567—69.3(455B) Primary treatment unit.

69.3(1) *General.* Every PSDS shall have, as a primary treatment unit, a septic tank as described in this rule.

a. All wastewater from a facility shall discharge into a septic tank, and all septic tank effluent shall discharge into a secondary treatment system in compliance with this chapter.

b. Septic tanks shall not be used for the disposal of chemical wastes or grease in quantities that might be detrimental to the bacterial action in the tank, or for the disposal of drainage from roof drains, foundation drains, or area drains.

69.3(2) *Capacity.*

a. The minimum liquid-holding capacity for septic tanks is specified in Table I (capacity may be obtained by using one or more tanks):

Table I - Septic Tank Holding Capacity

Home Size	Septic Tank Minimum Liquid Holding Capacity in gallons
Up to and including 3-bedroom homes	1,250 gal.
4-bedroom homes	1,500 gal.
5-bedroom homes	1,750 gal.
6-bedroom homes	2,000 gal.
Each additional bedroom	+ 250 gal.

b. Approval of septic tank capacity and design must be obtained from the administrative authority, if an installation serves a facility other than a dwelling and serves the equivalent of fewer than 16 individuals on a continuing basis. Minimum septic tank liquid-holding capacity shall either be 1,250 gallons or two times the daily sewage flow as estimated from Appendix A, whichever is greater.

c. The minimum liquid-holding depth in any tank compartment shall be 40 inches. The maximum liquid-holding depth for calculating capacity of a tank shall not exceed 6½ feet.

d. The interior length of a septic tank should not be less than five feet and shall be at least 1½ times the width (larger length-to-width ratios are preferred). No tank or compartment shall have an inside width of less than two feet. The minimum inside diameter of a vertical cylindrical septic tank shall be five feet.

69.3(3) *Compartmentalization.* Every septic tank shall be divided into two compartments as follows. Compartmentalization may be obtained by using more than one tank.

a. The influent compartment capacity shall not be less than ½ or more than ⅔ of the total tank capacity.

b. The effluent compartment capacity shall not be less than ⅓ or more than ½ of the total tank capacity.

c. The invert of the inlet pipe shall be a minimum of two inches and a maximum of four inches higher than the invert of the outlet pipe.

69.3(4) *Baffles.*

a. Four-inch diameter SCH 40 PVC pipe tees shall be used as inlet and outlet baffles.

b. Inlet tees shall extend at least six inches above and eight inches below the liquid level of the tank. The inlet tee shall extend below the liquid level for no more than 30 percent of the liquid depth.

c. The outlet tee shall extend above the liquid level a distance of at least six inches and below the liquid level a distance of at least 15 inches, but no more than 40 percent of the liquid depth.

d. A minimum one-inch clearance between the top of the inlet and outlet tees and the bottom of the tank lid shall be provided. A horizontal separation of at least 36 inches shall be provided between the inlet baffle and the outlet baffle in each compartment.

e. Outlet baffles shall be fitted with, or replaced by, an approved effluent screen. All effluent screens shall be certified by a third-party certifier accredited by ANSI to meet NSF/ANSI Standard 46-2022, September 5, 2022, available on the NSF website at: www.nsf.org; or other equivalent testing as determined by the department. Effluent screens require periodic inspection and cleaning to ensure their continued proper operation.

f. A horizontal slot four inches by six inches, or two suitably spaced four- to five-inch diameter holes in the tank partition, may be used instead of a tee or baffle. The top of the slot or holes shall be located below the water level within the middle third of the liquid depth. A ventilation hole or slot, located at least eight inches above the liquid level, shall be provided in the partition.

69.3(5) *Access.*

a. Access necessary for adequate inspection, operation, and maintenance must be provided to all parts of septic tanks.

b. Access openings shall be provided for each chamber, including the inlet, outlet, and pump chamber (if applicable). Openings shall be at least 18 inches in the smallest dimension and of adequate size to allow for pumping, maintenance, and visual inspection.

c. Watertight risers with a minimum diameter of 18 inches shall be installed to bring the access openings to the ground surface. To deter tampering, risers shall be secured using either stainless steel fasteners of sufficient complexity, locking devices, concrete lids of sufficient weight, or another device approved by the administrative authority.

69.3(6) *Installation.*

a. Concrete, fiberglass, or plastic tanks shall be bedded and installed according to the manufacturer's specifications. Provisions should be made to prevent flotation of the tanks when they are empty.

b. Any septic tank placed in fill soil shall be placed upon a level base that is stabilized through compaction or other manufacturer allowed practices.

69.3(7) *Connecting pipes.*

a. Pipes connecting septic tanks installed in series and prior to the distribution box or distribution network or device shall be a minimum of four-inch diameter SCH 40 PVC (SDR 26 or stronger).

b. All inlet and outlet connections shall be made by self-sealing gaskets either cast into the concrete or formed into the plastic or fiberglass approved for below grade applications or for use in the wastewater industry.

c. All joints in connecting pipe shall be approved connections that match the rating of the pipe, such as solvent-welded or compression-type gaskets approved for below grade applications or use.

d. Pipes shall be used to extend across excavations or unstable ground to at least two feet beyond the point where the original ground has not been disturbed during septic tank installation. If the excavation spanned is more than two feet wide, it must be filled with sand or compacted fill to provide a firm bed for the pipe. The first 12 inches of backfill over the pipe shall be applied in thin layers, using material free from stones, boulders, large frozen chunks of earth, or any similar material that could damage or break the pipe.

69.3(8) *Construction.*

a. Septic tanks shall be constructed of either watertight poured concrete, fiberglass, or plastic resistant to corrosion or decay and shall be designed so that the tanks, whether full or empty, will not collapse or rupture when subjected to anticipated earth and hydrostatic pressures. Metal tanks are prohibited.

b. Tanks shall be watertight. Before approving a tank, the administrative authority may ask for proof that a tank is watertight.

c. Tank divider walls and divider wall supports shall be constructed of either heavy, durable plastic, fiberglass, concrete, or other similar corrosion-resistant materials approved by the administrative authority.

d. Inlet and outlet ports of pipes shall be constructed of SCH 40 PVC sanitary tees or other similar approved corrosion-resistant material.

e. Concrete used in precast septic tank construction shall have a maximum water-to-cement ratio of 0.45. Cement content shall be at least 650 pounds per cubic yard. Minimum compressive strength (f^c) shall be 4,000 psi (28 megapascals) at 28 days of age. The use of Type II cement, as specified in ASTM C150/C150M-24, July 25, 2024, or the addition of either silica fume or Class F fly ash is recommended.

f. Minimum wall thickness for septic tanks shall conform to the current International Association of Plumbing and Mechanical Officials (IAPMO) standards, available on its website at: www.iapmo.org/publications/read-uniform-codes-online, or to the following specifications:

Poured concrete	6 inches thick

Poured concrete, reinforced	4 inches thick
Special concrete mix, vibrated and reinforced	2.5 inches thick
Fiberglass or plastic	IAPMO standard

g. Septic tank bottoms shall conform to the specifications in 69.3(8)*"f"* for septic tank walls, except that special mix concrete shall be at least three inches thick.

h. Concrete or masonry septic tank tops shall be a minimum of four inches in thickness and reinforced with ⅜-inch reinforcing rods in a six-inch grid or equivalent. Fiberglass or plastic tank tops shall meet the IAPMO standard.

i. The concrete cover for reinforcing bars, mats, or fabric shall not be less than one inch.

[**ARC 9467C**, IAB 8/6/25, effective 9/10/25; see Delay note at end of chapter]