



Department of Environmental Health  
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## **SANTA CLARA COUNTY WET WEATHER GROUNDWATER INVESTIGATION**

### **Background**

The Santa Clara County Sewage Disposal Ordinance requires that soil investigations be conducted on each building site to be served by an onsite sewage disposal (septic) system. One function of these soil investigations is to determine if there will be adequate separation between the bottom of the leachfields and seasonal high groundwater. The ordinance requires groundwater to be at least 8 feet below the leachfield in soils that exhibit moderate percolation rates, and 20 feet in highly permeable soils. For the Lexington Basin Area, a 5-foot separation to groundwater is required. Failure to provide the required separation to seasonal high groundwater may potentially result in groundwater contamination from the septic system or failure of the septic system itself. A septic system failure could manifest itself, among others, by effluent surfacing on the ground and/or sewage backing up into the house fixtures. Installing a septic system on a site that appears to have adequate separation to groundwater in the dry season but experiences shallow groundwater during the rainy season may result in a septic system which functions properly only part of the year.

The Department of Environmental Health (DEH) has developed a policy that describes the wet weather groundwater investigation process. This process is used to identify sites with elevated seasonal groundwater tables which may preclude development using onsite sewage disposal systems.

A seasonal groundwater table may be suspected where 1) previous soil investigations have indicated evidence of high groundwater (soil mottling); 2) the site is at the base of a hill, near a creek or otherwise located where water is likely to accumulate; 3) riparian type plant life is present indicating prolonged soil moisture; 4) the Santa Clara Valley Water District (SCVWD) records indicate high groundwater conditions in the area; and/or 5) the presence of any other condition that may indicate a seasonal high groundwater table.

### **Wet Weather Investigation Process**

A typical wet weather investigation will consist of a test pit, or with the approval of DEH, a test boring witnessed by DEH. The test must be conducted when sufficient rainfall has occurred in the area to establish the normal seasonal

groundwater table. Prior to conducting the wet weather groundwater investigation, the percolation rate of the soil should be determined by DEH in order to assure that the wet weather investigation is conducted at the proper depth. DEH uses data from four SCVWD rainfall-monitoring stations to determine when sufficient rainfall has occurred. The testing window will open for a 30-day period when at least 60% of historical seasonal average rainfall has occurred, and 14% of that average has occurred in the last 30 days. The window will be extended for two-week periods provided that at the end of each testing period at least 14% of historical seasonal average rainfall has occurred in the previous 30 days.

In lieu of test pits or borings, the applicant may choose to construct at least two test wells in locations specified by DEH. The wells must be constructed to the same depth as would be required for the test pit. The wells must be constructed by an individual or company knowledgeable in the proper construction of these wells, and approved by DEH. The casing must be perforated from four feet below the surface to the depth of the well and the annular space at the surface must be sealed to prevent the introduction of surface water into the well. DEH will monitor the well during the wet weather investigation window.

The District Environmental Health Specialist should be consulted to determine whether a wet weather groundwater investigation would be required on a specific site. Appropriate fees must be paid to DEH prior to conducting the wet weather investigation.

### **Wet Weather Test Alternative**

As an alternative to conducting the wet weather test, the applicant may elect to retain a hydrogeologist to investigate the site for evidence of seasonal high groundwater and submit a written report to the Department of Environmental Health. The investigation must include a field examination of test borings or excavations in the drainfield area and must address the topography and drainage of the area, including surface and subsurface drainage. Borings and excavations must be to 8 or 20 feet (as required, or 5-feet in the Lexington Basin area) of the bottom of the proposed drainfield (based on the percolation rate of the soil). The report must be submitted to the Land Use Senior who will request that the County Geologist review the report and comment. The County Geologist charges a fee for this review. Contact the County Geologist at 408-299-5774 for the fee schedule. These requirements should be discussed with the Land Use Senior at 408-299-5748 prior to conducting the investigation. A fee is also required by DEH for review of the hydrogeologist's report.