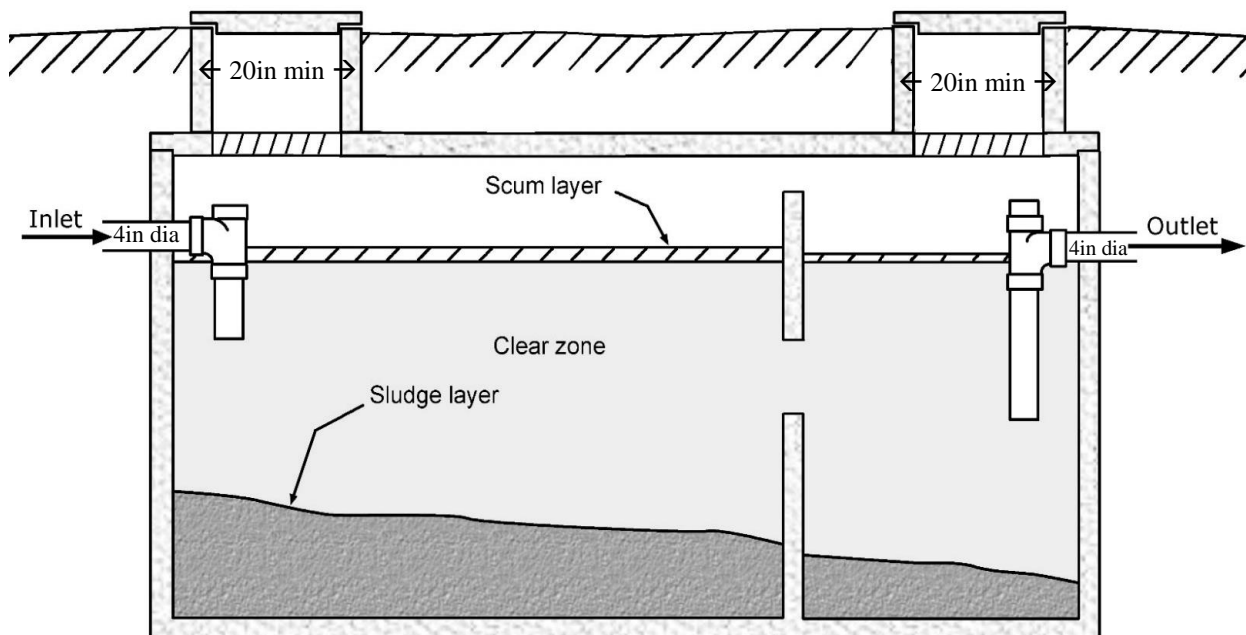


Basic Design Requirements for Septic Tanks Not on the DEQ-Approved List

1. Tanks must have a minimum of a 1,000-gallon capacity for residences with up to four bedrooms; add 150 gallons of capacity for each additional bedroom.
2. The tank must be watertight, including all joints and connections, and constructed of a durable, non-corrodible material such as concrete, fiberglass, thermoplastic or other approved material. No steel tanks are allowed.
3. The liquid depth shall be between three (3) and six (6) feet deep.
4. A single chamber tank shall have at least a 2:1 length to width ratio or be partitioned to prevent short-circuiting.
5. The first chamber in any two-chambered tank must accommodate at least 50 percent of the capacity.
6. Each chamber must have an access opening with a minimum dimension of 20 inches, from which both inlet and outlet tees shall be accessible.
7. Each chamber must have a cleanout riser that extends up to six (6) inches below the ground surface.
8. The inlet and outlet tees should be 4-inch diameter, schedule 40 PVC or equivalent, and should extend into undisturbed soil.
9. Install tanks used in a series such that the inlet to each successive tank shall be at least two (2) inches below the outlet of the preceding tank.

Internal Dimensions	Length (in): _____ Width (in): _____ Height (in): _____		
Liquid Depth (in)		Amount of Air Space Between Top of Liquid and Chamber Ceiling (in)	
Operating Capacity	$\left(\frac{\text{Length (in)}}{\text{Length (in)}} * \frac{\text{Width (in)}}{\text{Width (in)}} * \frac{\text{Liquid Depth (in)}}{\text{Liquid Depth (in)}} \right) \div 231 = \text{Operating Capacity} \text{ gallons}$		

Diagram of a Typical Two-Chambered Septic Tank



Drawing modified from CIDWT. 2009. *Installation of Wastewater Treatment Systems*. Consortium of Institutes for Decentralized Wastewater Treatment (CIDWT). Iowa State University, Midwest Plan Service. Ames, IA.