

# One-Compartment Septic Tank Policy

To continue to use a one-compartment septic tank that doesn't have a record of approval or as-built you must meet the following requirements. This applies to:

- Increase in footprint only (not increase in flow).
- Dry accessory structure.
- Pump tank replacement.
- Temporary medical hardship.
- Existing one-compartment tank(s) serving a primary residence when permitting a separate system for an Accessory Dwelling Unit.

When you replace a tank, it must meet current construction standards.

This policy doesn't apply to systems illegally installed without permits, proposed increase in flows, like for like replacements, or plumbed accessory structures. You must replace or certify metal tanks. You must replace one-compartment tanks in these scenarios with appropriately sized 2-compartment tanks. This policy will supersede Environmental Health Code Chapter 2. Section 31. B. until we revise the code.

## Requirements

- The existing one-compartment tank must be fitted with an approved effluent filter (does not include pump screen) before approval.
- Septic tank must:
  - Pass a 2-hour water tightness test (watertight to the invert of the outlet).
  - Have a satisfactory O&M inspection by a certified professional.
  - Meet current sizing requirements.
  - Be concrete (cinderblock tanks not allowed), fiberglass or polyethylene.

## Recommendations

- Clean effluent filter every 6 months.

## Questions?

Contact us at [ehsepticstems@tpchd.org](mailto:ehsepticstems@tpchd.org) or (253) 649-1925.

## Resources

- Winneberger (Winneberger, 1984) "explains the effect that velocities and turbulences have on the migration path of particles as they travel through septic tanks". He concluded that slow velocities through long tanks yield the highest effluent quality.
  - Winneberger, John H. Timothy. 1984. Septic-Tank Systems, A Consultant's Toolkit, Volume II the Septic Tank. Butterworth Publishers/Ann Arbor Science
- T.R. Bounds, P. E. (1997) found that overall hydraulic retention is the most relevant to effluent quality – "larger compartments or tanks yield better quality effluents".
  - Bounds, T.R. 1997. Design and Performance of Septic Tanks. Site Characterization and Design of On-Site Septic Systems, ASTM STP 1324, M.S. Bedinger, J.S. Fleming, and A.I. Johnson, Eds. American Society of Testing and Materials (ASTM).

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- A. S. El-Gendy, et al. (2012) found effluent quality to be improved when an effluent filter is used in conjunction with a sustainable hydraulic loading rate.
  - A. S. El-Gendy, et al. 2012. The use of an aerobic biological filter for improving the effluent quality of a two-stage anaerobic system. Sixteenth International Water Technology Conference, IWTC 16 2012, Istanbul, Turkey.