

San Joaquin County



Onsite Wastewater Disposal Standards

(San Joaquin County Ordinance Code Section 9-1105)

Amended by San Joaquin Local Health District May 23, 1989

Amended by Board of Supervisors December 11, 2001, R-01-828

County Ordinance History

August 14, 1950	Ordinance 549
May 1, 1962	Ordinance 949
May 10, 1979	Ordinance 2665
July 29, 1992	Ordinance 3675
December 13, 1994	Ordinance 3817

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1. INDIVIDUAL SEWAGE DISPOSAL SYSTEM PERMITS

- 1.1. Application for any Sanitation Permit required by Section 9-110.3 of the Ordinance Code of San Joaquin County shall be made by the owner of the property involved or his authorized representative. If owner's representative is other than a contractor licensed by the State of California, and is not exempt under Section 7044 of the Business and Professions Code or Section 3800 of the Labor Code, the application for the Sanitation permit will not be accepted. It is the responsibility of any and all persons performing any part of the repair or installation of a septic system to ascertain that a valid Sanitation Permit has been issued by the Director of Environmental Health prior to the initiation of any repair or installation. (Ordinance 3675)
- 1.2. All installations shall be installed as designed and approved. Any variation from approved design shall require a new sanitation permit and approval. The sanitation permit application shall be in triplicate, and shall include a plot plan drawn to reasonable scale with the following information:
 - 1.2.1. Owner's name, street address and job address.
 - 1.2.2. Names of streets or roads fronting the property.
 - 1.2.3. Outline of property giving dimensions and north direction.
 - 1.2.4. Dimensions, outlines, and locations of all existing and proposed structures, including hard surfaces such as patios, driveways and walks.
 - 1.2.5. Location of house sewer outlet and proposed location of septic tank and disposal system on the property.
 - 1.2.6. Location and nature of any existing sewage disposal system on the property.
 - 1.2.7. Location of any existing trees which may affect location of septic tank or disposal system.
 - 1.2.8. Location of any existing or proposed well, domestic or irrigation, in use or abandoned either on this property or within 150 feet of the property line.
 - 1.2.9. Source of domestic water supply.
 - 1.2.10. Total square footage of lot, and of all buildings.
 - 1.2.11. Set back requirements of front, back and sides.
- 1.3. Sanitation permits shall be valid for one year from date of issue to install the system. An additional one-year extension may be approved by the Director of the Environmental Health Department.

- 1.4. The sanitation permit shall be posted at a suitable location on the property when work commences, and shall remain posted until inspection and final approval by the Director of the Environmental Health Department.
- 1.5. Final approval of the Sanitation Permit shall be withheld until:
 - 1.5.1. Location and/or installation of the well is approved.
 - 1.5.2. Structures and all accessory construction as indicated on the plot plan are completed.
 - 1.5.3. Any wells or structures to be removed are properly abandoned.
 - 1.5.4. Compliance with any other conditions specified on the permit has been affected.
- 1.6. Sanitation Permits shall be required for package treatment plant and subsequent effluent disposal fields. Proposals for package plant installations, prepared by a Registered Engineer, shall be submitted to the Director of the Environmental Health Department for approval.
- 1.7. A separate Sanitation Permit may be required for the disposal system for each separate structure on the same property.
- 1.8. A Sanitation Permit shall be required for the installation of a vaulted privy as deemed acceptable by the Director of the Environmental Health Department.
- 1.9. A Sanitation Permit shall be required for repair of any part of the septic tank and/or leach field other than pumping of the septic tank.

2. LOTS OF RECORD WHICH DO NOT MEET CURRENT LAND AREA REQUIREMENTS

- 2.1. The size of lot and house size ratio listed below will be applicable to all applications submitted for approval. **PLANNING DEPARTMENT APPROVAL ON THE PLOT PLAN IS A PREREQUISITE.** (Section 2.1.1 & 2.1.2 added December 11, 2001, R-01-828).
 - 2.1.1 When considering the development of multi-story houses, the usable sewage disposal area with 50% expansion area should be the guiding consideration; however the ground floor lot-size ratio listed below shall not be exceeded.
 - 2.1.2 Development on Parcels Where Public Sewage Will Be Available: The ratio of lot size to house size and the size of the required septic system may be varied through the issuance of a Special Permit approved by the Director of the Environmental Health Department or designee.

As a condition of the issuance of the (30) days of availability to connect, regardless of whether or not the septic system is failing.

A failure to comply is a public nuisance subject to enforcement remedies authorized by Title 8, Division 5 of the Ordinance Code of San Joaquin County.

A prerequisite for the issuance of a Special Permit, pursuant to this subsection, will be the Board of Supervisors approval and funding of public sewage, which will subsequently serve the affected parcel. A "will serve" letter will be required from those utilities, which are not under the direct control of the Board of Supervisors.

- 2.2. Removal of accessory structures may be required prior to approval for sewage repairs. Details on the plot plan must be complete, including planned sidewalks, driveways, etc. on new construction.
 - 2.2.1. Under 5,000 sq. ft.: Maximum of 1 bedroom. Outbuildings, including garages, carports, workshops, storage buildings, etc. must NOT exceed 25% of the size of the house in square feet.
 - 2.2.2. 5,000 - 7,499 sq. ft.: Maximum 2 bedroom house, no larger than 850 sq. ft. not including the garage.
 - 2.2.3. 7,500 - 10,000 sq. ft.: Maximum 3 bedroom house, not larger than 1,100 sq. ft. not including the garage.
 - 2.2.4. Over 10,000 sq. ft.: Dwelling and accessory structures shall be designed to allow area required for individual sewage disposal system (septic tank and leach field area) plus an area for 50% expansion of the leach field in case of failure.

3. GENERAL STANDARDS

- 3.1. The location, installation and maintenance of the sewage disposal system and each part thereof shall be such that it will function in a sanitary manner and will not create a nuisance or endanger the safety of any water supply, ground water or surface water. In determining a suitable location for the system, consideration shall be given to the size and shape of the lot, location of building, slope of ground surface, depth to ground water, proximity of existing future water supplies and expansion of system or connection to future public sewers. Antiquated subdivisions recorded prior to October 17, 1961, and proposed to be served by septic systems are subject to Section 10, Requirements for Waste Disposal for New Land Developments. (Amended December 11, 2003, R-01-828)
 - 3.1.1. No part of any sewage system shall be located nearer than the following distances from water supplies.

**DISTANCE BETWEEN ALL WATER WELLS AND SEWAGE SYSTEM FOR LOTS OF
RECORD Prior to December 15, 1972 (DISTANCE IN FEET)**

	PUBLIC WELL	ALL OTHER WELLS
Package Treatment Plant.....	100 ft	50 ft
Septic Tank.....	100 ft	50 ft
Leach Lines/Filter Bed/Sumps <8 ft.....	100 ft	50 ft
Seepage Pits, Sumps or Sewage ponds..	150 ft	100 ft

The sewage system shall be located down slope of any water supply if the slope of terrain is 5% or greater.

- 3.1.2. The LOT SIZE shall be sufficient to permit proper location, installation and operation the sewage disposal system. The average daily amount of sewage, the character of the soil and the source of the water supply will determine the necessary lot size. (See Requirements for Waste Disposal for New Land Development after December 15, 1972).
- 3.1.3. Installation of drain fields in low areas and orchards subject to flooding, or in areas where ground water reaches the surface at certain times of the year, is NOT acceptable unless approved by the Director of the Environmental Health Department.
- 3.2. Design of the sewage system shall be determined on the basis of location, type of soil and ground water level or as determined by percolation test and/or soil profile test.
 - 3.2.1. The sewage disposal system shall be designed to receive all domestic sewage from the property. No basement, footing or surface drainage or discharge from water softener, iron filters, pool filters or water treatment systems shall be permitted to enter any part of this system.
 - 3.2.2. The sewage disposal system shall consist of a house sewer, a septic tank, distribution box and a drainage system. Package sewage treatment plants will be evaluated on their engineered design.
 - a) Where soil porosity and available area permit, the drainage system shall consist of a subsurface horizontal leaching field.
 - b) Where soil porosity and available area do not permit the use of subsurface horizontal leaching field, and an adequate absorption soil stratum can be found at a greater depth without endangering the water table, the effluent may, in combination with a subsurface horizontal leaching field, be discharged into one or more seepage pits at a maximum depth of 25 ft.
 - c) Package sewage treatment plants may be installed in lieu of a standard septic tank system. The package sewage treatment plant system must be designed by a Registered Engineer qualified to do that work and must meet the discharge standards as set by the Central Valley Regional Water Quality Control Board for the particular treatment plant.

3.3. Minimum Sizes:

3.3.1. Septic System

- a) The minimum sewage disposal system for any mobile home or houseboat shall be computed as a two (2) bedroom system unless the mobile home or houseboat has more than two (2) bedrooms.
- b) All sewage systems for one (1) bedroom homes over 500 square feet in size, are to be computed as a two (2) bedroom residence.
- d) Dens and family rooms, which contain a closet, shall be considered bedrooms.

3.3.2. Expansion Area

- a) For single-family dwellings, open land area must be available for addition to the original sewerage system. This land area is to be at least 50% of the amount required by the original sewerage system. (See Section 10 for Land Division after December 15, 1972.)
- b) For multiple dwellings, trailers courts, mobile home parks and commercial or industrial units, in addition to original sewerage installation, there must be at least 100% of open land area equal to the size of installed sewerage system available for future use. On discretionary land use applications and in other warranted situations, the Director of the Environmental Health Department may require the installation of a double leach field system with an alternating distribution box at the time of construction.

3.4. All abandoned septic tanks, or those to be abandoned, shall be filled with earth, sand or other approved material. (Uniform Plumbing Code, Section 722.2, 722.3, 722.4 and 722.5).

3.5. Temporary sewage disposal systems may be approved. The proposed method of disposition must be submitted, in writing, to the Director of the Environmental Health Department for consideration of a temporary sewage disposal system.

3.6. Repairs

3.6.1. A minimum sewerage system repair shall equal the amount of leach line needed for an additional bedroom as deemed necessary by the Director of Environmental Health. A sewerage system repair shall meet existing standards of construction and design.

3.6.2. All existing brick lined or open pits shall be completely rock filled even if intended for continued use. The rock shall be 2" - 4" rock.

3.6.3. Covers on redwood septic tanks that are dry rotted shall be replaced with either a top grade redwood or concrete cover. 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.

3.6.4. Repairs may be approved between individual leach lines if the parcel has no other applicable area to repair leach system.

3.7. Traffic slabs over concrete septic tanks shall be designed by a Registered Engineer.

4. PACKAGE TREATMENT PLANTS

4.1. Where package sewage treatment plants are required, complete engineered plans shall be submitted by a Registered Civil Engineer to the Director of Environmental Health and the San Joaquin County Department of Public Works for initial approval prior to beginning construction. Final approval for operation of the package sewage treatment plants shall not be granted until a waste discharge resolution has been set by the Central Valley Regional Water Quality Control Board (CVRWQCB). The plans shall include the following:

4.1.1. A complete scaled plot plan of the area showing wells, structures, sanitary sewerage lines, water lines and total proposed land use.

4.1.2. Total capacity of the plant in gallons and organic load. Design criteria shall include a reserve capacity to accommodate a surge flow or increase in the average daily flow.

4.1.3. Calculations showing ability of effluent to meet discharge standards as set by the Central Valley Regional Water Quality Control Board.

4.1.4. The source of data and the data calculated to the existing plant or any future expansion of the plant shall be shown on the plans.

4.1.5. The percolation rates of leach fields or seepage pits shall be calculated and figures shown on the plans. An expansion area equal in size to the original disposal field shall be so designated on the plan to be utilized in the event of failure of the original disposal field. This expansion area shall pertain to percolation ponds or evaporation ponds as well as subsurface disposal fields.

4.1.6. A hydrologic balance for evaporation/percolation ponds.

4.2. When any existing package sewage treatment plant is remodeled or altered, all of the above specifications are to be resubmitted for approval by the Director of Environmental Health and the CVRWQCB.

4.3. Mechanical and electrical equipment shall be of such durable hardware, workmanship and installation as to insure against operational failure with normal maintenance.

4.4. All installations shall be adequately protected against acts of vandalism or sabotage, which could result in a malfunction of the plant. The entire plant, polishing ponds and percolation ponds shall be fenced and a locked gate provided to protect against any unauthorized person gaining entrance into the plant area, which could lead to injury or loss of life.

- 4.5. A certified operator with skill to cause the plant to be operated as designed shall be available to operate the plant. The operator shall be certified by the State of California Water Resources Control Board – Central Valley Region.
- 4.6. All work or works shall be done under applicable required permits and inspection by the required regulatory agency.
- 4.7. The installation and operation of treatment plants shall not create a public nuisance in regard to odor nor cause a potential or immediate safety or health hazard to the public. The discharge of treated effluent shall not cause contamination of the water bearing strata or surface watercourses.
- 4.8. Final disposition of sewage effluent shall be in constant compliance with the discharge requirements as set by the Central Valley Regional Water Quality Control Board. Any deviation from these discharge requirements shall be declared a public nuisance and a violation of the Rules and Regulations of San Joaquin County Ordinance No. 3675. As such, a cease and desist order shall be given.
- 4.9. Treatment plant tanks are to be installed on undisturbed soil excavated to required slope and elevation or on properly installed reinforced concrete foundation in such a manner as to prevent listing or settling, which may cause malfunction or leaking.
- 4.10. A grease receptor shall be required whenever any commercial food establishment is connected to the plant or any activity, which produces a grease content over and above the normal grease content found in domestic sewage. Grease receptors shall be required as an addition to a sewage disposal plant if it is determined from the analysis of the sewage influent or effluent that elevated grease levels prevail.
- 4.11. A grease receptor must be installed in front of the wet well (head works) to affectively screen out floating and suspended grease produced by commercial food operations. The grease receptor must be of sufficient size to retain the grease-laden sewage for a period suitable to remove the grease.
- 4.12. An open polishing pond shall be installed between the plant and the subsurface disposal field. This pond must be segmented by a series of redwood baffles and a weir must be installed so as to screen out the suspended flocculent material remaining prior to flowing into the subsurface disposal field.
- 4.13. Monthly monitoring by a certified sewage plant operator is required. Analysis required may include Biochemical Oxygen Demands, Dissolved Oxygen and settleable solids of plant influents and effluents and at such other points on stream as may be necessary*. Average daily flows and peak flows after plant is in operation are to be determined by a reliable method. Copies of these analyses and operational records shall be furnished to the Director of Environmental Health and the Central Valley Regional Water Quality Control Board.
- 4.14. An auxiliary electrical power supply shall be available for the continued operation of the package sewage treatment plant. Portable power supply may be used if made available within a reasonable period of time in the event of a failure.
- 4.15. All plumbing fixtures must be of a low flow, energy efficient and water-saver type for commercial facilities.

*Analyses shall be done utilizing the methods specified in the most recent edition of "Standard Methods For Examination of Water and Wastewater" USPHS.

5. INDIVIDUAL HOUSEHOLD AEROBIC SEWAGE TREATMENT PLANTS

- 5.1. Individual household aerobic sewage treatment systems must be engineer designed for determination of length of leach lines or number of pits. Design must be based on percolation rates for various types of soils and number of bedrooms to be served.
- 5.2. Once the design of a plant and disposal field has been approved the design shall be kept on file so that future installations will not require an engineered design.
- 5.3. The treatment plant must be designed to provide complete aerobic breakdown of the sewage.
- 5.4. The plant shell, motors, pumps, air circulating units, skimmers and sludge return, valves switches and any other mechanical device shall be of durable hardware and workmanship and subject to approval by the Director of the Environmental Health Department.
- 5.5. Individual household aerobic sewage treatment plants shall require the same minimum disposal area as septic tanks. The use of these plants shall not entitle a person to reduce parcel sizes.

6. INDIVIDUAL SEWAGE DISPOSAL SYSTEMS

- 6.1. Septic Tank
 - 6.1.1. Plans for all pre-fabricated septic tanks shall be submitted by a Registered Structural Engineer to the Director of Environmental Health for approval. Such plans shall show all dimensions, reinforcing, structural calculations and such other pertinent data as may be required.
 - 6.1.2. All septic tanks shall be constructed of sound, durable concrete or other Approved materials not subject to excessive corrosion or decay, and shall be watertight. Each such tank shall be structurally designed to withstand all anticipated earth or other loads and shall be installed level and on a solid bed. Redwood septic tanks are not acceptable.
 - 6.1.3. The minimum compressive strength of any concrete septic tank wall or floor shall be two thousand (2000) pounds per square inch. Concrete septic tank covers shall be reinforced and shall have a minimum compressive strength of twenty-five hundred (2500) pounds per square inch. All septic tanks covers shall be capable of supporting an earth load of not less than three hundred (300) pound per square foot when the maximum coverage does not exceed three (3) feet.
 - 6.1.4. Septic tanks shall have a minimum of two (2) compartments. The inlet compartment of any septic tank shall not be less than two-thirds (2/3) of the total capacity and length of the tank. Access to each compartment shall be provided by a manhole twenty-two (22) inches

in minimum dimensions, one of which shall be located over the inlet and one over the outlet.

- 6.1.5. The recommended liquid depth of the septic tank shall be 4 ½ feet with a Maximum depth of six (6) feet. The length of the septic tank shall be at least two (2) times the width. The air space above the liquid depth shall be eight (8) inches. There shall be a clearance of two (2) inches between the cover and all partitions and baffles or a two (2) inch ventilation hole.
- 6.1.6. The specifications and procedure for poured-place septic tanks are as follows:
 - 6.1.6.a. The bottom of the septic tank is poured first with at least four (4) inches of concrete mix. Three-eighths (3/8) inches of rebar steel, eighteen (18) inches on center and doweled out for sides and baffles, is to be installed in the forms. At least six (6) inches of rebar is doweled out for sides and baffles of the tank. The top of the septic tank is poured last and shall have rebar eighteen (18) inches on center with six (6) inches of concrete or twelve (12) inches on center with six (6) inches of concrete or twelve (12) inches on center with four (4) inches of concrete. Concrete sections two (2) feet wide may be poured and placed on the top of the tank. (No manhole will be necessary if two (2) foot sections are used and easily removable).
 - 6.1.6.b. Concrete blocks, six (6) inch minimum may also be used with three eighths (3/8) rebar sixteen (16) inches on center for sides of septic tank only. Concrete block walls shall be doweled six (6) inches, solid filled with concrete, and inside walls troweled smooth with cement grout.
- 6.1.7. Construction shall be such as to insure the tank being watertight and to prevent the entrance of rainwater or surface drainage.
 - a) The inlet pipe must be vented and four (4) inches in diameter and shall extend approximately six (6) inches above the water line and twelve (12) inches below the water surface of the tank and within the area of the manhole.
 - b) The outlet pipe must be vented and four (4) inches in diameter and shall extend at least six (6) inches above and eighteen (18) inches below the water surface.
 - c) The invert of the inlet pipe shall be at least two (2) inches above the invert of the outlet pipe.
- 6.1.8. Design of the septic tank shall be such as to assure uniform horizontal flow throughout its entire length. The septic tank shall have a minimum retention time of twenty-four (24) hours for all sewage.

- 6.1.9. The septic tank shall be at least five (5) feet from any property line and five (5) feet from any foundation, structure, swimming pool or driveway if the tank is watertight.
- 6.1.10. For houseboat or island installations, the septic tank is to be placed at least fifty (50) feet inland from the high tide water line on the island side of the levee. The flex line from houseboat to septic tank must be above the water level and must be so installed as to provide gravity flow in the entire line, to either the septic tank or back to the pump.
- 6.1.11. The required minimum capacity of the septic tank for dwellings shall be based on the number of bedrooms contemplated or existing. Dens and family rooms shall be considered as bedrooms if closets are installed.
- 6.1.12. All unattached habitable structures on the same property shall have a separate septic system.
- 6.1.13. The following table shall be used for computing septic tank capacities for dwellings:

a)	1-3 Bedrooms	1200 gallons
b)	4 Bedrooms.....	1600 gallons
c)	5 Bedrooms.....	2000 gallons
d)	6 Bedrooms.....	2400 gallons
e)	Duplex..... 2-4 Bedrooms	2000 gallons
f)	Triplex 5-6 Bedrooms	2400 gallons
g)	Fourplex 7-8 Bedrooms	3000 gallons
h)	Multiple family residences and apartment houses	No more than 4 units per system, unless approved package treatment plant is installed

- 6.1.14. For commercial establishment - the Base Tank Capacity (BTC), a minimum of 1200 gallons is to be installed, plus the Average Daily Flow (ADF). For ADF above 1500 gallons, the Calculated Tank Capacity (CTC) may be calculated at 1,125 gallons plus 75% of the average daily flow or $V=1,125 + 0.75 ADF$.

6.1.15. The following Water Use computation Factor Table shall be used for Commercial Establishments:

Type of Establishment	Gallons Per Person Per Day (Unless otherwise indicated)
a. Rooming Houses	50 gal/per
b. Boarding Houses	60 gal/per
c. Motels/Hotels.....	50 gal/per
d. Restaurants and cocktail lounges.....	100 gal/seat or 35/per
e. Bars or cocktail lounges	20 gal/per
f. Campgrounds with control bathhouse	35 gal/per
g. Recreational vehicle camps.....	100 gal/per space
h. Tourist camps with individual bath units	75 gal/per
i. Retail Markets with public toilets	150 gal/per fixture
j. Retail Markets without public toilets	0.1 gal/sq ft
k. Day camps (no meals served).....	15 gal/per
l. Day schools and Day Care facilities w/o cafeterias, gyms or showers	15 gal/per
m. Day schools with cafeterias, gyms & showers.....	25 gal/per
n. Boarding Schools	100 gal/per
o. Day workers at schools/offices (per shift	30 gal/per
p. Institutions other than hospitals (involuntary)	175 gal/per
q. Industrial buildings (gallons/person/shift, exclusive of industrial waste) with food cafeteria.....	25 gal/per
r. Industrial Building no food cafeteria	15 gal/per
s. Picnic parks (toilet wastes only gal/picnicker)	5 gal/per
t. Swimming pools and bathhouses.....	10 gal/per
u. Country clubs, per resident member	100 gal/per
v. Drive-in theaters, per car space (snackbar included)	10 gal/per
w. Movie theaters, per auditorium seat (snackbar)	10 gal/per
x. Airports, per passenger	5 gal/per
y. Self-service laundries	1000 gal/machine
z. Stores, per toilet fixture (employee/public use)	150 gal/fixture
aa. Service stations (per vehicle served).....	10 gal
bb. Public gathering (auctions, ball games, fairs, etc.)	10 gal/per (exp capt)
cc. Food preparation (wholesale).....	250 gal/employee/shift
dd. Churches - no kitchen.....	5 gal/seat
ee. Churches - with kitchen	10 gal/seat
ff. Kennels.....	10 gal/dog

NOTE: Structure occupancies not classified above shall base their sewage flows on one-year actual water use of a similar occupancy supplied by applicant. Consult the Manual of Septic-Tank Practice or the E.P.A. Manual, Onsite Wastewater and Disposal Systems for other flows.

6.1.16. Fiberglass septic tanks will be approved on an individual basis only after review of design criteria and certification by a Sealer of Weights and Measure for capacity. The following specifications shall apply to the installation of all fiberglass septic tanks:

- a) The tank bed must be prepared by using compacted clean sand as per tank manufacturer's specifications.
- b) The tank shall be set on a compacted sand bed and the surrounding excavation backfilled with clean sand, well compacted, to within eighteen (18) inches of the top of the tank.
- c) The remainder of the excavation shall be filled with loose soil free of rocks.
- d) The fiberglass septic tank shall be equipped with Schedule 40 Plastic pipe and four (4) inch "T's" at the inlet and outlet.
- e) Inlet and outlet joints shall be watertight.

7. INSTALLATION REQUIREMENTS OF SEWAGE SYSTEM FOR LABOR CAMPS

7.1. Sewage Facilities for Toilets Only:

TOILET FIXTURES	SEPTIC TANK CAPACITY	LEACHLINES*
1- 3	1200 gallons	
4- 5	1600 gallons	
6-10	2000 gallons	
11- and over	(plans to be reviewed)	

7.2. Sewage Facilities for Showers Only:

SHOWER FIXTURES	SEPTIC TANK CAPACITY	LEACHLINES*
1-5	1200 gallons	
6-10	1600 gallons	
11 and over	(Plans to be reviewed)	

7.3. Sewage Facilities for Kitchens Only:

	SEPTIC TANK CAPACITY	LEACHLINES*
1-45	1200 gallons	
46-75	1600 gallons	
76-150	2000 gallons	

Note: When toilets, showers and kitchens are connected to one sewage disposal system, the minimum septic tank capacity and leaching line will be the sum of the requirements for each facility. However, these disposal systems may be installed separately.

*Please refer to Disposal Area Requirements Constant for Leach Line by Soil Type, Section 8.6.

8. SUBSURFACE DISPOSAL FIELD

(See Table No. 1 for leach line by soil type page 20)

- 8.1. Location of the disposal field should be in an unobstructed and unshaded area. The minimum distances for lots recorded prior to December 15, 1972 * shall be:

	SEPTIC TANK	LEACH UP TO 8' DEPTH	SEEPAGE PITS OR SUMPS >8' DEPTH
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 & 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.

- 8.2. Where drain lines or seepage pits are installed, a watertight Distribution box of sufficient size to accommodate the necessary field lateral lines shall be constructed at the head of each disposal field with watertight inlet and outlets.
- 8.2.1. Each field lateral line shall be connected separately to a distribution box, shall not be subdivided, and shall provide equal distribution.
 - 8.2.2. The invert of all outlets shall be level. The inlet invert shall be at least two (2) inches above the outlet.
 - 8.2.3. The distribution box shall have a minimum inside dimension of twelve (12) inches and be at least twelve (12) inches deep with a solid impervious bottom.
 - 8.2.4. A five (5) foot ABS Schedule 40 or equivalent tight line with a continuous soil barrier shall be installed between the septic tank, the distribution box and leach line.
- 8.3. Disposal Trenches in the disposal field shall be of the same width and shall be of the same width and shall meet the following:

*Refer to Section 10 Table for distance requirements for lots of record after December 15, 1972.

- 8.3.1. Maximum length of individual leach line..... 100'
- 8.3.2. Minimum width of trench 24"
- 8.3.3. Maximum grade of line..... 3" per 100'
- 8.3.4. Preferable grade of line..... 2" per 100'
- 8.3.5. Distance between line 10' edge to edge
- 8.3.6. Minimum depth of rock
below approved Perforated pipe 12"
- 8.3.7. Minimum depth of rock
over approved Perforated pipe..... 2"
- 8.3.8. Maximum depth of trench..... 42"
- 8.3.8. Minimum distance between
leach line and Septic tank 5'
- 8.3.10. Maximum soil cover over leach line 24'
- 8.3.11. Minimum soil cover over leach line 6"

8.4. Leaching Lines

- 8.4.1. All exit lines from septic tank to disposal field shall be of 4" A.B.S. Schedule 40 or equivalent and all joints glued or sealed according to ASTM Standards.
- 8.4.2. Leach lines may be installed with approved 4" PVC perforated pipe or other approved material.
- 8.4.3. All bends used in the leaching lines shall have one tight joint at each end of the bend.
- 8.4.4. No leach line shall be placed under concrete, blacktop, roadway or structure. If necessary to cross under such construction, watertight lines of material acceptable for the house sewer shall be used. (No Orangeburg pipe or concrete jointed pipe). Leach lines and disposal fields must be maintained in an open area and not compacted. Barricades may be required to maintain this area.
- 8.4.5. No additional credit shall be given for trenches wider than twenty four (24) inches.
- 8.4.6. Grade boards (optional) may be used in trenches for proper grading.

8.5. Filter material shall be graded and washed rock or other approved material.

- 8.5.1. Rock used for filter material shall be one (1) inch to two and one-half 2 ½ inches in diameter.
- 8.5.2. Materials shall be free of dust, sand, clay and fine material.
- 8.5.3. The filter material shall be protected from the earth backfill by fifteen (15) pounds asphalt-saturated felt or other approved material.

8.6. Methods of calculating leach line requirements and filter bed area.

	SOIL	SOIL FACTOR
8.6.1.	Clay and/or Peat	.250
8.6.2.	Silt and/or Sandy Clay Loam	.225
8.6.3.	Sand and/or Sandy Loam	.200

Multiply the Base Tank Capacity (BTC) plus the Average Daily Flow (ADF) of sewage by the Soil Factor to determine the lineal feet of leach line required.

Example: 1200 gallon BTC + 1200 gallon ADF = 2400 gallon CTC
2400 x .225 = 540 lineal feet of leach line two feet wide for sandy clay loam.

8.7. Filter Beds

- 8.7.1. The minimum depth of the filter material under the perforated pipe shall be twelve (12) inches.
- 8.7.2. There shall be a minimum of at least two (2) inches of filter material over the perforated pipe.
- 8.7.3. The filter bed shall be covered with fifteen (15) pound asphalt saturated felt or other approved materials prior to backfill.
- 8.7.4. The filter bed size will be computed on the following basis:

Calculate the length of leach line requirement. Multiply this by three in sandy soils and four in clay soils. This gives required square footage of filter bed.

8.8. Seepage pits may be used for final effluent disposal. Leach lines shall be required with seepage pits installations, unless otherwise specified by the Director of Environmental Health.

- 8.8.1. The filter material in the disposal trench shall terminate at least five (5) feet from the pit excavation. The pit barrier trench shall be undisturbed soil below the grade line of the tight line. Only soil shall be packed around conduit between leach line and pit. No rock or building paper will be approved in this five (5) foot area. The terminal end of this tight line must be elevated four (4) inches above the end of the leach line.
- 8.8.2. The diameter of each pit shall be at least thirty-three (33) inches. It shall not extend within ten (10) feet of the water table. THE MAXIMUM DEPTH OF ANY PIT SHALL BE TWENTY FIVE (25) FEET.
- 8.8.3. 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.
- 8.8.4. The seepage pit shall be filled with washed rock two (2) to four (4) inches diameter, to the top level of the outside of the distribution box.

- 8.8.5. Existing and new systems shall not have less than forty seepage pit, unless otherwise specified by the Director of Environmental Health.
- 8.8.6. At least 60% of all septic systems must be in leach line except in hardpan/clay soils or as determined by the Director of Environmental Health.
- 8.8.7. Seepage pit equivalents:
 - a) one - 33" diameter pit = 60' leach line
 - b) one - 36" diameter pit = 70' leach line
 - c) one - 42" diameter pit = 80' leach line
 - d) one - 48" diameter pit = 90' leach line
 - e) one - 60" diameter pit = 110' leach line
- 8.8.8. The seepage pits shall be located at the end of the leach line.
- 8.8.9. Seepage pits shall be located no closer than ten (10) feet, edge to edge.
- 8.8.10. Pits are prohibited in areas of normal high ground water and perched water table. The water table will be determined at the time when the water is closest to the surface.
- 8.8.11. Pits are to be drilled no deeper than twenty-five (25) feet nor closer than ten (10) feet above the maximum water table. When the depth of the water table is questionable, a test hole to thirty five (35) feet depth may be required if pits are to be installed. If water is encountered, the pit shall be backfilled with ten (10) feet of native soil.

8.9. MOUNDED SYSTEMS

- 8.9.1. A mound system is a soil absorption system that is elevated above the natural soil surface. The purpose of the design is to overcome site restrictions that prohibit the use of conventional soil absorption systems. Such restrictions are slowly permeable soils, slowly permeable soils with high water tables, and permeable soils with high water table.
- 8.9.2. The mound system consists of a suitable fill material, an absorption area, a distribution network, a cap or cover and topsoil. The effluent is pumped or siphoned or gravity fed into the absorption area through a distribution network located in the upper part of the coarse aggregate. It passes through the aggregate infiltrates the fill material. Treatment of the wastewater occurs as it passes through the fill material and the unsaturated zone of the natural soil. The cap, usually a finer textured material than the fill, provides frost protection and retains moisture for a good vegetative cover. The topsoil provides a growth medium for the vegetation.
- 8.9.3. Design of a mound system is to conform to the EPA Design Manual for Onsite Wastewater Treatment and Disposal Systems, October 1980 except for the following exceptions:

a) Minimum size of the absorption area within the mound system:

- 1 bedroom – 2000 sq ft bed area
- 2 bedroom – 3000 sq ft bed area
- 3 bedroom – 4000 sq ft bed area
- Add 1000 sq. ft bed area for each bedroom above 3

b) All individual homes will be required to install a minimum of a 1900 gallon tanks with 800 gallon lift station, (dosing chamber), if system is under pressure from a pump. System shall have a back flow device installed between raised bed and lift station where applicable; thus to prevent back flow when system is nearing total saturation. Lift station must have an automatic alarm installed to warn homeowner of lift pump failure. All wiring connections will be made outside of lift station in a water- proof type electrical junction box. All wiring will be done under applicable permits from County or State agencies.

c) The perimeter of the absorption bed may require a 2" width redwood board retaining wall the height of the bed to maintain soil stability.

8.9.4. Variation in design and sizing of a mound system must be done by a Registered engineer and approved by the Director of Environmental Health.

8.10. SUMPS (GREATER THAN EIGHT (8) FEET IN DEPTH)

1. Sumps are to be dug no deeper than twenty-five (25) feet nor closer than ten (10) feet above the water table.
2. Sumps installed at depth four (4) feet to twenty-five (25) feet shall reach a permeable soil strata.

9. VAULTED PRIVIES

9.1. GENERAL - A vaulted privy is a temporary means of disposal. For other than Temporary use, it will be permitted only in those areas where a subsurface disposal system is not practicable.

9.2. Location shall be such that it cannot discharge, flow, seep or drain into any groundwater or water intended for human or animal consumption. The following are minimum distances:

- | | | |
|--------|------------------------|----------|
| 9.2.1. | From any well | 100 feet |
| 9.2.2. | From any dwelling | 50 feet |
| 9.2.3. | From any property line | 10 feet |
| 9.2.4. | From water table | 5 feet |

9.3. Construction

1. The pit shall be constructed of concrete and be watertight and not less than three (3) feet long and thirty (30) inches wide and shall be at least five (5) feet deep. For each additional seat, the length shall be increased by two (2) feet.

2. The building shall be of tight construction to exclude insects and rodents. The riser shall be of matched tongue and groove lumber or concrete and molded seats shall be provided with tight covers. The door shall be self-closing. The base shall be banked with earth and the vent pipe shall extend from the vault to one (1) foot above the roof. The top shall be screened with sixteen (16) mesh screen.
3. A Sanitation Permit is required prior to construction.

TABLE NO.1 LEACH LINE REQUIREMENTS BASED ON NUMBER OF BEDROOMS*

	1200 GALLON SEPTIC TANK			1600 GALLON SEPTIC TANK	2000 GALLON SEPTIC TANK
TYPE SOIL	1 BR**	2 BR	3 BR	4 BR	5 BR
	NO PITS APPROVED FOR THIS TYPE OF SOIL				
Sand and/or Sandy	80'	160'	240'	320'	400'
Slit and/or Sandy Clay Loam	90' 40'+1-33" pit	180' 100'+1-42" pit	270' 150'+2-33" pit	360' 200'+2-42" pit	450' 240'+3-36" pit
Clay and/or Peat	100' 40'+1-33" pit	200' 80'+2-33" pit	300' 170'+2-36" pit	400' 180'+3-42" pit	500' 270'+3-42" pit
Hardpan	60'+1-33" pit	80'+2-36" pit	120'+3-36" pit	120'+4-42" pit	200'+4-48" pit

*All computations are for a standard 24" wide trench

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

10. REQUIREMENTS FOR WASTE DISPOSAL FOR NEW LAND DEVELOPMENTS

10.1. THE FOLLOWING REQUIREMENTS SHALL APPLY TO ALL DIVISIONS OF LAND AND ALL LAND DEVELOPMENTS FILED AFTER DECEMBER 15, 1972.

(The installations of individual disposal systems, especially in large numbers, creates discrete discharges, which must be considered on an individual basis. The life of such disposal system may be quite limited. Failures, once they begin in an area, generally will occur on an area wide basis. Further, regular Maintenance is important to successful operation of individual disposal systems. To assure continued protection of water quality, to prevent water pollution and to avoid the creation of public health hazards and nuisance conditions, a public entity a/shall be formed with powers and responsibilities defined herein for all subdivisions having 100 lots or more. Subdivisions with less than 100 lots which threaten to cause water quality or public health problems shall also be required to forma public entity.) Estate type zoning (R-R1) shall require a double leach field system with an alternating distribution box to be installed at time of construction.

- a) Public Entity – A local agency, as defined in the State of California Government Code Section 53090 et seq., which is empowered to plan, design, finance, construct, operate, maintain and to abandon, if necessary, and sewerage system or the expansion of any sewerage system and sewage treatment facilities serving a land development. In addition, the entity shall be empowered to provide permits and to have supervision over the location,

design, construction, operation, maintenance and abandonment of individual sewage disposal systems within a land development, and shall be empowered to design, finance, construct, operate and maintain any facilities necessary for the disposal of wastes pumped from individual sewage disposal systems and to conduct any monitoring or surveillance programs required for water quality control purposes. (Unless there is an existing public entity performing these tasks.)

10.2. New land developments are subject to sewage disposal provisions as set forth in the Development Requirements of the San Joaquin County Planning Title.

10.3. MINIMUM CRITERIA

10.3.1. Percolation rates shall be required on all new divisions of land and all new land developments on private sewage disposal systems **under/ (less than)** three (3) acres in area. Each lot proposed in any subdivision must have a percolation rate established.

10.3.2. Percolation rate sites may be specified as to the number of locations and the sites on the division of land plat or the land development plan by the Director of Environmental Health. Depth of test hole shall not exceed forty-two (42) inches. Percolation tests must be done within the proposed sewage disposal area. On a failed percolation a second percolation may be done at a depth no greater than twenty-five (25) feet, on approval by the Director of Environmental Health, providing water table separation distances are met.

10.3.3. Percolation rates and soil profiles must be done by a Registered Engineer or Registered Environmental Health Specialist and observed by a Registered Environmental Health Specialist. Advance notice shall be given so that the performance of a percolation test may be observed. A permit from the Environmental Health Services Division is required.

10.3.4. The minimum disposal area shall conform to the following:

Percolation Rate (minutes/inch)*	Minimum Usable Disposal Area (square foot)**
60 -120	***
41 - 60	12,000
21 - 40	10,000
11 - 20	8,000
Less than 10	6,000

* Determined in accordance with procedures contained in current U.S. Department of Health, Education and Welfare "Manual of Septic Tank Practices", E.P.A. Manual, Onsite Wastewater and Disposal Systems or a method approved by the Director of Environmental Health.

**Areas that are within the minimum distances (see 10.2.8) which are necessary to provide protection to water quality and/or public health shall not be used for waste disposal. The following areas are also considered unsuitable for the location of disposal systems or expansion area:

- a. Areas within any easement which is dedicated for surface or subsurface improvement.
- b. Paved area.

- c. Areas not owned or controlled by property owners unless said area is dedicated for waste disposal purposes.
- d. Areas occupied or to be occupied by structures.

***Requires an alternate septic system or a system designed by a State of California Registered Engineer.

- 10.3.5. A soils profile of the division of land or land developments shall be made to a depth of at least ten (10) feet where the water table or clay strata's are unknown.
- 10.3.6. Multiple dwellings proposed to be built on divisions of land after December 15, 1972 must have the required minimum usable disposal area for each unit based on percolation area.
- 10.3.7. Any division of land or new land development having a slope greater than 10% will be evaluated on an individual basis.
- 10.3.8. Minimum distances in feet to be maintained where public and private sewage disposal systems shall be installed as follows:

Facility	Domestic Well	Public Well	Flowing Stream*	Drainage Course or Ephemeral Stream**	Cut or Fill Bank+	Property Line++	Lake or Reservoir*+
Septic tank, sewer line or Package Treatment Plant	50	100	50	25	10	25	50
Leaching field or Sewage Ponds or sumps <=8' deep	100	100	100	50	+	50	200
Seepage Pit & sumps >8' depth	150	150	100	50	+	75	200

- * As measured from the line which defines the limit of a 100 year frequency flood.
- ** As measured from the edge of the channel.
- + Distance in feet equals four time the vertical height of the cut or fill blank. Distance is measured from the top edge of the bank.
- ++ When individual wells are used. (See Example Figure I.)
- *+ As measured from the high water line.

- 10.3.9. The percolation rate in the disposal field shall be no greater than sixty (60) minutes per inch. Percolation rates for seepage pits shall be no greater than thirty (30) minutes per inch.
- 10.3.10. Ground slope in the disposal area shall not be greater than thirty (30) percent.
- 10.3.11. There shall be a minimum of a three (3) foot separation between the Bottom of a leach trench or ponds and perched water and a minimum of a five (5) foot separation between the bottom of the leach trench or ponds and the static groundwater table.
- 10.3.12. In areas of known high ground water tables, a subsurface boring shall be completed to determine the depth of the water table for all new tentative divisions of land.
- 10.3.13. A ten (10) foot separation is required between the bottom of a seepage pit and the groundwater table. Greater depths are required if soils do not provide adequate filtration.

- 10.3.14. Land developments consisting of less than one hundred (100) lots shall be processed by San Joaquin County Environmental Health Department for compliance with the Rules and Regulations. Tentative maps for subdivision involving six or more family units may be submitted to the California Regional Water Quality Control Board - Central Valley Region with sufficient information that the proposed development will meet San Joaquin County Ordinance 3675.
- 10.3.15. Tentative maps for land developments shall be accompanied by a report of waste discharge and sufficient information to clearly demonstrate that the proposed development will meet these Rules and Regulations. A public entity may be required prior to any discharge of waste.
- 10.3.16. Short time, interim use of individual septic tanks - leaching systems may be acceptable in areas which do not meet these guidelines if sufficient, dependable funding of community collection, treatment and disposal is demonstrated and a plan and time schedule for implementation is being followed.

11. CONSTRUCTION AND USE OF CHEMICAL TOILETS

- 11.1. Chemical toilet facilities shall provide sufficient space for comfortable use. A minimum area of eight (8) square feet, with a minimum width of two and one half (2½) feet, shall be provided for each toilet seat. A minimum area of ten (10) square feet, with a minimum of two and one half (2½) square feet shall be required when a urinal is included. Sufficient additional space shall be included if hand-washing facilities are within the facility.
- 11.2. Toilets shall be designed, constructed and maintained so as to prevent the access of flies to the excreta.
- 11.3. The inside surface of all toilets shall be of durable, non-absorbent material, smooth, easily cleanable and finished in a light color.
- 11.4. The toilets shall be ventilated and provided with self –closing doors, Lockable from the inside.
- 11.5. The tanks for chemical toilets shall be constructed of durable, easily cleanable material. Tank size shall be sufficient to contain the initial chemical charge and provide capacity for at least one day's use for forty persons. Size and construction shall be such as to prevent splashing on the occupant, field or road while being transported. A minimum tank capacity of forty gallons shall be installed in the toilet.
- 11.6. Chemicals capable of controlling odors and liquefying solids shall be used in chemical toilets.
- 11.7. Disposal of contents of chemical toilets shall be into a water pollution control plant; a copy of a permit to dispose of waste at water pollution control plant must be on file in the Environmental Health Department prior to the rental of any toilets in San Joaquin County.

- 11.8. Toilets shall be maintained in a clean and sanitary manner, free of odor and stains.
- 11.9. Each chemical toilet must be identified with the name of the company and a number. The lettering shall be at least three (3) inches in height.
- 11.10. Toilets must be stored at a site approved by the Environmental Health Department.
- 11.11. Pumper trucks must comply with the same provisions as contained in the Environmental Health Department Rules and Regulations for Septic Tank Pumpers.

The undersigned, Secretary of the San Joaquin Local Health District does hereby certify that the foregoing is a full, true and correct copy of a Resolution passed at a special meeting of the Board of Trustees of the San Joaquin Local Health District held on the 23rd day of May, 1989; that said Resolution has not been rescinded, annulled, or set aside and the same is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the official seal of said San Joaquin Local Health District to be hereunto affixed this 23rd day of May, 1989.