Policy #9: Wet Season Soil Evaluation to Determine Vertical Separation

Effective Date: November 1, 2008, Updated: Nov 7, 2019

Purpose: The purpose of this policy is to establish the procedure to evaluate and determine the estimated maximum seasonal high groundwater table in a proposed drainfield area as part of the Building Site Application review process.

Both state and local rules require that the Health District must render a decision on the height of groundwater/vertical separation within 12 months of receiving a Building Site Application (BSA).

Policy: Pursuant to Section 10.D.3. of Ordinance 2008-01, the following shall be completed when a wet season evaluation is required by the Health District to determine the maximum high groundwater table for a submitted Building Site Application:

1. The Health District shall notify the designer and applicant that the BSA review status has been placed in pending for a wet season soil evaluation. The notification shall be made through a written letter.

2. The designer and applicant shall decide whether they will proceed with one of the following 3 options:
   a) Proceed with the wet season soil evaluation by submitting a Wet Season Soil Evaluation application, with the applicable fees to the Health District; or
   b) Develop and submit a BSA-Redesign to re-locate the onsite sewage system; or
   c) Withdraw the submitted BSA.

3. If the designer and applicant choose to complete a redesign or withdraw the BSA, the BSA will be denied by the Health District. There is no option for a fee refund for a Denied BSA.

4. If a curtain drain is included as part of the BSA, the designer and applicant may choose to install the curtain drain, as designed, prior to the wet season evaluation; an Onsite Sewage System Installation Permit – Curtain Drain shall be obtained from the Health District prior to construction of the curtain drain.
5. The wet season soil evaluation shall be conducted as follows:

   a) Wet season soil evaluation applications shall be submitted no later than February 1 of the current year for sites to be evaluated for that year. This means that the observation wells shall also be installed by this time. The wet season soil evaluation application shall also contain a site plan showing the locations of the installed observation wells.

   b) A minimum of three (3) water table observation wells shall be installed at the site: two that spatially represent the primary area, and one near the center of the reserve area. See Figure 1 for observation well construction criteria.

   c) Evaluation of the observation wells shall be conducted as follows:

      i. The inspections shall occur between the months of December through March, with a minimum of 14 days passing between each inspection.

      ii. The designer shall conduct at minimum, two (2) solo inspections.

      iii. The Health District shall conduct at minimum, one (1) solo inspections.

      iv. A single joint inspection shall be conducted with both the designer and the Health District representative present.

      v. Inspections should occur between 24-72 hours of a normal rain event. A rain event is defined as 24-period which receives the following precipitation amounts:

      | Geographical Area       | Normal Rain Event | Rain Station               |
      |-------------------------|------------------|----------------------------|
      | Fin Hill North          | .15 - .25 “or rain | (01) KPUD Office          |
      | Gorst to Finn Hill      | .15 - .40 “of rain| (62) Silverdale            |
      | Gorst South             | .15 - .55 “of rain| (72) KC South Road Shed    |

   Please Note: It is not recommended that wet weather evaluations are conducted after precipitation exceeds a normal rain event, however, passing readings shall be allowed.

   d) Inspections shall be documented on forms provided by the Health District.

   e) As part of each inspection, the following information will be documented:

      i. Date and time of the inspection;
ii. Precipitation accumulation within the past 24 hours and the source of the precipitation information (kpudhydrodata.kpud.org);

iii. The measurement, in inches, from the surface of the ground to the surface of water, if present) in the observation well. If no water is present, then that observation will be recorded; and

iv. Based upon the system design included in the Building Site Application, a determination of the vertical separation for each observation well with respect to the proposed dispersal component’s soil interface.

f) Upon completion of the wet season inspection of the observation wells, the designer shall submit their completed inspection evaluation report to the Health District.

g) Based on these findings, the Health Officer shall either accept or deny the BSA of record.

6. Parcels/areas that have been denied as a result of failing wet weather review, shall not be considered in the future as a viable area for sewage disposal, unless reasonable mitigation can be presented, and additional wet weather review periods may be necessary to ensure the suitability of the site for development.

NOTES:

1. The Health Officer may, on a case-by-case basis, accept a wet season soil evaluation application for a site for which no Building Site Application has been submitted. Health Officer approval is required prior to submitting the wet season soil evaluation application when it is not related to a pending Building Site Application.

2. If a curtain drain is designated on the submitted design, it is recommended (not required) that the curtain drain be installed prior to beginning the wet season soil evaluation. Construction of the curtain drain requires a permit and Health District inspection.
FIGURE 1
EXAMPLE SOIL/GROUNDWATER OBSERVATION WELL CONSTRUCTION

- Ground Surface
- Min. 4” Perforated Pipe
- Gravel or Equivalent
- Removable Cap
- Bentonite Recommended
- Native Soil
- Restrictive Layer