

Env-Wq 1002.48a "Ledge Tank" means any single compartment septic tank with a liquid level less than 48" or any multi-compartment septic tank with a liquid depth of less than 36 inches.

Env-Wq 1010.01 Liquid Capacity of Septic Tanks.

(a) Subject to (b) through (g), below, and Env-Wq 1010.14, the minimum septic tank capacity for a single-family residence having no more than ~~2~~ **4** bedrooms shall be ~~1,000~~ **1,250** gallons.

(f) Subject to (g), below, where raw sewage is to be pumped into the septic tank, whether or not a garbage grinder is or will be used, the septic tank volume shall be twice the volume otherwise required by this section or Env-Wq 1010.02, as applicable, which shall be accomplished by tank duplication or compartmentalization.

(g) ***Subject to (3) below, w***hen raw sewage is pumped only from ~~a set of~~ basement bathroom fixtures to the building's gravity sewer, the total capacity of the septic tank shall be increased by:

(1) At least 250 gallons if:

a. Only one compartmentalized septic tank is used; or

b. A separate septic tank is used that will connect to the main septic tank for the structure; ~~and~~

(2) At least 1,000 gallons if a separate septic tank is used that will connect directly to the EDA.

(3) If the sewage is being pumped by a non-macerating sewage pump capable of handling 2 inch or greater solids, no additional tank volume is required.

(h) Systems designed for flow rates greater than 600 gallons per day shall have multi-compartment septic tanks or multiple septic tanks.

Env-Wq 1010.03 Watertightness of Septic Tanks.

(a) Septic tanks shall be watertight and constructed of materials not subject to corrosion or decay, such as concrete, ***plastic*** or fiberglass.

(b) A concrete septic tank shall be sealed so as to be watertight if constructed from separate sections ***with butyl rubber joint sealant conforming to ASTM C990-01a.***

Env-Wq 1010.04 Backfill ***and Bedding*** Around Septic Tanks.

Backfill ***and bedding material*** around and ***beneath*** septic tanks shall be ~~made~~ ***placed in thin layers lifts no greater than 12 inches and*** compacted in a manner that shall not damage the structural integrity of the tank.

Env-Wq 1010.05 Access to Interior of Septic Tank.

(a) Access shall be provided to each compartment of a septic tank for inspection and cleaning by means of ***at least one*** a removable cover or a manhole that is:

- (1) ~~At least 23 inches in diameter~~ **20 inches minimum and 24 inches maximum in diameter;**
 - (2) Of a shape or otherwise of a construction that prevents the cover from falling into the *septic* tank; and
 - (3) ~~At a depth of no more than 6 inches below finished grade~~ **a maximum depth of 12 inches and a minimum depth of 6 inches below finish grade subject to (d) below;**
- (b) ~~Both the inlet and the outlet~~ **All interior** baffles shall be accessible.
- (c) A septic tank with an effluent filter shall have a riser **not higher than 24"** which extends to finished grade. **If the riser is greater than 24" in height, the riser must have a diameter of 36"**
- (d) **A septic tank riser that extends to finish grade must have a cover that meets at least one of the following requirements; locking cover, mechanically fastened cover or cast-iron frame & cover.**
- (e) The bottom of the septic tank shall not be more than 15 feet below the grade of the area where the septage pumping truck will park when the tank needs to be pumped out.
- (f) Septic tanks shall be accessible by truck to within 125 feet of the nearest road or driveway.

Env-Wq 1010.06 Septic Tank Structural Design Requirements ~~Load Conditions~~.

Septic tanks shall be designed and constructed in accordance ASTM C1227 latest edition as follows:

- (a) ~~The entire septic tank shall be designed for the expected maximum load condition.~~ **Non-vehicular lightly loaded- Where the septic tank will not be subjected to vehicular traffic, the tank shall be designed for a minimum live load at the surface of 300 pounds per square foot plus the weight of up to three feet of unsaturated earth.**
- (b) **Non-vehicular heavily loaded-Where the septic tank will not be subjected to vehicular traffic; the tank shall be designed for a minimum live load at the surface of 300 pounds per square foot plus the weight of up to six feet of unsaturated earth.**
- (c) **Vehicular Loaded- A septic tank that will be subjected to vehicular loading. The tank shall be designed for a live load at the surface of 300 pounds per square foot or traffic load per AASHTO (HS25-44 for ASD or HL-93 for LRFD), whichever load or cases produce the highest stress, and up to six feet of unsaturated earth.**
- (d) **For concrete septic tanks, the minimum compressive strength for the concrete shall be 4,000 psi at 28 days.**

(b) ~~The top or cover of the tank shall be reinforced if made of concrete, as follows:~~

- ~~———— (1) For normal locations in grass areas, where the tank will not be subject to heavy loads from vehicles and the like, the top or cover shall be at least 3 inches thick and reinforced with No. 6 gauge wire mesh, 4 inches on center in both directions; and~~
- ~~———— (2) For locations where vehicles or construction equipment such as tractors or bulldozers might travel over the septic tank, the tank shall meet AASHTO H 20 specifications, as published in the AASHTO LRFD Bridge Design Specifications, 4th edition, or better.~~

Env-Wq 1010.07 Inlet and Outlet Baffles.

- (a) Each septic tank shall have an inlet baffle and an outlet baffle.
- (b) The outlet baffle shall be a vented **PVC** tee that extends to a distance below the surface of the liquid equal to 40% of the liquid depth.
- (c) The outlet baffle and inlet baffle shall extend above the liquid line to not less than one inch from the top of the *septic* tank.
- (d) The inlet baffle shall:
 - (1) **Be a PVC sanitary tee to divert** the incoming sewage downward; and
 - (2) Penetrate **at least a maximum of 6 inches** below the liquid level, ~~but in no case greater than the depth of the outlet baffle.~~
- (e) **All compartment walls in multi-compartment septic tanks shall have baffles located at the liquid level.**

Env-Wq 1010.08 Sealing of Pipes. Pipes leading to and exiting from septic tanks shall be sealed with ~~non-shrink mortar, thick plastic cement, or other sealant having the same or better durability and sealing capability~~ **with a watertight resilient flexible connector conforming to ASTM C923-08, ASTM C1644-06.**

Env-Wq 1010.09 Storage Above Liquid Level and Septic Tank Sizing.

- (a) For a septic tank having straight, vertical sides, the distance between the *inside* top of the tank and the liquid line shall be equal to approximately 20% of the liquid depth.
- (b) **There shall be a total of no less than 25 ft² of surface liquid area and a total inside length of at least 6 feet between inlet and outlet of the septic tank.**

Env-Wq 1010.10 Liquid Depth. ~~The liquid depth shall not exceed 5 feet for septic tanks of less than 3,000-gallon capacity and shall not exceed 6 feet for larger tanks. Deeper tanks may be used, but the available volume shall be calculated on the basis of the liquid depth established by this rule.~~

- (a) **Minimum required liquid depth shall be 48" for a standard single compartment septic tank;**
- (b) **Minimum required liquid depth for a Ledge Tank as defined in Env-Wq 1002.48a shall be 30". Ledge tanks may only be used in accordance with Env-Wq 1010.14 Shallow Septic Tanks.**
- (c) **Minimum required liquid depth for a two compartment septic tank in which the second compartment is used as a pump chamber shall be 48".**
- (d) **Minimum required liquid depth for a multi compartment septic tank shall be 36".**

Env-Wq 1010.11 Compartments.

(a) Septic tanks may be separated into two compartments, provided that the first compartment equals at least 2/3 of the required volume for the septic tank.

(b) Septic tanks may be separated into multi compartments, provided that the first compartment equals at least 2/3 of the required volume of the septic tank and the total volume of all compartments meet the minimum required septic tank volume.

(c) For pump systems, septic tanks may be separated into multi compartments, provided that the first compartment equals at least 2/3 of the required volume of the septic tank and all compartments meet the required septic tank volume excluding the pump chamber.

~~(a) Tanks may be separated into 2 compartments, provided that the first compartment equals at least 2/3 of the required volume.~~

~~(b)~~ If a *septic* tank has more than one compartment, the following shall apply:

~~(1) An access manhole shall be provided to each compartment in accordance with Env-Wq 1010.05;~~

~~(2)~~ Venting between compartments shall be provided to allow free passage of gas;

~~(3)~~ Inlet and outlet baffles shall be proportioned as for a single tank; and

~~(4)~~ The same allowance shall be made for storage above the liquid line as in a single tank.

Env-Wq 1010.13 Shallow Septic Tanks.

(a) A ~~septic~~ *Ledge Tank less than 6 feet deep as defined in Env-Wq 1002.48a* shall be used only on a ledge lot as defined in Env-Wq 1002.48.

(b) To ensure adequate settling of solids when a ~~septic~~ *Ledge Tank less than 6 feet deep* is used, total septic tank volume shall:

(1) Be twice the septic tank capacity specified in Env-Wq 1010.01 or Env-Wq 1010.02, as applicable; and

(2) Be achieved using 2 or more septic tanks in series.

Env-Wq 1013.02 Pump Chamber.

(a) The pump chamber shall be water-tight and vented.

(b) Venting shall be done directly or through the *septic* tank.

(c) The capacity of the pump chamber shall be such that the pump or siphon can be set to dose each field a minimum of 3 times per day.

(d) If duplicate pumps are not provided, the dosing chamber shall be equipped with a high water alarm that signals in a centrally-located area at the building served if the pump fails for any reason.

(e) Each pump chamber shall be accessible via a riser *in accordance with Env-Wq 1010.05(a)*.

(f) A Duplex pump chamber shall be accessible via a riser with an access hatch. System Designer is to specify loading requirements for the access hatch.