



SAN JUAN COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

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ADMINISTRATIVE DETERMINATION

Geotechnical Reports for Certain Category II Geologically Hazardous Areas

Director: Sam Gibboney

Issued: June 5, 2014

SJCC 18.35.060(D)(2)(a) and (b)

(Revised to reflect updated code numbers)

SJCC 18.35.065 (B)(1)

Number: PP-2014-01 GEOHAZ WAIVER DET

This determination is issued in accordance with San Juan County Code (SJCC)18.10.035 to allow for the effective administration of SJCC 18.35.060(D)(2)(a) and (b) and 18.35.065 (B)(1) and timely project review. It also will ensure that environmental protection standards pertain to the scale and scope of a project and site circumstances.

Determination

The requirement in SJCC 18.35.065 (B)(1) for a geotechnical report may be waived by applicants for permits and approvals for development and vegetation removal in or within 200 feet of Category II Geologically Hazardous Areas described in SJCC 18.35.060(D)(2)(a) and (b) if the proposal meets all of the following criteria:

- a. It creates:
 - i. Less than 2,000 square feet of impervious surface; and
 - ii. Less than 7,000 square feet of land disturbance (clearing, grading or compaction);
- b. The development area contains Category II Geologically Hazardous Areas characterized by soils identified in the *USDA Soil Survey of San Juan County, Washington*, as having:
 - i. A high risk of erosion;
 - ii. A land capability subclass of "e;" and
 - iii. Slopes less than 15%;
- c. The proposal does not involve construction of structural shoreline stabilization measures, including seawalls and bulkheads; and
- d. The application meets the requirements of 18.35.065(B)(4) and (6).

Background: San Juan County Code (SJCC) 18.35.065(B)(1) requires all applications for required permits and

approvals for development or vegetation removal in or within 200 feet of Category II Geologically Hazardous Areas to be accompanied by a geotechnical report. Approximately 80 percent of the County contains soils in having a high risk of erosion and a land capability subclass of "e" which categorizes them as Category II Geologically Hazardous Areas. Where such soils are located on slopes of less than 15 percent and the development is under the thresholds that trigger a stormwater plan, such activities are unlikely to decrease slope stability or pose an unreasonable threat to persons or property on or off-site. Because soil sedimentation and erosion, and cut and fill techniques are regulated under SJCC 18.35.065 this reporting requirement may impose an undue burden of time and money on applicants proposing small scale projects including but not limited to installations of wells or on-site sewage systems without any additional public benefit.

Process: If they choose to, applicants whose proposals meet the criteria outlined in this decision may submit their application without a geotechnical report required by SJCC 18.35.065(B)(1) and instead submit a geotechnical report waiver form (copy attached). CD&P staff will review the project to ensure that the waiver criteria are met.

Permit or Approval Conditions: All such project decisions would be conditioned to require compliance with the following conditions to ensure that erosion related hazards are mitigated:

- a. When feasible, structures and improvements shall be located to avoid the most hazard-prone portion of the proposed development area and to preserve vegetation necessary to prevent soil erosion;
- b. Structures, uses and/or activities shall be sited, designed, and constructed to minimize cut and fill and to retain as much of the natural topographic character of the existing slope as possible;
- c. Unless permanent restoration and protection are timed to ensure slope stability during the wet season, applicable temporary erosion and sedimentation best management practices needed to prevent soil erosion and destabilization shall be used during construction. Compliance with the 12 elements of Minimum Requirement #2 for erosion control is required. These requirements apply in areas that will be cleared, graded or disturbed which will not be covered with structures or other improvements until replacement plantings or other permanent stormwater management practices are established;
- d. If planting is proposed as a best management practice, a planting plan shall be provided identifying plant species, quantities, sizes, locations, spacing, and density, along with proposed measures to protect and maintain the plants until they are established;
- e. Where concentrated runoff (i.e., runoff that is visible above ground and that is not sheet flow) will be discharged within 50 feet of the boundary of an erosion hazard area additional stormwater management best management practices will be required to control erosion and sedimentation;

Based upon a review of the project site plan, drainage plans and critical area maps, the CD&P director may, waive, approve modifications to, or require additional conditions.

Appeal: This Administrative Determination shall be final unless appealed pursuant to SJCC 18.10.030(C).

18.35.055 Geologically hazardous areas – Applicability.

The provisions of this section apply in and within 200 feet of all geologically hazardous areas. (Ord. 27-2012 § 1; Ord. 2-1998 Ex. B § 3.6.5. Formerly 18.30.120(A))

18.35.060 Geologically hazardous areas – Identification and classification.

A. All of San Juan County has some level of risk associated with geologic hazards. The County classifies areas of known or suspected risk into three categories as described in this subsection.

B. In applying these regulations, the requirement to identify geologically hazardous areas is limited to those located in or within 200 feet of areas proposed for development or removal of vegetation.

C. Slope is one factor that is considered in classifying geologically hazardous areas. Slope is the vertical change in elevation that occurs in a given distance expressed in percent. Slope is measured perpendicular to the contour of the land and for classification purposes it is measured in 10-foot vertical increments. In the absence of a topographic field survey of the subject property, the director may use the San Juan County Digital Elevation Model (DEM), based on Light Distance and Ranging (LiDAR) technology, to estimate slopes. In determining slopes and other geologic factors, however, conditions in the field shall control.

D. Geologically hazardous areas are classified into three categories according to the probability of hazardous geologic activity occurring and the potential consequences to people and property.

1. Category I – Landslide and Other Hazards.

a. Areas designated in the Washington Department of Ecology Coastal Zone Atlas as U (Unstable), UB (Unstable Bluff), URS (Unstable Recent Slide), or UOS (Unstable Old Slide) and other areas identified by site-specific geologic reports.

b. Areas with slopes of greater than 50 percent and with a vertical relief of 20 feet or more, except areas of exposed, unfractured bedrock. If any portion of a slope meets this definition, the slope or some larger portion may be designated a landslide hazard area.

c. Areas designated as quaternary slumps, earthflows, mudflows, or landslides on maps published by the United States Geological Survey or the Washington Department of Natural Resources.

2. Category II – Erosion, Landslide, and Other Hazards.

a. Erosion hazard areas characterized by soils identified in the USDA Soil Survey of San Juan County, Washington, as having a high risk of erosion, with a land capability subclass of “e.”

b. Category II landslide hazards include any area with all three of the following characteristics:

i. Slopes in excess of 15 percent;

ii. Pervious soil layers overlying semi-pervious to impervious soil layers; and

iii. Evidence of springs or groundwater seepage to the surface.

c. Mine Hazards. Areas directly underlain or affected by mine workings including steep and unstable

slopes created by open mines. Mine hazard areas are based upon the identification of active or historic mining activity and site-specific information regarding topography and geology provided by the applicant as needed.

3. Category III – Seismic Hazards.

a. San Juan County in its entirety is located within Seismic Design Category D1 of the International Building Code and the International Residential Code.

b. Liquefaction susceptibility zones identified in the Washington Department of Natural Resources Liquefaction Susceptibility Map. (Ord. 27-2012 § 1; Ord. 2-1998 Exh. B § 3.6.5. Formerly 18.30.120(B))

18.35.065 Geologically hazardous areas – Protection standards.

A. Category I.

1. The following shall be prohibited:

a. Structures where the primary occupancy is public assembly, including but not limited to schools, churches, day care centers, hospitals and other medical facilities; and

b. Facilities for emergency response and public safety.

2. Applications for required permits and approvals for development and vegetation removal in or within 200 feet of any Category I geologically hazardous area shall be accompanied by a geotechnical report prepared in accordance with SJCC 18.35.070 (geotechnical reports), and demonstrating that:

a. The slope is less than 80 percent; and

b. There is no hazard or the hazard will be mitigated with appropriate conditions. The geotechnical report shall specify adequate conditions to ensure that proposed modifications to the land will not cause or contribute to instability of the site or adjacent areas.

3. The director may, based on the content of the geotechnical report, waive or approve modifications to the requirements set forth in subsections (A)(4) through (6) of this section.

4. Development shall be located in accordance with the following:

a. Structures and improvements shall be sited, designed, and constructed to minimize cut and fill and to retain as much of the natural topographic character of the slope as possible; and

b. Structures and improvements shall be located to avoid the most hazard-prone portion of the proposed development area and to preserve vegetation necessary to prevent soil erosion.

5. Where previous human activity has significantly modified natural topography, the County may allow further modification of such slopes if a geotechnical report demonstrates that such activity will result in the same or improved slope stability.

6. To prevent soil erosion and destabilization of slopes, areas that are cleared or graded, and that are not

covered with structures or other improvements, must be protected until replacement plantings are established. Temporary erosion and drainage controls may be required unless permanent restoration and protection are timed to ensure slope stability during the wet season.

7. Where concentrated runoff (i.e., runoff that is visible above ground and that is not sheet flow) will be discharged within 50 feet of the boundary of a landslide or erosion hazard area, a geotechnical report, prepared in accordance with SJCC 18.35.070 (geotechnical reports) is required.

B. Category II.

1. Applications for required permits and approvals for development or vegetation removal in or within 200 feet of Category II geologically hazardous areas shall be accompanied by a geotechnical report, prepared in accordance with SJCC 18.35.070 (geotechnical reports).

2. Where concentrated runoff will be discharged within 50 feet of the boundary of a landslide or erosion hazard area, a geotechnical report, prepared in accordance with SJCC 18.35.070 (geotechnical reports), is required.

3. The director may, based on the content of the geotechnical report, waive or approve modifications to the requirements set forth in subsections (B)(4) through (6) of this section.

4. Development shall be located in accordance with the following:

a. Structures and improvements shall be sited, designed, and constructed to minimize cut and fill and to retain as much of the natural topographic character of the slope as possible; and

b. Structures and improvements shall be located to avoid the most hazard-prone portion of the proposed development area and to preserve vegetation necessary to prevent soil erosion.

5. Where previous human activity has significantly modified natural topography, the County may allow further modification of such slopes if a geotechnical report demonstrates that such activity will result in the same or improved slope stability.

6. To prevent soil erosion and destabilization of slopes, areas that are cleared or graded and that are not covered with structures or other improvements must be protected until replacement plantings are established. Temporary erosion and drainage controls may be required unless permanent restoration and protection are timed to ensure slope stability in the wet season.

C. Category III. Development activities are required to conform to the applicable provisions of the International Building Code or the International Residential Code, which contains structural safeguards to reduce the risks from seismic activity. Construction performed in accordance with the San Juan County owner/builder provisions (SJCC 15.04.500 through 15.04.710) is, however, exempt from conformance with the International Building Code and the International Residential Code.

D. All Categories – General Protection Standards – Bulkheads. Construction of structural shoreline stabilization measures, including seawalls and bulkheads, shall meet the requirements of SJCC 18.35.110 through 18.35.140 and Chapter 18.50 SJCC. In addition to other required elements, geotechnical/coastal geologic reports required by these sections shall identify any potential adverse impacts to adjacent and

nearby properties. Adverse impacts to other properties shall be mitigated in accordance with the requirements of SJCC 18.35.020 through 18.35.050. (Ord. 27-2012 § 1; Ord. 2-1998 Exh. B § 3.6.5. Formerly 18.30.120(C))

18.35.070 Geologically hazardous areas – Geotechnical reports.

A. Geotechnical reports shall be prepared, stamped and signed by a qualified professional. These reports must:

1. Be appropriate for the scale and scope of the project;
2. Include all geologically hazardous areas and all potentially affected areas in or within 200 feet of the area proposed for development or vegetation removal. If the affected area extends beyond the subject property, the geotechnical analysis may utilize existing data sources pertaining to that area;
3. Clearly state that the proposed project will not decrease slope stability or pose an unreasonable threat to persons or property either on or off site;
4. Be adequate to determine compliance with the requirements of the San Juan County Code;
5. Generally follow the guidelines set forth in the Washington State Department of Licensing Guidelines for Preparing Engineering Geology Reports in Washington (2006). In some cases a full report may not be necessary to determine compliance with the San Juan County Code, and in those cases a letter or abbreviated report may be provided.

B. The director will review geotechnical reports for completeness and compliance with this section.

C. A geotechnical report does not expire unless there are changes in proposed land uses or site conditions. (Ord. 27-2012 § 1; Ord. 2-1998 Exh. B § 3.6.5. Formerly 18.30.120(D))