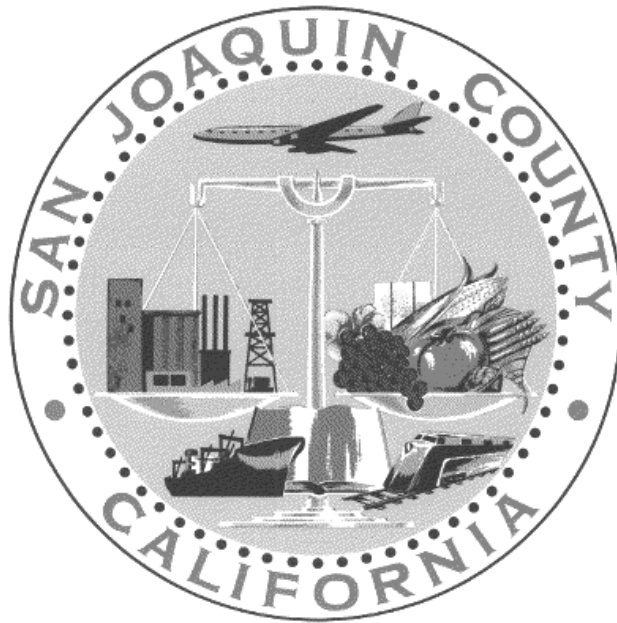


San Joaquin County



Residential Onsite Systems Bulletin

Environmental Health Department
1868 East Hazelton Avenue
Stockton, CA 95205-6232
(209) 468-3420

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I. PERMITS

A SANITATION PERMIT IS REQUIRED BEFORE BEGINNING WORK ON ANY ONSITE WASTEWATER DISPOSAL SYSTEM.

Applications for the sanitation permit are available at the San Joaquin County Environmental Health Department, 1868 East Hazelton Avenue, Stockton, CA 95205-6232.

II. INSTALLATION REQUIREMENTS

All household sewage or other liquid waste shall be disposed of through an on-site sewage disposal system. Disposal systems designed for individual dwellings shall consist of tightline, a septic tank, a distribution box and a sub-surface drainfield - covered by leach line paper or other approved material.

All unattached habitable structures on the same property shall have a separate disposal system.

A. HOUSE TO SEPTIC TANK CONNECTION:

1. PURPOSE:

To carry sewage from the building to the septic tank.

2. MATERIALS:

The following materials may be used for construction of this three or four inch (3" or 4") sewer line between the dwelling and the septic tank:

- a. Cast Iron.
- b. Vitrified Clay.
- c. Plastic (Schedule 40 or SDR-35).
- d. Other approved material (with leak proof connections).

3. STUB-OUT AND GRADE TO SEPTIC TANK:

- a. Stub-out should be installed to prevent any greater depth than two feet (2') from finish grade to leach lines.
- b. Grade or slope should not be less than 1/8 inch nor more than 1/4 inch per foot.

4. CLEAN-OUT:

- a. A two-way clean out shall be installed at ground level between the house and the septic tank.
- b. At every 90-degree bend at ground level.
- c. Every 100 feet at ground level.

B. SEPTIC TANK:

The septic tank shall have a minimum liquid capacity of 1,200 gallons.

1. PURPOSE:

The septic tank retains raw sewage and separates the solids from the liquids by sedimentation and liquefaction through bacterial action. The larger the tank, the longer the retention and the clearer the liquid (effluent). This permits a relatively clear liquid to flow into the subsurface disposal fields.

2. MATERIALS:

The following materials may be used for construction of the septic tank:

- a. Approved precast concrete.
- b. Approved poured, reinforced concrete.
- c. Other approved materials.

3. DESIGN:

This bulletin shows an approved design for a 1,200-gallon septic tank.

- a. The septic tank shall have two compartments. The first, or inlet compartment, shall contain at least 2/3 of the total tank capacity.

4. SEPARATION:

A five-foot (5') A.B.S. schedule 40 or SDR-35 tightline with continuous soil barrier shall be installed between the septic tank and the leach line or distribution box. If more than one hundred feet (100') between septic tank and D-Box, two-way clean out is required.

C. DISTRIBUTION BOX:

1. PURPOSE:

The distribution box distributes the liquid from the septic tank equally among two or more lines of the leaching field. The distribution box also provides an inspection point and may be used to control the flow of the effluent to the leaching field.

- a. Inlets and outlets of any distribution box shall be watertight. A five-foot (5') minimum A.B.S. Schedule 40 or SDR-35 tightline with continuous soil barrier shall be installed between the distribution box and the leach line.

D. SUB-SURFACE DISPOSAL FIELD

1. LEACH LINES:

a. PURPOSE:

Leach lines provide additional treatment and disposal for sewage.

b. MATERIALS:

The line shall consist of approved perforated pipe. The pipe shall have an inside diameter of 4 inches. The rock used in the disposal field shall be 1 inch to 2 1/2 inches in diameter. Rock must be washed and free of fine particles. As an alternative to rock-filled leach lines, chamber or rockless systems may be approved.

c. LOCATION:

Leach lines shall be no closer than twelve feet (12') center to center. The total amount of rock in the trench must be a minimum of 18 inches, 12 inches below the pipe and 2 inches above the pipe.

d. DESIGN:

The trench shall be twenty-four inches (24") wide and shall be no deeper than forty-two inches (42"). Leach lines shall have a grade of one inch (1") to three inches (3") per one hundred feet (100'). The bottom of the leach line shall be a minimum of five feet (5') above the water table.

All leach lines, sumps, and pits shall be covered with leach line paper or equivalent. Straw hay may also be used. Roofing felt is not allowed. Chambers shall be covered with approved filter fabric as required.

The total length of the leach line shall be specified by the Director of Environmental Health Department. **NO ONE LINE SHALL EXCEED A TOTAL OF 100 FEET IN LENGTH.**

2. SEEPAGE PITS:

Every seepage pit shall have a minimum of forty feet (40') of leach line between the septic tank and the pit, unless otherwise approved by the Director of San Joaquin County Environmental Health Department.

a. PURPOSE:

The seepage pit provides an area for absorption of liquid wastes into the soil.

b. MATERIALS:

The seepage pit shall be filled with washed rock two inches (2") to four inches (4") in diameter to the level of the outside top of the distribution box or Tee. A five foot (5') soil barrier and ABS Schedule 40 or other approved tightline shall precede each seepage pit or sump. The rock and distribution box or Tee shall be covered with leach line paper or straw prior to back filling. The seepage pit shall contain a vertical four inch perforated leach pipe extending to the pit bottom and connected with a four inch capped Tee to the tight line or connected through an open bottom distribution box.

c. DESIGN:

The seepage pit shall have a minimum diameter of thirty six inches (36") with a MAXIMUM DEPTH OF 25 FEET. A ten (10) foot separation is required between the bottom of a seepage pit and the water table. A five foot (5') ABS Schedule 40 or other approved tightline, with continuous soil barrier, shall be installed between the leach line and pit or sump.

3. EXPANSION AREA:

For single-family dwellings, open land area must be available for addition to the original disposal system. This land area is to be least 50% of the amount required by the original disposal system, or by what has been determined by an engineered percolation test.

4. REPAIRS:

- a. A minimum sewage system repair shall equal the amount of leach line needed for an additional bedroom. A sewage system repair shall meet existing standards of construction and design.
- b. All existing brick lined or open pits shall be completely rock-filled if intended for continued use or destroyed if it is to be abandoned.
- c. The tops of any redwood tanks that are dry-rotted must be replaced with either a top grade redwood or concrete top. If either a redwood or metal septic tank shows signs of deterioration to the point it is no longer water tight, the entire tank must be replaced.

III. INSPECTION

The septic tank and leach line field must NOT be backfilled until inspected and approved by the San Joaquin County Environmental Health Department. When the system is complete, except for backfilling, call the office for an inspection. Inspections will be scheduled within two (2) workdays of the request for inspection.

REFER TO INSPECTION BY PERMIT NUMBER at lower right hand corner.

Approval will be indicated only on the sanitation permit. The permit must be placed where it can be easily located by the Environmental Health Specialist.

TABLE NO 1 LEACH LINE REQUIREMENTS BASED ON NUMBER OF BEDROOMS ¹					
	1200 Gallon Septic Tank			1600 Gallon Septic Tank	2000 Gallon Septic Tank
TYPE SOIL	1 BR ²	2 BR	3 BR	4 BR	5 BR
Sand and/or Sandy Loam	NO PITS APPROVED FOR THIS TYPE OF SOIL				
	80'	160'	240'	320'	400'
Silt and/or Sandy Clay Loam	90' (40' + 1-36" pit)	180' (100' + 1-42" pit)	270' (2-75' + 2-36" pit)	360' (2-100' + 2-42" pit)	450' (3-80' + 3-42" pit)
Clay and/or Peat	100' (40' + 1-36" pit)	200' (2-40' + 2-36" pit)	300' (2-85' + 2-36" pit)	400' (3-60' + 3-42" pit)	500' (3-90' + 3-42" pit)
Hardpan	110' (40' + 1-36" pit)	220' (2-40' + 2-36" pit)	330' (3-40' + 3-36" pit)	440' (2-60' + 4-42" pit)	550' (4 -50' + 4-48" pit)
HIGH WATER TABLE AREAS: 100' Leach Lines Per Bedroom or Alternative System Approved by EHD.					

¹ All computations are for a standard 24" wide trench.

² All one (1) bedroom homes over 500 square feet in size and one bedroom mobile homes are to be computed as a two (2) bedroom residence.

IV. SUBSURFACE DISPOSAL FIELD (FOR EXISTING LOTS OF RECORD) PRIOR TO DECEMBER 15, 1972.

A. Location of the disposal field should be in an unobstructed and unshaded area.

The minimum distances shall be:

	Septic Tank	Leach	Seepage Pit/Sump
Any water supply well-private.....	50'	50'	100'
Any water supply well-public	100'	100'	150'
Water supply pipes	5'	5'	5'
Streams, waterways	50'	100'	100'
Lake or reservoir.....	50'	200'	200'
Property lines.....	5'	5'	5'
Foundations, structures, driveways and swimming pools	5'	10'	10'
Distribution box.....	3'	5'	5'
Disposal field	5'	--	--
Seepage pits or sumps.....	5'	5'	10'
Large trees	10'	10'	10'
Storm drainage ponds (<6' depth).....	10'	10'	10'

For houseboat or island installation, the disposal field must be placed at least 100 feet from the high tide water line on the island side of the levee.

V. SUBSURFACE DISPOSAL FIELD (FOR EXISTING LOTS OF RECORD) AFTER DECEMBER 15, 1972.

Facility	Domestic Well	Public Well	Flowing Stream ¹	Drainage Course or Ephemeral Stream ²	Cut or fill bank ²	Property Line ³	Lake or Reservoir ⁴
Septic Tank, sewer line, or Package Treatment Plant	50'	100'	50'	25'	10'	50'	50'
Leaching field or Sewage Ponds or sumps <=8' depth	100'	100'	100'	50'	+	50'	200'
Seepage Pit & Sumps >8' depth	150'	150'	100'	50'	+	75'	200'

¹ As measured from the line that defines the limit of a 100-year frequency flood.

² As measured from the edge of the channel.

³ Distance in feet equals four times the vertical height of the cut or fill bank. Distance is measured from the top edge of the bank.

⁴ When individual wells are used.

⁵ As measured from the high water line.

VI. CONSTRUCTION OF A DISPOSAL SYSTEM



Septic Tank – Outlet (Liquid side)



Septic Tank – Inlet (Solid side)

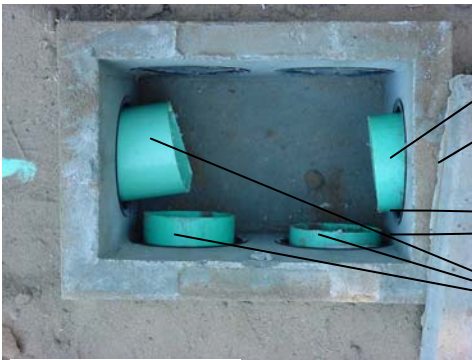


Septic Tank, D-Box and Zabel Filter

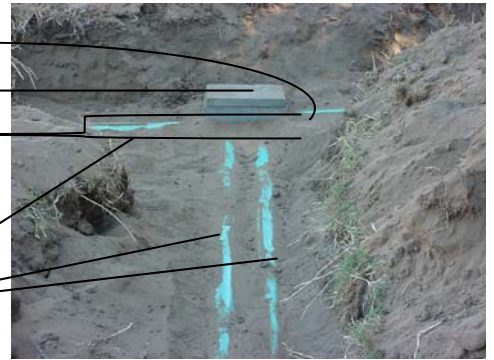


Septic Tank, D-Box and Sanitary T

D-Box
1" fall between Inlet and Outlet
5' Tight Line
Zabel Filter
Sanitary T

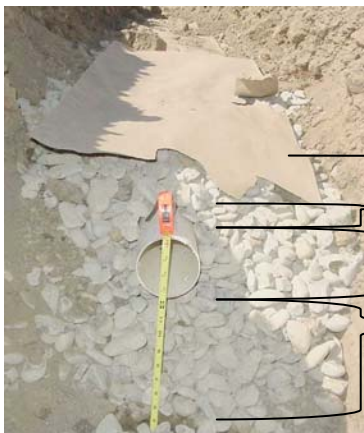


D-Box



D-Box

Inlet
D-Box
1" fall between Inlet and Outlet
Outlet



Leach Line



Leach Line

Straw
Leach Line Paper
Two Inches Rock
Four Inches Leach Line Pipe
One Foot Rock



SDR 35 going to pits



Hand shovel & compact soil around chamber to 2" above chamber.

5' barrier trench of undisturbed soil before pit



Sheet Metal Screw, 3 per connection



SDR 35



Double Walled 5' each way when crossing water line.

Clean Out within Two (2') feet of house foundation.



Filter Bed

