

SECTION 14

MINIMUM SEPTIC TANK CAPACITY

The information in this section covers Septic Tank Capacity only. The provisions outlining Minimum Pump Tank Capacity are presented in *Section 18*. All septic tanks shall be sized in accordance with the minimum standards as outlined in the following Subsections.

A. General Septic Tank Sizing Information

1. The minimum hydraulic detention time, for any size tank, shall be one and one-half (1½) days or thirty-six (36) hours based on projected daily wastewater flows. In no case shall a septic tank's effective liquid holding capacity be less than 750 US gallons.
2. The actual effective liquid holding capacity of a tank to be utilized as a septic tank shall be considered that volume of liquid capacity that occupies the interior space of said tank to the level of the invert of the pre-cast outlet port of that tank (i.e. the liquid level being the actual level to the invert of the outlet port of a tank set upon a level plane). Therefore, the air-space that lies above the actual surface of the liquid level of a tank shall not be considered as part of a septic tank's effective liquid holding capacity.

B. Septic Tank Sizing Requirements for Single-Family Dwellings

~~The septic tank sizing requirements for single-family dwellings are divided into two (2) categories. The first category (Category One) outlines the septic tank sizing requirements for those single-family dwellings utilizing only standardized plumbing fixtures and containing no oversized bathing fixtures. The second category (Category Two) outlines the septic tank sizing requirements for those single-family dwellings utilizing or containing any type of oversized bathing fixtures (i.e. any type of bathing fixture, regardless of its moniker, that will physically hold an amount of water exceeding 30 US gallons, either to the level of the fixture's overflow drain or as its maximum capacity).~~

~~1. Septic Tank Sizing – Category One~~

- ~~(a)~~ The effective liquid holding capacity of a septic tank to be installed to serve a residential single-family dwelling, ~~containing no oversized bathing fixtures,~~ shall be based ~~solely~~ on the number of bedrooms proposed or that can be anticipated for said dwelling and shall as a minimum comply with the provisions outlined in Table S14-1.

Table S14-1

Number of Bedrooms	Capacity of Septic Tank (gallons)
2 (or less)	750
3	900
4*	1000

* For each additional bedroom over four (4), add 250 gallons per bedroom.

- (b) The aforementioned septic tank capacities provide for a single system to accept and treat the combined household wastes from standard plumbing fixtures and appliances commonly used in single-family dwellings. The various types of plumbing fixtures include garbage grinders, dishwashers, showers, standard bathing fixtures and automatic clothes-washing machines, etc. ~~They do not serve single-family dwellings containing or utilizing oversized bathing fixtures.~~

~~2. Septic Tank Sizing – Category Two~~

- ~~(a) Septic tanks serving those single-family dwellings utilizing oversized bathing fixtures shall be sized to accommodate the additional projected sewage discharge they produce. The effective liquid holding capacity of septic tanks serving such dwellings shall be based, not only on the number of proposed (or anticipated) bedrooms at 250 US gallons per bedroom (gal/bdr), but also on the additional projected daily wastewater flow produced by said fixtures. The following formula shall be used to calculate the necessary minimum effective liquid holding capacity of the septic tank:~~

$$\text{--- } V = [(OSBFC - 30) \times (NBDR)] + NPWF$$

~~Where:~~

~~V = Minimum Required Effective Liquid Holding Capacity (US gal.)~~

~~OSBFC = Oversized Bathing Fixture Capacity (US gal.)~~

~~30 = Standard Bathing Fixture Capacity (US gal.)~~

~~NBDR = Number of Bedrooms in dwelling~~

~~NPDF = Normal Projected Daily Flow @ 250 gal/bdr (US gal.) or (NBDR x 250 (US gal.) = NPDF)~~

~~Note: Where a single-family dwelling contains more than one (1) oversized bathing fixture, the projected sewage discharge produced from each such fixture shall be calculated and provided for.~~

~~(b) Example:~~

~~The minimum effective liquid holding capacity calculation for a septic tank serving a four (4) bedroom single-family dwelling containing one 80 US gal. oversized bathing fixture and one 75 US gal. oversized bathing fixture is as follows:~~

~~$$V = [\{ (OSBFC - 30) + (OSBFC - 30) \} \times (NBDR)] + NPDF$$~~

~~$$V = [\{ (80 - 30) + (75 - 30) \} \times (4)] + (4 \times 250)$$~~

~~$$V = [\{ (50) + (45) \} \times (4)] + (1000)$$~~

~~$$V = [(95) \times (4)] + (1000)$$~~

~~$$V = 380 + 1000$$~~

~~$$V = 1380 \text{ US gallons (minimum)}$$~~

~~Therefore, the dwelling in this example would require a septic tank with a minimum effective liquid holding capacity of 1380 US gallons. Since commercially available tanks are only produced in 250 US gallon increments, a standard 1500 US gallon tank would suffice.~~

C. Septic Tank Sizing for Other Types of Structures or Facilities

1. For any type of structure or facility, other than single-family dwellings, the net volume or effective liquid capacity, below the liquid level of a septic tank, for flows up to 500 gallons per day shall be at least 750 gallons.
2. For any type of structure or facility, other than single-family dwellings, with flows between 500 and 1500 gallons per day, the effective liquid holding capacity of the tank shall be equal to at least one and one-half (1½) days liquid sewage flow.
3. For flows greater than 1500 gallons per day, the minimum effective liquid holding capacity shall equal 1125 gallons plus 75 percent of the daily wastewater flow or:

$$V = 1125 + 0.75Q$$

Where:

V = Minimum Required Effective Liquid Holding Capacity (US gal.)

Q = projected daily wastewater flow (US gal.)

4. Where unknown and/or unusual wastewater discharge characteristics are expected from a facility, projected normal sewage flow shall be determined from the information presented in *Appendix 7* or from actual known water usage data (i.e. information from water utility company for a comparable existing facility) may be used if available. Upon the completion of a review of a proposed facility's projected daily flow calculations, additional septic tank volume may be required by the Department.

Appendix 7 contains Table A7-1 which shows the projected daily wastewater flows from various type of facilities and establishments that shall be utilized by the Department for determining wastewater discharge amounts for the calculation of necessary septic tank size.