



County of Santa Cruz

Health Services Agency – Environmental Health

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Guidelines for Required Technical Reports for Onsite Wastewater Treatment Systems (OWTS) **Design and Permitting**

The installation of OWTS has the potential to result in a public health hazard by either adversely affecting the stability of slopes or allowing for the surfacing of effluent. When OWTS are proposed in areas of potential instability, a technical report(s) must be prepared with appropriate geologic and geotechnical data demonstrating that the proposed OWTS will not cause wastewater surfacing and/or slope instability, as applicable, throughout the primary and designated reserve dispersal system areas or in neighboring areas.

The technical report(s) must be prepared by either a California Licensed Professional Geologist with experience in engineering geology and/or a California Licensed Professional Civil Engineer with experience in geotechnical engineering. Slope stability analysis included within a technical report must be prepared in conformance with the County's [Guidelines for Geotechnical Investigation Reports](#). Technical reports are submitted to Environmental Health for the OWTS permit review and processing and may require peer review by the Permit Engineering Group, within the Community Development and Infrastructure department, at the discretion of the Health Officer.

A technical report for a proposed OWTS is required to be submitted to Environmental Health when the following conditions are encountered:

1. Whenever the slope of the proposed leachfield for an existing development exceeds 30% gradient (dispersal systems may not be located on slopes steeper than 50%). A slope stability analysis must be included as part of the technical report.
2. If the proposed leachfield is located within 25 ft above a slope greater than 67% not subject to the limitations specified below, or within 50 ft above a slope greater than 67% if the slope area is composed of fractured material or if slope area or embankment is intersected by impermeable strata or shallow groundwater. A slope stability analysis must be included as part of the technical report.
3. Whenever any component of the OWTS is proposed within 100 feet of an unstable land mass or area subject to earth slides as identified by a licensed professional civil engineer, geotechnical engineer or licensed professional geologist.
4. Whenever the land proposed for onsite sewage disposal has severe soil limitations, or introduction of sewage effluent into the soil may create slope instability, as determined by the professional judgment of the Health Officer.
5. Whenever a geologic or geotechnical report that is submitted to the County as part of a building or development permit application for a development where an OWTS is proposed, the report must also include review and comment of the specific OWTS proposal submitted to the Environmental Health Division. This report must evaluate the effect of the proposed OWTS regarding the potential for slope instability and, if

necessary, designate other areas on the site where an OWTS, that meets County standards, will not adversely affect slope stability or result in a public health hazard.

The technical report must, at a minimum, include the following:

1. A reference to the OWTS engineering installation plan;
2. Topography;
3. Subsurface lithologic and structural data;
4. Existing and Proposed Grading, including OWTS dispersal fields;
5. Cross-section(s) showing soil and bedrock zones encountered (for slope stability analysis);
6. Groundwater conditions;
7. Surface drainage and soil erosion hazards;
8. Any other appropriate factors based on the site specific constraints.
9. A discussion of slope stability and seismic hazards must be included in all reports. When completed or required, slope stability analysis must be prepared in conformance with the County's Guidelines for Geotechnical Investigation Reports.*
10. The report must include any recommendations deemed appropriate or necessary to mitigate potential slope stability, drainage or seepage concerns associated with either the installation or on-going operation of the proposed OWTS, including, as necessary, recommended horizontal setback(s) from any cut banks, embankments, steep slopes or any identified unstable land mass.
11. The conclusions of the technical report must specifically address the potential for the proposed OWTS to create the following unacceptable circumstances: permit sewage effluent to surface, degrade water quality, affect soil stability, present a threat to the public health or safety, and create a public nuisance. In all cases, the proposed placement and function of the OWTS must be found to be suitable before it can be approved.
12. If the dispersal field is modified an amended technical report must be submitted that references the modified plan.

*We encourage the project engineering geologist and/or geotechnical engineer to review the current editions of the County of Santa Cruz's [Guidelines for Engineering Geologic Reports](#) and [Guidelines for Geotechnical Investigation Reports](#), as applicable, available on the Community Development and Infrastructure webpage [here](#) and [here](#), respectively (hyperlinked to the webpage).