

## Eastgate Environmental Health Services

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## MEMORANDUM

March 4, 2016

**TO: On-Site Septic System Designers, Master Installers and Maintainers**  
**FROM: Lynn Schneider, Supervisor, Wastewater and Drinking Water Programs**  
**RE: Required Standards for OSS Repair Design and Submission**

The purpose of this memo is to provide guidance for designing and submitting OSS repair applications. It has come to the attention of Washington State Department of Health that Seattle-King County Health Department has not been reviewing repair applications consistent with WAC 246-272 A-0280. As such, the following changes to repair applications and review are to be **implemented immediately**. It is understood that this will be a “living document” meaning that it will have to be amended as different repair situations arise.

This memo is intended to provide guidance for **repair or replacement of a failed system**. If, at the time of repair or replacement, or anytime in the future, the building owner wants to alter, expand, repair, or improve the building served by an OSS, the Health Officer shall review the building application to determine compatibility of the proposed alteration, repair, or improvement with the proposed (or newly repaired or replaced) on-site sewage disposal system.

**NOTE:** In all cases, if the property owner wants **new building construction** that would impact the existing OSS (increase in number of bedrooms, increased life expectancy of house relative to the age of the OSS, change of use, increase in hydraulic and/or waste strength characteristics, etc.), a conforming system is required. Application to be made using the Public Health - Seattle and King County, Site Design Application Form for Individual On-Site Sewage System (OSS) - <http://1.usa.gov/1phcHro> along with the full fee.

In limited situations, **when the system is as close to conforming as possible**, it may be possible for the building owner to receive approval for a building permit to support an addition, repair, alteration, or improvement of the existing structure. These applications will be reviewed on a case-by-case basis.

**Design criteria must be applied to extent possible given site conditions.** It is the specific intent of this memo to prevent the improvement of any property, to which a public sanitary sewer is not available, to such an extent or in such a manner whereby the amount of any sewage produced on the property would exceed the property's ability to dispose of and treat said sewage effluent in a manner consistent with WAC 246-272A and King County BOH Title 13.

### **Vertical Separation Requirements:**

Vertical separation and minimum Treatment Levels must be consistent with Title 13, Table 13.28-1 and WAC 246-272A Table VI, and be conforming to the extent possible for each lot. Effluent treatment must be maximized to protect drinking and surface water. Where a conforming system is not feasible, at a minimum, pressure distribution with timed dosing is required; however, the system type and treatment level must be based on vertical separation requirements. A conforming OSS must meet minimum vertical separation requirements, minimum sizing requirements based on soil texture and number of bedrooms, a fully conforming reserve area, approved drinking water source, etc. In some cases, reduction of trench wall spacing may be considered.

### **Gravity Systems:**

Master installers may continue to submit repair applications in the normal manner if, the OSS is **fully conforming** for vertical separation and sizing requirements. Soil texture analysis for the purposes of sizing the system will be performed by the reviewing sanitarian or by a designer. The use of 3-foot trenches may be used for gravity systems but keep in mind that gravelless chambers are not 36” wide so additional drainfield may be required.

Gravity systems are not allowed in type 1 soils. Depending on other site features, an OSS meeting Treatment Level B is required for type 1 soils.

All applications must include elevations for the plumbing stub(s) and all tank inlet and outlet inverts (including existing sewage tanks). This is critical especially for gravity systems. If the existing septic tank is deep, meeting minimum vertical separation requirements may require construction of deeper soil logs.

**Pump-to-Gravity Systems:**

These systems must be submitted by a septic system designer or professional engineer and **can be** submitted as a typical repair proposal without fee rather than as a site application.

**Pressurized systems:**

All pressurized systems must be submitted as a site application with a **two-hour fee of \$369.80**. Installation permit fees are **\$691** consistent with the repair permit fee schedule.

For sites with high water table conditions, please refer to the DOH List of Registered On-site Treatment and Distribution Products document for component options. There are components that meet Treatment Level A without UV disinfection. This is required when the repair OSS is adjacent to fresh water bodies.

**Horizontal and Vertical Separation:**

Where minimum vertical and/or horizontal separation requirements cannot be met, please refer to title 13, Table 13.64-1 or WAC 246-272 A Table IX.

**System Sizing:**

Sizing of the drainfield is to be based on soil texture and the number of bedrooms. Septic tanks must be two-compartment, structurally sound, and a minimum of 1000 gallons. Where new tanks are to be installed, especially non-concrete tanks please specify the tank make and model number and bedding specifications. All tanks must be water-tight tested. If installing in an area of high seasonal water tables, bentonite grouting of all openings should be required.

**Repairs in the Urban Growth Area or Incorporated Cities:**

Sewer availability letters must be provided. Per Title 13, 13.04.050 B.1, connection to public sewer is required if the site is within 200 feet of sewer and a fully conforming OSS cannot be designed and installed.

**Conforming vs. Non-Conforming Repairs:**

Again, all OSS repairs must be conforming to the extent possible for each lot. This includes a conforming reserve drainfield area. Each design, where possible, should consider the potential for future remodeling and expansion. When possible, the area of the existing failed system may be utilized as part of a reserve area if the site has not been damaged, landscaped, etc.

**Sewage Tank Replacement Only:**

Repair applications for tank replacement only may be submitted by an installer. You must provide relevant plumbing stub and tank inlet and outlet invert elevations, provide a copy of the old tank abandonment report and the results of 24-hour water-tight testing with the record drawing and installation permit. Also, the d-box is to be retro-fitted with a locking riser to grade. If the existing OSS is un-documented (no record drawing) an assessment of the location and condition of the d-box and drainfield will be required. For older systems it does not make sense to replace the septic tank without knowing the location and condition of the down-stream components.

**Time-of-Sale Repairs:**

All repair applications that are a consequence of time-of-sale inspections **must** include a legible copy of the OSS inspection report. This is the third time we've had to write this due to lack of compliance.

If, during the inspection, a significant portion of the drainfield appears to be functioning properly (vertical separation must be accounted for), but a small portion appears to be failing or clogged (e.g., the first line of a serial distribution system is flooded up to the first step-down only), a partial repair may be allowed. These situations will require a comprehensive system evaluation and this must be documented on the repair proposal.

**Notice on Title:**

The Notice on Title **must reflect the OSS operational capacity relative to the number of bedrooms it has been designed to serve.** This is especially important for repairs where there is inadequate room to design and install a conforming system.

**Quality of Submittals:**

Hand sketched drawings; even for sewage tank replacement applications are not acceptable. Sites plans must be accurate and drawn to scale per Title 13, 13.28.030 A.3. For master installers, you may need to have a designer provide scaled site plans for both the repair proposal and record drawing.

In the near future, we will be making the transition to electronic submittal of applications. Those of you who are still hand-drafting may wish to consider taking a CAD course sooner than later.

It is understood that these are significant changes to the way we have been reviewing repairs. However, we are required to comply with WAC 246-272A in order to protect ground water and drinking water quality. It is also understood that these changes are likely to result in significant cost increases to homeowners. We are working to develop an alternate home loan assistance program.

We know that this guidance document will not cover all of the possible repair scenarios that we all encounter. So, please feel free to call or e-mail us with your questions, comments, or suggestions.

We are revising the site application cover sheet to reflect these changes. The cover page will delineate three categories: New Construction (vacant lots, ADU's), Repairs (to replace a failing OSS), and Replacement (to support house remodel/expansion).

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