Number: ONST.11.POL.802

Title: APPLICATION OF RECOMMENDED STANDARDS AND GUIDANCE FOR PRESSURE DISTRIBUTION SEWAGE SYSTEMS – July 2009 VERSION

Related: **None** **Approved:** _____
Environmental Health Director
Date: **7/5/11**

Cancels: ONST.02.POL.802 (9/1/02) **RCW/Code:** WAC 246-272A, Article IV

This policy clarifies how Thurston County Environmental Health applies the Washington State Department of Health Recommended Standards and Guidance (RS&G) for Pressure Distribution Sewage Systems (July 2009).

1. **"Shall" and "must" items in the RS&G must be followed.**
   "Must" and "shall" items are required for all pressure distribution systems except as noted in this policy.

2. **Guidance portions of the RS&G can be used at the discretion of the designer except as specified in this policy.**

3. **Pump Chamber: RS&G Section 2.4.1.4**

   - Basket-style pump chamber screens are NOT allowed for new construction.
   - Basket-type screens are allowed only in repair situations where effluent filters CANNOT be installed in the septic tank outlet.

4. **Pump Controls: RS&G Section 2.5.1.2.1**

   Timer controlled dosing is required for:

   - All sites where technologies meeting Treatment Levels A or B are mandated under WAC 246-272A-0230 or Article IV,
   - All sand-based systems,
   - Sewage systems designed for 1000 gallons or more per day,
   - Reduced-sized gravelless drainfields, systems installed in Soil Types 2 and 3, and
   - The dispersal component in all repairs using the allowances of Table VI of Article IV.

5. **Orifice spacing: RS&G Section 2.8.3.1**

   - All trench systems located in a Category I, Aquifer Recharge Area will require a minimum of one orifice per 6 sq. ft of infiltrative surface area, evenly distributed.
   - Orifice spacing of 30 inches will be allowed for beds.

6. Minimum Design Submittal: RS&G Section 2.9

- Designs must address all the requirements of Article IV, Section 8.1.
- Certain sewage system types require submittal of a service contract with Certified Monitoring Specialists prior to permit issuance, see (policy) ONST.08.POL.605.
- Highest transport line elevation: required only for sites where it will be higher than the highest lateral invert. *(i.e.,* pumping over a hill.)
- Electrical wiring diagram: NOT required with any design.
- User's manual: NOT required with the design for a sewage system using pressure distribution. (See section on User's Manual)

7. Record Drawing Information: RS&G Section 2.10

A complete Record Drawing submission must contain, at a minimum, the following:

- All items noted in Section 15 of Article IV, WAC 246-272A-265
- All items listed in the attached Record Drawing Submittal Requirements dated October 13, 2010
- Any provisions made to facilitate the location of lateral cleanouts (if applicable).
- Certification of a satisfactory pressure test:
  - REQUIRED: the recorded squirt height for the system overall
  - Not Required: squirt height for each lateral end
- When timers are used and after installation:
  - Measured drawdown in the pump chamber per dose cycle; and,
  - Timer settings for pump run time and pump time off.

8. User's Manual: RS&G Section 2.11

The sewage system designer must provide the homeowner a user's manual for the following types of OSS's:

- Proprietary treatment devices,
- Reduced sized drainfields,
- Systems designed to meet treatment level A that utilize pressure distribution as the final means of effluent treatment and dispersal.

Unless specified by the health officer, user's manuals do not need to be submitted to the department.

9. Operation and Maintenance: RS&G Section 3.0

Operation and maintenance requirements will be included in the Operational Certificate, User's Manual, or the Recommended Maintenance information provided by the Department.

10. Compliance of pumps, controls, and associated electrical components with applicable NEC and local electrical codes is the responsibility of the manufacturer for those parts and the electrician installing them.

"RECORD DRAWING" SUBMITTAL REQUIREMENTS

Updated 10/13/10

This document identifies Thurston County requirements for Record Drawings (formerly "As-builts") and cancels all other documents pertaining to this matter.

A "Record Drawing" shall be submitted to the health officer upon completion of new construction, modification, or repair of an On-Site Sewage System (OSS). WAC 246-272A-0625) requires the drawing to be labeled "Record Drawing".

The main purpose of a Record Drawing is to provide accurate and detailed information to the homeowner who may have little or no knowledge of OSS components. The elements identified in this document are important and should assist the homeowner in locating the OSS components, as well as conducting ongoing operation and maintenance of the OSS.

The drawing is a stand-alone document submitted after the installation is completed. The drawing must contain sufficient information to adequately identify the site. A re-creation of the entire lot dimensions is not necessarily needed. What is needed is a representation, to scale of the items identified in this document.

A. Responsibilities (Section 14.4.2 of Article IV)

1. **Installers:**

   a. Install all portions of the OSS in accordance with the approved design or approved modification.

   b. Responsible for pressure testing after installation (Section 1.2 of the Recommended Standards and Guidance for Pressure Distribution).

   c. Inform the Licensed Designer or Professional Engineer of the results.

   d. Note the correction of deficiency items identified on a final inspection and inform the Licensed Designer or Professional Engineer when no re-inspection is required.

   e. The applicable information required shall be provided to the designer/engineer on the document supplied by Thurston County Environmental Health (INSTALLER CONSTRUCTION COMPLETION FORM).

2. **Licensed Designer / Professional Engineer:**

   a. "Certify to the health officer that the on-site sewage system (OSS) installation is per the approved design or approved modifications…"

   b. Submit 3 Record Drawings for new construction prior to final occupancy for building projects located in Thurston County.

   c. Submit 3 Record Drawings within 30 calendar days of final inspection notification for projects other than new construction. Examples: Sewage system repairs, modifications, and city building projects, etc.

3. **Thurston County**

   a. EH: will review, request changes, and accept drawings.

Final occupancy approval will be withheld for new construction until the drawing is submitted, reviewed, and accepted by Environmental Health. The Permit Assistance Center does not schedule final occupancy inspections for Thurston County building projects until the Record Drawing is accepted.

B. Requirements:

1. **Dimensions** (Section 15.1 of Article IV)

   a. The maximum size is 11 x 17 inches.

   b. The scale shall not be greater than one inch equals 30 feet unless otherwise authorized.

   It may be beneficial to include a scale bar showing 1-inch equals 30 feet or authorized scale. Final records are imaged electronically. Imaged documents when printed out may not characterize the original scale. The addition of a scale bar showing the scale will address this issue on imaged printouts.

2. Be **drawn** and submitted after the installation is completed.

   a. Drawing must be in ink

   b. A "Red Lined" copy of the approved design will not be accepted

   c. All information and language relating to design specifications shall be removed from the document, i.e., pre-construction notes, specific installation requirements, the use of terms "to be" or "must be", etc.

3. **Show** the following:

   a. Licensed Designer/Licensed Professional Engineer stamp, signature and date

   b. Installation firm name and installation date

   c. Owner/applicant name

   d. Property tax parcel number

   e. Folder sequence number

   f. Site address

   g. North arrow

4. Three **copies** shall be submitted and distributed *by the county* to:

   a. Thurston County Public Health & Social Services, Environmental Health Division

   b. Property owner

   c. Licensed Designer / Licensed Professional Engineer by SWDOL.

   - When a Thurston County Certified Installer submits a "Record Drawing when a designer or engineer is not involved, the third copy shall be for the installer. Example: **For tank placements only,** a design is not required, but a site plan from a Thurston County Certified Installer is required.

C. Drawing Elements: The drawing must contain and label information to adequately identify the site and locate the system components.

1. **Structures** – show outline or footprint. (Building envelope is not acceptable.)

    a. Residence and/or sewage generating structure.

    b. Other structures in the vicinity of the sewage system and on the lot.

    c. For residential show total number of bedrooms using the OSS (primary residence plus other uses such as a Family Member Unit, Accessory Dwelling unit, Guest House, etc).

2. **Components** of wastewater system

    a. **Plumbing -** stub out, cleanouts.

    b. **Tanks -** septic tank, pump/siphon chamber and their size (s)

    c. **Pumps -** make and model.

    Document applicable pressure test results

    - Actual run time on and off settings. (Timer only)
    - Pump chamber draw down in inches per minute. (Timers only)
    - All squirt test results.

    d. Disposal Component

    - Trench cross-section and construction details must be included if the installation varied from the original design approval.

    e. **Treatment devices** such as an intermittent sand filter, aerobic treatment unit, or disinfection component.

    f. **Ports** – inspection ports/monitoring ports (deep and shallow) / sampling ports

    g. **Misc** – Anti-siphon devices, valves, valve boxes and other components such as spring check valves, dose counters, couplings, unions, etc.

3. **Water Source**

    a. Confirm the water source, i.e. single family well or connection to a public water supply

    b. Show the well location on the lot. Single family well or any well on the lot.

    c. Show well locations 100 feet or less from the OSS.

    d. Water lines as installed to residence and/or other structures on the property. Note: When the designer/engineer and installer are not directly involved with the installation/inspection of the water line, it is acceptable to place a disclaimer on the Record Drawing that the location is per "__". The statement shall include who installed the line, i.e. owner, builder, etc.

4. **Reserve Area**

    a. Location and dimension.

    b. Show the make-up area for systems installed with approved reductions.

5. **Site Features**

    a. Driveways or other existing roads.

    b. Setbacks to surface water, drainage ditches, footing drains, property lines, etc.

6. **Other**

    a. Note the correction of deficiency items identified on a final inspection notice.

    b. Information pertaining to any changes to the approved design. Any changes must be technically justified.

    c. Note the completion of all construction details to satisfy the requirements of a waiver.

    d. Septic tank or pump chamber evaluation/abandonment information.

    e. Note the completion of all construction details for water and sewer line crossings when not part of the approved design.

    f. Any information that the Licensed Designer/Professional Engineer deems pertinent to certification of the system and would help locate system components. All information must reflect what is installed.

If any of the above items are not present at the time of an initial drawing, a partial drawing can be submitted. The drawing will be placed with the records until the final and finished record drawing is submitted.