review Committee Meeting scheduled for November 19, 2003.

I. Introduction

The Growth Management Act identifies “geologically hazardous areas” (also known as Geohazards) as one of six types of critical areas that local jurisdictions must protect under their critical area regulations. The Geohazard section of Kitsap County’s Critical Area Ordinance was reviewed and updated in 1999.

The 1999 update was a result of a proposed CAO revision by a group of local experts, including the Department of Fish and Wildlife, The Suquamish Tribe and Myers Biodynamics consulting firm. Staff worked with the group on language changes, which was then forwarded to two consulting geologists for peer review. Finally, the language was forwarded to the Planning Commission and Board of County Commissioners for approval, resulting in the August 1999 CAO amendment. The language, incorporated into Section 700 of the CAO (Special Reports) provides clear direction on when shoreline bulkheading will or will not be allowed, and detailed report requirements for any development in or adjacent to geologically hazardous areas.

II. Functions of Geologically Hazardous Areas

The unconsolidated geology of the Kitsap peninsula is the product of our glacially dominated past. Advancing glaciers gouged out new landscape features; deep pits and steep canyons eventually flooded with meltwaters. Kitsap’s lakes and stream valleys as well as the Puget Sound and Hood Canal, are the spectacular products of this glacial energy. As a result, high shoreline bluffs and steep ravines following its stream corridors characterize Kitsap County’s topography.

Topography influences the suitability of land for development. For example, steep slopes are typically unstable in nature, are costly to develop, and in certain areas, are not suitable for development. Geologically hazardous areas are those areas that, because of their susceptibility to erosion, landslides, debris or mud flows, or other geologic events, are generally not suited for commercial, residential, or industrial development.

Soil suitability for structural support and stability are also important factors in determining the potential for development. Load-bearing capacity of soil, hydric properties, erosion potential, and characteristics with respect to shrink-swell all play a significant role in development of land.

In particular, hydric properties indicate the existence of wetlands, and signal the potential for other environmental concerns.

III. Geohazard Mapping and Inventory in Kitsap County

Geologically hazardous areas are those areas designated in the Department of Ecology Coastal Zone Atlas and the Quaternary Geology and Stratigraphy of Kitsap County as land that has had recent or historic landslide activity and/or has unstable slope conditions. The soil survey conducted by the U.S. Soil Conservation Service includes detailed soil maps that can be used for general site selection and planning and may identify potential site development constraints for particular parcels. The survey explains in great detail each soil's suitability for agricultural, residential, sanitary facility, recreational, woodland wildlife habitat, and other land uses. Geohazard standards apply to any development proposed in Geologically hazardous areas. However, site-specific determinations can be made by submitting an appropriate Geologic or Geotechnical report, completed by a certified geological engineer.

Though most geologically hazardous areas are mapped, some may not appear on any maps. If an area meets the definition for a geologically hazardous area, it is regulated whether or not it is shown on County maps. It is the property owner's responsibility to know what regulated features exist on their property.

Potential future mapping updates, using the LiDAR data set for Kitsap County, would provide a map with detailed topography, at a resolution that would allow more accurate parcel scale analysis.

IV. Best Available Science Literature Review

The following information should be available in order to assist in discussing best available science for geologically hazardous areas:

- Kitsap County Critical Areas Ordinance – August 1999
- Special Reports Requirements 1999 – Amendment to CAO
- Citations of Recommended Sources of Best Available Science – Washington State Office of Community Development.
- King County BAS review – Chapter 5 Geologic Hazard Areas
- Pierce County BAS review – Pierce County Code 18E.80 Landslide Hazard Areas and PCC 18E.110 Erosion Hazard Areas