

On-Site Rule Revision Issue:

Minimum Septic Tank Size (Sewage tanks #1 of 3)

1. Issue (WAC 246-272A-0232)

Change the 900-gallon minimum septic tank size to 1000 gallons (single family residential).

2. Problem statement

The most common septic tank use for OSS in WA is single family residential. The current rule sets a minimum septic tank size of 900 gallons for a 1-3 bedroom residence. There is only one 900-gallon septic tank on the WA DOH list of registered sewage tanks. In WA, the far most common septic tank size used for residences with 1-4 bedrooms is 1000 gallons. The 1000-gallon tank size is readily available throughout the state. Using a 900-gallon tank is not a practical or economically feasible requirement.

3. Supporting Research/Evidence

For OSS, the septic tank provides the primary treatment, and in some cases the only treatment besides the soil. The septic tank stores and digests settled and floating organic solids in sludge and scum layers. Up to a 40% reduction of these layers can occur in the septic tank.

A larger tank may allow less frequent pumping as result of more storage and therefore more settling and digestion.

DOH explored only some states in this general geographical area for their tank size requirements. AK, ID, MT and OR all require 1000-gallon tanks for up to 4 bedrooms. (Idaho allows a 900-gallon tank for 1-2 bedrooms.)

4. Options

- A. Change the rule to require 1000 gallons as the minimum septic tank size for 1-4 bedrooms.
- B. Do not change the current rule requirement.

5. PROs/CONs

PROs:

- A 1000-gallon septic tank is readily available throughout WA. The 900-gallon septic tank necessitates shipping to the various other counties in the state.
- Additional retention time allows for more digestion of the sewage.
- Additional digestion may reduce the pumping frequency required.

CONs:

- The larger tank may cost a bit more (anecdotally, \$10 more).
- The size increase is not substantial, so the additional digestion would be minimal.
- Minimal additional digestion may not reduce the pumping frequency substantially.

6. Recommendations & Optional Rule Language to Consider

We recommend a **change** to Table VII to reflect a minimum septic tank size of 1000 gallons.

TABLE VII

Required Minimum Liquid Volumes of Septic Tanks

Number of Bedrooms	Required Minimum Liquid Tank Volume in Gallons
≤ 4	1000
Each additional bedroom	250

Supporting information

1. USEPA 2002 Onsite Wastewater Treatment Systems Manual
2. On-site Sewage Regulations from AK, ID, MT, OR.