

## Appendix I

### Sample Geological Hazards Assessment Review Checklist

The following checklist may be used by the jurisdiction's staff to assist them in their review of geological hazard assessments that are submitted as part of a critical areas report. The checklist is a way of ensuring that the necessary components of the assessment have been included. The checklist can also be used as a tool for communicating needed corrections to the applicant. This checklist is based on the Pierce County checklist developed in 1999 as modified by GeoEngineers, Inc., for the City of Kent in 2002.

Project Name: \_\_\_\_\_ Date: \_\_\_\_\_

Application No.: \_\_\_\_\_ Geotechnical Engineer: \_\_\_\_\_

Professional Liability Insurance Certificate on File: \_\_\_\_\_

Circled items need to be addressed. Checked items are O.K.

#### Return All Review Mark-Ups and Checklist With Resubmittal:

Items 1 through 31 are the minimum requirements to be addressed by the geotechnical engineer. All remaining items are required to be completed by the applicant or their agents prior to permit approval.

1. \_\_\_\_\_ Report stamped and signed by P.E.
2. \_\_\_\_\_ Contour map of area, showing existing contours, at a maximum scale of 1"=20' and with 2" contour interval.
3. \_\_\_\_\_ Delineation of 15 – 39 percent slopes on maps with the report.
4. \_\_\_\_\_ Delineation of slopes greater than 40 percent on maps with the report.
5. \_\_\_\_\_ Boring or test pit logs included. (Septic test pits are not acceptable.)
6. \_\_\_\_\_ Exploration methods described and justified.
7. \_\_\_\_\_ Soil and/or rock stratigraphy described.
8. \_\_\_\_\_ Ground water levels and estimated or measured seasonal variations.
9. \_\_\_\_\_ Description of any prior site grading.
10. \_\_\_\_\_ Description of any on and near site soil instability.
11. \_\_\_\_\_ Description of any on and near site slope failure.
12. \_\_\_\_\_ Submittal of data concerning the vulnerability of the site to seismic events.
13. \_\_\_\_\_ Slope stability studies and opinion of slope stability both in static and seismic events.
14. \_\_\_\_\_ Proposed angles of cut and fill.
15. \_\_\_\_\_ Site grading requirements.
16. \_\_\_\_\_ Structural foundation requirements.
17. \_\_\_\_\_ Estimated foundation settlement.
18. \_\_\_\_\_ Soil compaction criteria.
19. \_\_\_\_\_ Proposed surface water drainage.
20. \_\_\_\_\_ Proposed subsurface water drainage.

21. \_\_\_\_\_ Lateral earth pressures.
22. \_\_\_\_\_ Vulnerability of the site to erosion.
23. \_\_\_\_\_ Suitability of on-site soil for fill.
24. \_\_\_\_\_ Specifications for import fills.
25. \_\_\_\_\_ Lab data and soil index properties.
26. \_\_\_\_\_ Building limitations.
27. \_\_\_\_\_ Discussion on whether or not wet weather construction is feasible.
28. \_\_\_\_\_ Report is less than five years old for the site.
29. \_\_\_\_\_ Required buffer and setback from toe: \_\_\_\_\_ Feet.
30. \_\_\_\_\_ Required buffer and setback from top: \_\_\_\_\_ Feet.
31. \_\_\_\_\_ Required buffer and setback from flank: \_\_\_\_\_ Feet.

**Narrative Addressing the Following Issues:**

1. \_\_\_\_\_ Is the development located to minimize disturbance and removal of vegetation?
2. \_\_\_\_\_ Are structures clustered (where possible) to reduce disturbance and maintain natural topographic character?
3. \_\_\_\_\_ Development conforms to the natural contours.
4. \_\_\_\_\_ Foundations tiered (where possible) to conform to existing topography.
5. \_\_\_\_\_ Development designed to minimize building footprint and disturbed area.
6. \_\_\_\_\_ Development designed to minimize impervious surface coverage.
7. \_\_\_\_\_ Roads, walks, and parking designed to parallel natural contours.
8. \_\_\_\_\_ Access located on least sensitive area of site.

**Notification Requirements:**

1. \_\_\_\_\_ Buffer placed in a critical area tract, protective easement, land trust dedication or other Department approved mechanism.
2. \_\_\_\_\_ Letter from engineer stating that the edge of the buffer(s) and setback(s) have been clearly staked, flagged and fenced (see attached detail) prior to any site clearing or construction.
3. \_\_\_\_\_ Title notification recorded for landslide and/or erosion and/or seismic hazard area.

**Erosion Hazard Area Requirements:**

1. \_\_\_\_\_ Erosion hazard is present if site has a USDA designation of: moderate-severe, severe or very severe SCS soil type SCS hazard designation.
2. \_\_\_\_\_ Abbreviated Erosion/Sediment Control plan needed.
3. \_\_\_\_\_ Full Erosion/Sediment Control plan needed.

**Storm Drainage Requirements:**

1. \_\_\_\_\_ Abbreviated Drainage plan meeting geotechnical recommendations.
2. \_\_\_\_\_ Full Drainage plan meeting geotechnical recommendations.
3. \_\_\_\_\_ Letter from engineer stating that drainage plan meets geotechnical recommendations.

**Private Inspection:**

1. \_\_\_\_\_ Letter of inspection by the geotechnical engineer verifying compliance with the approved report prior to footing and/or foundation inspection approval.
2. \_\_\_\_\_ Letter of inspection by the geotechnical engineer verifying installation of erosion control facilities.
3. \_\_\_\_\_ Storm drainage certification letter by the civil engineer prior to final building inspection approval.