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PUBLIC HEALTH AND
SOCIAL SERVICES DEPARTMENT

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MEMORANDUM

Date: March 8, 2006

To: Designers, Engineers & other interested parties

From: Alan Schmidt, R.S., O.W.T.S.I., Senior Environmental Health Specialist

Subject: Miscellaneous Items

This memorandum is written to inform and update the industry on the department's position and expectations.

The following is a list of subjects provided for clarification:

A) TEST PIT REQUIREMENTS

Article IV, Section 11, establishes soil and site evaluation requirements. The number of test pits and soil logs required is stated:

Section 11.2.1.1 Unless a reduced number of soil logs is authorized by the health officer, observed conditions in soil logs from at least:

- 11.2.1.1.1 Two test pits in the initial disposal component;
and
- 11.2.1.1.2 One test pit in the reserve area.

The purpose of this requirement is to ensure soil conditions in the primary and reserve drainfield areas are sufficiently represented. Once this is established, an acceptable on-site sewage system is designed and sited.

The department's concern is not that we adhere to the stated number and location of test pits, but that the number and location of the test pits accurately reflect the site under review. A representative soil log is one that is in the drainfield area or immediately adjacent to the drainfield area.



In cases where soils vary and site conditions are restrictive, the drainfield site may not be adequately characterized with the minimum number of test pits stated above. In cases where soils are consistent and site conditions are not limiting, fewer may be appropriate. The health officer is the one that authorizes a reduced number of soil logs. In addition, the code allows the health officer to request additional test pits as needed.

A system should not be designed to the "best" or "closest" test pit. The more inconsistent soil profiles are, the more complex the site conditions are, the more likely the site will not be accurately represented with a "best" or "closest" test pit. In most circumstances, this will necessitate digging additional test pits. When there is any doubt, the designer is expected to require additional test pits. The concept of "wait and see what the county says" is not a prudent practice.

The designer or engineer is required to submit an application and design that meets minimum requirements. It is useful to include with the submittal explanations and justification of what you have observed and what you designed. This will assist the department in completing the review in a timelier manner. Ask yourself these questions:

1. Does the location and numbers of test pits accurately reflect the site under review?
2. Does the submittal contain enough information to justify the proposal?

B) "SEVEN TIMES RULE"

Thurston County Environmental Health requires that all systems be designed so that the dose volume is at least seven times the volume of the liquid that drains after a dose.

The implementation date for showing that this requirement has been met in the hydraulic calculations of the sewage system design is March 27, 2006.

Design options available for meeting this criterion when dose volumes do not meet this requirement are:

1) ORIFICE ORIENTATION:

- Orifices placed in the 12 o'clock position with orifice shields
- Orifices placed in the 3 or 9 o'clock position when placement in the 6 o'clock position does not provide the volume needed.

2) DRAINFIELD LOCATION IS AT A LOWER ELEVATION THAN THE PUMP CHAMBER:

- Use of a clear adjustable true union in conjunction with a utility spring check valve to ensure the transport line remains charged is acceptable. The clear union valve is installed

at the pump chamber. The swing check valve is installed at the end of the transport line. Adjustment procedures for the swing check valve can be obtained from the manufacturer or distributor.

-The clear union valve is installed at the pump chamber so that an easy check can be made to verify the transport line remains charged. The spring check valve must be installed with access to the surface for checks and maintenance.

-Anti-siphon measures are required.

C) SOIL LOG DESCRIPTIONS

Soil log descriptions shall be written as found in Table II of Article IV (USDA-NRCS classifications) without abbreviations. **The soil log description must specify the depth of the restrictive layer. If no restrictive lens was found note that in the soil log description.** This is needed to show that the minimum vertical separation requirements are met based on the type of sewage system proposed.

The implementation date for showing the depth of the restrictive lens on design submittals is March 27, 2006.

The Department of Licensing has made it clear that a licensed designer or an engineer is the only one authorized to make design changes. When there is a disagreement as to the depth of the restrictive lens with no design change needed, the reviewing sanitarian will make a note in the file. If the disagreement results in a change to the design, this change needs to be made by the designer or engineer.

D) Design Criteria when designs are submitted for "Model Homes" prior to final plat approval.

Preauthorization by Development Services must be obtained prior to submittal of the on-site sewage system design. When this occurs all existing design requirements are applicable. Additional requirements are:

1. The application must clearly indicate that this is for a model home.
2. The lot is identified as a proposed lot in the applicable plat on the application and site plan.
3. A map of the entire proposed plat is included with the design, or
4. A site map of the entire parent parcel is included.
5. The proposed lot is identified and labeled as a blow up (excerpt) diagram on the plat map.
6. The excerpt (blowup) is drawn to scale and, **for review purposes only**, will be considered as a stand-alone parcel.

E) Time periods between field and site work completion and actual design submittal

When time has elapsed between the completion of the site and fieldwork for a design and the actual submittal occurs, site conditions may have changed. The time period inferred is "months" rather "days or weeks". As an example: The work was completed in the spring.

The design was not submitted until the end of the summer. Factors such as vegetation growth and site clearing may have destroyed or masked field markers. When a situation such as this occurs it may be useful to check the site prior to submitting the design.

If the site has not been assessed for this circumstance at the time of submittal, Environmental Health staff will make every effort to complete the site inspection. If factors have resulted in the masking or destruction of field markers, these items will need to be addressed and another site visit conducted.

F) Notice to all licensed sewage system designers and professional engineers who perform on-site wastewater design work in Thurston County

Thurston County makes every effort to resolve any on-site wastewater system design issues by holding meetings with design professionals to openly discuss subjects of concern. This is done in order to achieve an understanding of expectations. We then send follow up letters to the design professionals so it is clear what was discussed and what is expected. We hold these meetings to resolve any issues rather than sending a formal complaint to the Washington State Department of Licensing (WSDOL). **This is to inform you that Thurston County sends a courtesy copy of all follow up letters to the WSDOL.** Please be aware that routing copies of these follow up letters is not intended as a formal complaint to WSDOL.

G) Article IV Update

Article IV has been amended. The update covers the revised definition of a "Community On-Site Sewage System (COSS)", a "Conforming System" and includes the addition of the Henderson Watershed Protection Area. You may obtain an updated copy at the Permit Assistance Center or by accessing the Thurston County Public Health & Social Services Department web page. The updated version is available in the Environmental Health section.