



Septic Tank Basics in New Mexico

Functions of a Septic Tank A septic tank is a watertight receptacle for the treatment of sewage. It receives the discharge of sewage from a building and it separates settleable and floating solids from the liquid. It digests organic matter by anaerobic bacterial action, stores digested solids through a period of detention, and it allows clarified liquids to discharge for additional treatment and dispersal.

Heavier solids settle to the bottom of the tank (sludge) and floatable solids including fats, oils and grease, rise to the top (scum). The clarified effluent in the clear zone moves through the outlet pipe to the next system component for further treatment.

Partial digestion of solids is accomplished by anaerobic bacteria in the tank, but processes are slow and incomplete, so the storage of solids is an important function of septic tanks. (CIDWT,2009)

Materials Septic tanks may be constructed of the following materials: precast

reinforced concrete, poured-in-place concrete, fiberglass or polyethylene. For a complete list of approved septic tanks go to the NMED Liquid Waste web-site and look for the "Approved Septic Tank List."

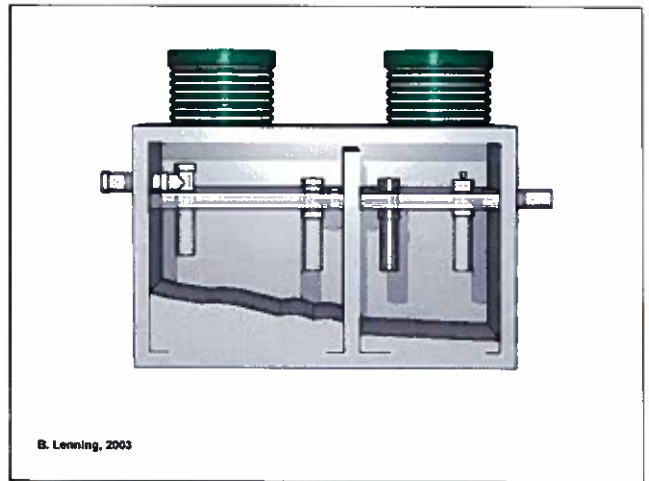
Single Family Dwellings, Number of Bedrooms	Other uses, maximum fixture units (31.1 gal per fixture)	Minimum Septic Tank Capacity
1	10	750
2-3	12	1000
4	15	1200
5-6	20	1500
7-9	27	2000
	29	2250
	32	2500
	35	2750

effluent is drawn from the clear zone of the outlet. There are two types of baffles: partial-wall baffles or sanitary tees. These baffles must extend at least 4 inches above and 12 inches below the water surface of the septic tank.

Setbacks The septic tank must meet the minimum setback requirements listed in Table 302.1 of the Liquid Waste Regulations. These setbacks include, but are not limited to the following distances from the septic tank: building (5 ft); property line (5 ft); disposal field (10 ft); private well (50 ft); and waters of the state (50 ft).

Tank Access The septic tank shall have at least two access openings, each of which shall be 20 inches in diameter. One access opening shall be placed over the inlet and one shall be placed over the outlet. Each access shall be extended to the ground surface with a secure lid. If the extensions are made of concrete they shall be coated with an approved bituminous coating to prevent corrosion.

Effluent Filters All septic tanks shall include an effluent filter which has been approved by the department. The filter shall be installed on the outlet of the tank before final discharge. These filters are proprietary products which are designed to remove additional solids from the waste stream before it exists the septic tank. These filters must be inspected and cleaned on a regular basis, so access to these filters is required via an access riser, installed to grade.



B. Lewning, 2003

Capacity of Septic Tanks The NMED Liquid Waste Regulations uses the adjacent table to determine the minimum liquid capacity of septic tanks. For residential units the minimum capacity is based on bedrooms and for commercial units the capacity is based on the number of plumbing fixtures.

Baffles All septic tanks must have an inlet and outlet baffle. An inlet baffle is intended to direct the incoming flow downward into the clear zone and protect the inlet piping from being clogged by the scum layer. The outlet baffle typically extends to the middle of the operating depth of the tank so the



District 2 Field Notes

Note to Installers: Prior to calling for a liquid waste inspection, please remember that most of our field offices are short-handed. We will do our best to accommodate your schedules. Please make sure that your installation is complete when your inspector arrives on-site. Please remember the following:

- **Setbacks** Make sure that all setbacks have been met and that they are in accordance with Table 302.1 of regulations; (i.e. 100ft minimum distance between disposal field and well);
- **Cleanouts:** make sure that cleanouts are present and installed correctly;
- **Septic Tank:** make sure that septic tank is level, interior is coated with bituminous coating, no cracks, watertight; and the inlet and outlet baffles are properly installed;
- **Access Risers:** make sure that at least two risers are installed over the access openings and that they extend to grade;
- **Effluent Filter:** make sure that the effluent filter is installed on the effluent side of the tank;
- **Distribution Box:** make sure the distribution box is installed level, on natural undisturbed or compacted soil or on concrete footing; make sure that the flow is equally distributed to each line (verify with a bucket of water);
- **Disposal Field:** make sure the disposal field is installed in accordance with plans; the type of soil that you encounter is the same as stated on the liquid waste application or resizing may be required; make sure that if you use chamber systems or other proprietary products, you install them in accordance with the manufacturer's instructions;
- **Inspection Port:** make sure that inspection ports are capped, that they provide access to bottom of trench, that they are 4" minimum diameter pipe of SDR 35 or better, and that they terminate at ground level.

Always Remember Trench Safety!

According to OSHA, every year more than 30 construction workers are killed in trenches. Remember:

- **Don't enter an unprotected trench**
- **Trenches 5 ft or deeper require a protective system**
- **Inspect trenches at the start of each shift or after a rainstorm**
- **Keep heavy equipment and excavation spoils at least 2 ft away from trench edge**
- **Provide stairways, ladders, ramps or other means of access in all trenches 4 ft or deeper**

District 2 Field Office	Telephone Number
Espanola	505-753-7256
Las Vegas	505-454-2800
Raton	575-445-3621
Santa Fe	505-827-1840
Taos	575-758-8808



Jim Vincent, Liquid Waste Specialist Robert Italiano, District Manager

Liquid Waste Website Address: <http://www.nmenv.state.nm.us/fod/LiquidWaste/>