SAN MIGUEL COUNTY

ENVIRONMENTAL HEALTH DEPARTMENT

333 W. Colorado Ave., 3rd Floor
P.O. Box 4130, Telluride, CO 81435 970 728-0447 Fax 970 728-3718

SEPTIC APPLICATION

PERMIT FEES: New system $300.00. Repair $100.00.
A Check payable to San Miguel County is due at time of application.

OWNER:_____ PHONE: _____

PARCEL ID NUMBER: _____ EMAIL: _____

SITE ADDRESS:_____

MAILING ADDRESS:_____

CONTRATOR/INSTALLER: _____

CONTRACTOR EMAIL:_____ PHONE: _____

CONTRACTOR'S ADDRESS: _____

NEW TANK:_____ NEW LEACH FIELD:_____

REPLACE TANK:_____ REPLACE LEACH FIELD:_____ REPAIR: _____

TYPE OF STRUCTURE: _____

NO. OF PEOPLE: _____ NO. OF BDRMS: _____

WASHER: _____ DISPOSAL: _____ OTHER: _____

WATER SUPPLY: _____

LEGAL DESCRIPTION: _____ 1/4 OF SECT: _____ TN: _____ RW: _____

LOT SIZE: _____ OR

SUBDIVISION LOT #: _____ BLOCK: _____ FILING: _____

DIRECTIONS TO SITE: _____

_____

_____

_____

SEPTIC PERMIT APPLICATION CHECK LIST

Yes/No	
☐ ☐	**Does this project include any NEW solid-fuel burning devices, gas log fireplaces, or gas fireplace appliances? If yes, please supply make and model #.**
☐ ☐	**Does this project involve any CHANGE to an existing solid-fuel burning device, gas log fireplace, or gas fireplace appliance?**
☐ ☐	**Will this project involve installation of a new individual sewage disposal system, or modification to an existing sewage disposal system?**
☐ ☐	**If connected to an existing individual sewage disposal system, will this project involve any additions of bedrooms or increase in water use?**
☐ ☐	**Does this project include plan s for a darkroom or other activities involving the use of chemicals?**
☐ ☐	**What is the proposed water supply source? private well _____; municipal _____; other _____ (specify).**
☐ ☐	**Does this project include plans for any water treatment equipment?**
☐ ☐	**Does this project include any swimming pool, hot tub, or spa, either open to the general public or part of a public accommodation with rentals of less than a two week period.**
☐ ☐	**Is there a restaurant, catering business, retail food market, or any commercial food service planned for this project?**
☐ ☐	**If the project includes an existing restaurant or retail food market, will there be any changes being made to the commercial food service establishment?**

Applicant acknowledges that approval of this permit and system does not guarantee the system against failure. This permit is void if not used within 12 months after application date.

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT: _____

DATE: _____

SEPTIC SYSTEMS

TO OBTAIN A PERMIT:

Provide a site plan indicating location of proposed drain field, buildings and wells in the area (leach field must be 100 feet or more away from any drinking water source).

Step 1

Select the area in which you wish to have the field constructed. The Environmental Health Officer can assist in selecting the area.

One soil profile hole shall be excavated to a depth of 8 feet with a back-hoe in the area where the proposed absorption field is to be located, to determine soil conditions at the site. This hole must extend to a depth at least 4 feet below the bottom of the proposed absorption system. If bedrock is encountered before the 8 foot level, stop at that point. Three additional percolation test holes shall be excavated to conduct a soil percolation test, as described in the Soil Test section of these instructions.

PROVISIONS FOR WATER ON SITE TO CONDUCT SOIL TEST MUST BE ARRANGED.

Step 2

The Environmental Health Officer will revisit your property and observe and test the holes you prepared. From the information gained, a sewage disposal system will be designed, or you will be referred to a registered professional engineer.

Step 3

A final inspection is required. **ALL** lines and tank shall remain uncovered until final approval from the Health Officer or prior approval from the Environment Health Department. You or your contractor can make an appointment with the Health Officer to verify the system was installed according to permit. He/she will check that the field length and width have been excavated as designed, during the final inspection. However, **YOU** will be responsible for the depth of the field unless a written request to the Health Officer is received at the time of permit application.

ENGINEERED SYSTEMS

1. **Systems must be designed by a State of Colorado Registered Professional Engineer.**

2. **The Engineer will perform the necessary site evaluations, percolation tests, etc.**

3. **The Engineer will submit 2 sets of stamped plans, an electronic PDF of the system design, and design calculations for County approval.**

4. **After approval, the Engineer (or representative) will pick up 1 set of plans & the septic permit.**

5. **The Engineer shall provide a stamped certification that the system was installed in accordance with the septic design approved by San Miguel County. They must also provide an "as built" drawing relative to permanent features on the site.**

REQUIRED FOR FINAL APPROVAL
As Built drawings shall provide the following:

1. **Tank size and type**
2. **Dimensions of field to include width and depth**
3. **Location of tank in relation to house**
4. **D-Box**
5. **Clean Outs**
6. **Depth of system components**
7. **Quantity of sand, gravel and infiltrators used**

SOIL TEST

1. **Location:**

   Soil percolation tests shall be performed in at least 3 test holes in the area in which the absorption system is to be located, spaced uniformly over the proposed site, except there shall be no less than 1 test hole in any 1200 square foot area of the absorption system.

2. **Dimensions:**

   a. **The percolation test holes shall be from 4 to 12 inches in width or diameter, and shall be terminated at the depth of the proposed absorption system.**

   b. **One soil profile test hole at least 8 feet deep or to bedrock, must be completed to give an indication of the soil condition in the area including that soil zone at least 4 feet below the bottom of the proposed absorption system.**

3. **Procedure:**

   Percolation test holes shall be filled with water to a depth of 14 inches or more at least 8 hours, but not more than 24 hours, prior to making the water percolation test, and shall be refilled with water if necessary to a depth of at least 14 inches prior to final measurement. Measure the time for the water to drop 1 inch within the lower 25 % depth of the percolation test hole. The percolation rate shall be reported in minutes of time per inch drop.

4. **Calculation:**

   The field percolation rate shall be the average rate of the percolation tests after rate has stabilized in all the test holes observed in the proposed absorption area. A percolation rate of between 5 & 60 minutes per inch is required except as provided in V111-C-b-1(1) of these guidelines. A field percolation rate determined by the test shall be used in calculating the absorption area required for the proposed system.

5. **Performance of Percolation Tests:**

   The percolation test shall be performed by or under the supervision of a registered professional engineer or by a competent technician of the local health department unless the tests were previously performed by a registered professional engineer and the results thereof submitted with the application for a permit.

GENERAL INFORMATION ON SEPTIC SYSTEMS

Soaps, detergents, bleaches, drain cleaners, or other material as normally used in the household will have no appreciable adverse effect on the system. However, as both the soil and essential organisms might be susceptible to large doses of chemicals and disinfectants, moderation should be the rule.

Toilet paper substitutes should not be flushed into a septic tank. Paper towels, newspaper, wrapping paper, rags, and sticks, etc., may not decompose in the tank and are likely to lead to clogging of the plumbing and disposal system.

Contrary to popular belief, septic tanks do not accomplish a high degree of bacterial removal. Although the sewage undergoes treatment in passing through the tank, this does not mean that infectious agents will be removed; hence, septic tank effluent cannot be considered safe. The liquid that is discharged from a tank is, in some respects, more objectionable than that which goes in. As previously explained, a septic tanks' primary purpose is to condition the sewage so that it will cause less clogging of the soil absorption field.

Further treatment of the effluent, including the removal of pathogens, is effected by percolation through the soil. Disease producing bacteria will in time die out in the unfavorable environment afforded by soil. In addition, bacteria are also removed by certain physical forces during filtration. This combination of factors results in the eventual purification of the sewage effluent.

The first step in the designing of a leach field system is to determine whether the soil is suitable for the absorption of septic tank effluent and, if so, how much area is required. To find out the above information a soil percolation test must be performed. After the rate at which the particular soil will absorb water has been determined, it can be figured out how many square feet of absorption field is required to soak up the amount of water to be used by the occupants. For example, a family of 3, no automatic machines and located in a very sandy, porous soil would need a much smaller leach field.

A properly sized, installed and maintained septic tank to soil absorption system should give many years of service to its user.

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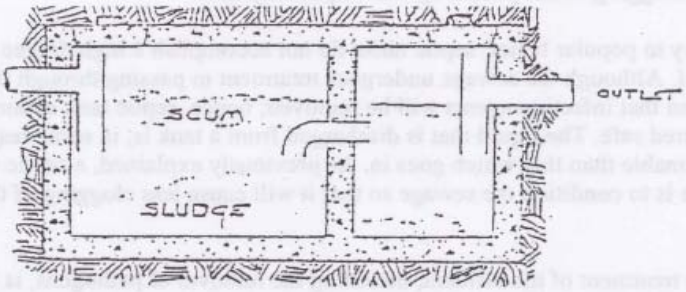
"FACTS TO KNOW ABOUT YOUR SEPTIC TANK SYSTEM"

The majority of the rural residences in this county are not located so that they could conveniently hook up to a public sewage disposal system. Septic tank systems are the most commonly used type of individual sewage disposal. This system consists of two basic parts, the septic tank and soil absorption system.

A septic tank's purpose is to provide for the removal of the solids found in household wastes. It acts as a large settling tank and therefore conditions the sewage so that it may be more readily percolated into the subsoil of the ground. Thus, the most important function of a septic tank is to provide protection for the absorption ability of the subsoil.



Septic tanks MUST be cleaned before too much sludge or scum is allowed to accumulate. The heavier sewage solids settle to the bottom of the tank forming a blanket of sludge. The lighter solids including fats and greases, rise to the surface and form a layer of scum. If either the sludge or scum builds up and approaches too closely to the tank outlet, particles will be scoured into the disposal fields and clog the soil absorption system. Eventually, when this happens, liquid may break through to the ground surface and the sewage may back up in plumbing fixtures. When a disposal field is clogged in this manner, it is not only necessary to clean the tank, but it also may be necessary to construct a new disposal field.

There are wide differences in the rate that sludge and scum will accumulate from one tank to the next. A family of eight with a garbage disposal will need to have their tank pumped more often than a family of three. A modern designed tank serving and average sized family will need pumping on an average of once every 3 to 5 years.

Grease traps are not ordinarily considered necessary on household sewage disposal systems. The septic tank capacities required by today's regulations are sufficient to receive the grease normally discharged from the home.

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TABLE II

TABLE OF MINIMUM HORIZONTAL DISTANCES IN FEET BETWEEN COMPONENTS OF A SEWAGE DISPOSAL SYSTEM INSTALLED AFTER NOVEMBER 15, 1973 AND PERTINENT PHYSICAL FEATURES

	Spring, Wells, Suction Lines	Potable Water Supply Line	Potable Water Supply Cistern	Dwelling Occupied Building	Property Lines, Piped or Lined Irrigation Ditch	Subsoil Drains, Intermittent Irrigation Lateral	Lake, Water Course, Irrigation Ditch or Stream	Dry Gulches	Septic Tank
Dispersal System Utilizing Aerosol Methods	(3) 100	(4)(2) 10	50	125	10	0	(3) 25	(3) 10	10
Seepage Pit or Slit Trench	(3) 100	(4)(2) 50	25	20	25	10	(3) 50	(3) 25	6
Absorption Trench, Seepage Bed, Sand Filter, Sub-surface Dispersal System, or Drywell	(3) 100	(4)(2) 25	25	20	10	10	(3) 50	(3) 25	6
Unlined Sand Filter in Soil With a Percolation Rate Slower than 60 Minutes per Inch	100	(4)(2) 25	25	15	10	10	25	15	10
Unlined or Partially Lined Evapotranspiration System, Wastewater Pond, or Surface Disposal System Other than Aerosol	100	(4)(2) 25	25	15	10	10	25	15	10
Lined Sand Filter	60	(4)(2) 10	25	15	10	10	25	10	5
Lined Evapotranspiration Field or Lined Wastewater Pond	60	(4)(2) 10	25	15	10	10	25	10	5
Pit Privy or Vault Privy	50	(4)(2) 10	25	15	10	10	25	10	--
Septic Tanks, Treatment Plants, Dosing Tanks, Vaults	(2) 50	(4)(2) 10	25	(1) 5	10	10	50	10	--
Building Sewer or Effluent Lines	(2)(4) 50	(4)(2) 10	(4) 25	0	(2)(4) 10	(4) 10	(2)(4) 50	(2)(4) 10	--

NOTE: The minimum distances shown above shall be maintained between the system components and the physical features described. Where soil, geological or other conditions warrant, greater distances may be required by the local board of health or by the Water Quality Control Commission pursuant to C.R.S. 25-8-206 in accordance with the authority prescribed by law and rules and regulations implemental of said section. Components which are not watertight should not extend into areas of the root system of nearby trees. For repair or upgrading of existing systems where the size of lot precludes adherence to these distances, repaired facility shall not be closer to water supply components than the existing facilities.

(1) Distance shown shall not apply to treatment plants or effluent lines where recycling is permitted.

(2) Crossings or encroachments may be permitted at the points as noted above provided that the water conveyance pipe is encased for a minimum distance of ten (10) feet on each side of the crossing. A length of pipe shall be used with a minimum Schedule 40 rating of sufficient diameter to easily slide over and completely encase the water conveyance. Ridged end caps of at least Schedule 40 rating must be glued or secured in a watertight fashion to the ends of the encasement pipe. A hole of sufficient size to accommodate the pipe shall be drilled in the lowermost section of the ridged cap so that the conveyance pipe rests on the bottom of the encasement pipe. The area in which the pipe passes through the endcaps shall be sealed with an approved underground sealant compatible with the piping used.

(3) Add 8 feet additional distance for each 100 gallons per day of design flow over 1000 gallons per day as specified in the table, unless it can be demonstrated by a registered Professional Engineer or Geologist that a mechanical or natural barrier will prevent contamination.

(4) Encroachments may be permitted provided the water or wastewater conveyance pipe is encased as in (2) above, specified in the table.