



Criteria for Onsite Wastewater Treatment Systems (OWTS) Updated: 01/01/2020

This document outlines the updated criteria for permitting OWTS (septic systems) in the County of San Luis Obispo. These standards take effect Wednesday, January 01, 2020 and will remain in place until the adoption of an approved County Local Agency Management Program (LAMP). The State of California Onsite Wastewater Treatment System (OWTS) Policy Standards supersede San Luis Obispo County Codes (Title 19).

Replacement or Repair of Septic Systems: The County has the authority to permit repairs on systems that will conform to OWTS Policy Tier 1 requirements listed in this document. The County does not have the authority to permit the replacement of failing systems or system components that cannot be repaired to meet OWTS Policy Tier 1 standards.

Any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because its dispersal system is no longer adequately percolating the wastewater is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such the dispersal system must be replaced, repaired, or modified so as to return to proper function.

Any OWTS septic tank failure, such as a baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such shall require the septic tank to be brought into compliance.

Any OWTS that has a failure of one of its components, such as a distribution box or broken piping connection, shall have that component repaired so as to return the OWTS to a proper functioning condition. If the repair/replacement cannot meet the criteria outlined in this document, or involves seepage pits, the applicant must pursue permitting the repair through the Regional Water Quality Control Board (RWQCB).

Maximum Daily Flow Volume: The County does not have the authority to permit systems discharging 3,500 gallons per day or more. Applicants must seek approval from the RWQCB for installation of systems that exceed 3,500 gallons per day.

Regional Water Quality Control Board (RWQCB) Permitting: Permits that cannot be reviewed or approved by the County of San Luis Obispo Department of Planning & Building (County) must attain separate approval from the RWQCB. Guidance for completing the permit application process with the RWQCB is located at:

https://www.waterboards.ca.gov/centralcoast/water_issues/programs/septics/



Questions about RWQCB Permitting should be directed to:

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Criteria for Permitting through County of San Luis Obispo:

Proposed septic systems must adhere to all design criteria in the following pages in order to pursue permitting through the County. For additional detail review the Tier 1 criteria in the State of California Onsite Wastewater Treatment System Policy: [State of California Onsite Wastewater Treatment System Policy](#)

Onsite Wastewater Treatment Systems: All OWTS shall be designed by a qualified professional. Designs must include plans drawn to scale, completely dimensioned, showing direction and approximate slope of surface, location of present or proposed retaining walls, drainage channels, water supply lines or wells, paved areas and structures on the plot, number of bedrooms or plumbing fixtures in each structure, and location of the private sewage disposal system with relation to lot lines and structures. Details of construction necessary to ensure compliance with the requirements of; Criteria for OWTS, California Plumbing Code (CPC) Appendix H, and RWQCB OWTS Policy, together with a full description of the complete installation including quality, kind, and grade of materials, equipment, construction, workmanship, and methods of assembly and installation.

Qualified System Installers: A Licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C42), or Plumbing Contractor (Specialty Class C-36) shall install all new OWTS and replacement OWTS in accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations.

Seepage Pits: The County does not have the authority to permit the installation of seepage pits. Applicants must seek approval from the RWQCB for installation of systems that utilize seepage pits.

Additional Dwelling Units (ADU): ADU's utilizing an OWTS shall meet the minimum standards for a residential single family dwelling (SFD) mentioned in the Criteria for OWTS, CPC Appendix H, and RWQCB OWTS Policy for Tier 1 systems. Where conditions cannot be met, installation of a Nonconventional Onsite Wastewater Treatment System (NOWTS) with supplemental treatment components may allow for the addition of an ADU and require approval from the RWQCB.

Additions, Renovations, and Additional Dwelling Units: Where an addition of one or more bedrooms or major design criteria changes are proposed for an existing dwelling, the designer



must provide an engineered analysis that the existing system, including both septic tank and disposal fields meets the projected increase in effluent, outlined in the Criteria for OWTS, CPC Appendix H, and RWQCB OWTS Policy. The OWTS must be designed by a qualified professional.

Additions and Renovations: Require an OWTS functionality verification performed by a C-42 Licensed Sanitation System Contractor prior to plan submittal to ensure the system meets RWQCB OWTS Policy Tier 0 standards. Any functionality issues or required repairs to the system must then meet RWQCB OWTS Policy Tier 1 requirements and be addressed on the plans. A form is available from the Building Department, see: Septic Verification Form on County of San Luis Obispo Planning and Building website. [Septic Verification Form on Web](#)

Winery On-Site Disposal System: Domestic wastewater and process wastewater shall be disposed of in separate systems.

Winery Wastewater Waiver Required: Wineries producing less than 26,000 gallons of wine or 10,000 cases, must provide a Winery Wastewater Waiver from the RWQCB.

Percolation Testing: For new systems or existing systems with significant design criteria changes, a percolation test is required and must be performed by a qualified professional. Percolation procedures must adhere to the standards mentioned in San Luis Obispo Title 19 Chapter 7. Leaching systems may be used where the percolation rate is between 1 and 120 minutes per inch (mpi). Systems in areas with percolation rates outside that range must be permitted by the RWQCB.

Exploratory Boring: For new systems or existing systems with significant design criteria changes, an exploratory boring to a minimum depth of 15' to determine the depth of groundwater or impervious material is required. For mpi less than 5 but more than 1, a required depth of 20 feet from the bottom of the leach area to usable groundwater (including usable perched groundwater) must be verified. See Criteria for OWTS "Groundwater Separation", or the RWQCB OWTS Policy, Tier 1, Table 2.

Site Slope: Septic tanks or leaching systems shall not be installed on slopes of 25% or more. Where the natural slope is 26% or greater, the property will need a NOWTS and must be permitted by the RWQCB.

Separation from Impermeable Strata: A minimum distance of 10 feet shall be maintained from the bottom of leaching systems to impermeable strata. This distance shall be verified by test borings where required by County.

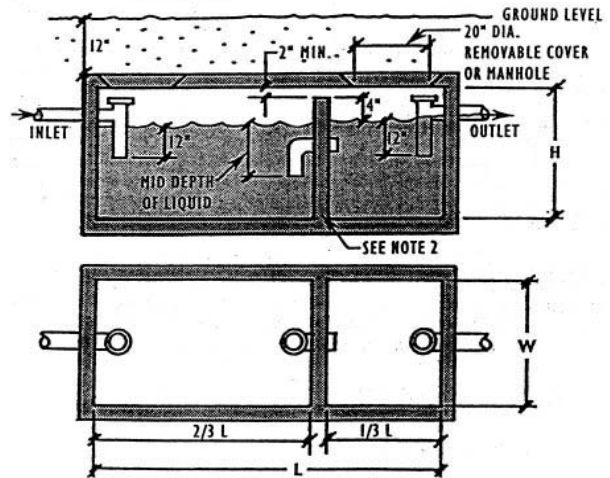
Groundwater Separation: The required depth from the bottom of the leach area to usable groundwater (including usable perched groundwater) is given in the table below. The County may require testing or documentation to verify that the required separation has been met.



Groundwater Separation		
Soil Percolation Rate (mpi)	Conventional OWTS	Non-conventional OWTS with supplemental treatment
1-4 mpi	20 feet	10 feet
5-29 mpi	8 feet	4 feet*
30-120 mpi	5 feet	2 feet*

Septic Tank Size: The minimum tank capacity for new or replaced residential systems is noted below. Filters are required on all tanks. For septic tank capacity for other occupancies, and for septic tank design, refer to the CPC.

Cross Section of a Septic Tank





Capacity of Septic Tanks			
Single Family Dwellings - Number of Bedrooms	Multiple Dwelling Units/Apts - One Bedroom Each*	Other Uses: Max Fixture Units Served**	Minimum Septic Tank Capacity in Gallons
1 or 2	–	15	750
3	–	20	1000
4	2 units	25	1200
5 or 6	3 units	33	1500

* Extra bedroom 150 gallons **See California Plumbing Code Appendix H Table H.201.1

Septic Tanks Risers: Access openings shall have watertight risers, be a minimum of 20 inches, and be located over each compartment, the tops of which shall be set at most 6 inches below finished grade. Access openings at grade or above shall be locked or secured to prevent unauthorized access. See RWQCB OWTS Policy 8.2.2, 8.2.2.1, 8.2.2.2.

Abandonment of Septic Tanks: Abandoned septic tanks will need to be pumped. The receipt or a copy of the receipt of the pumping will need to be given to the County. The tank will then need to be filled with sand, cement slurry, or gravel. If tank is completely removed the excavated area will need to be backfilled with an approved material and compacted to 90%.

Distribution Boxes: Identify on plans the location, cross section, and gradient where the distribution boxes will be located. Distribution boxes must adhere to 2018 CPC Appendix H 601.5 and be designed to ensure equal flow and shall be installed on a level concrete slab in natural or compacted soil.

Sewer Lateral: Horizontal drainage piping shall be run in practical alignment and a uniform slope of not less than 1/4 inch per foot or 2 percent toward the point of disposal. An additional cleanout is required for every 100' of lateral length or changes in direction of more than 135 degrees. See 2018 CPC Chapter 7 Section 708.1 and 707.4.

System Setbacks & Location: No OWTS components shall be located at any point having less than the minimum distances indicated in 2018 CPC Appendix H Table H 101.8. Setbacks for buildings or structures includes; porches and steps, whether covered or uncovered, breezeways, roofed porte cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances.



Required System Setbacks			
Min. Distance Required From:	Building Sewer Line	Septic Tank	Disposal Field
Buildings or Structures	2 feet	5 feet	8 feet
Property Line- Private Property	Clear	5 feet	5 feet
Water Supply Wells	50 feet	100 feet	100 feet
Streams, Springs & Water Migration	50 feet	100 feet	100 feet
Large Trees	–	10 feet	–
Reservoir, Spillway Elevation	–	200 feet*	200 feet*
Vernal Pools, Wetlands, lakes or Ponds	-	200 feet	200 feet
Disposal Field	–	5 feet	3 feet
Domestic Water Line	1 foot	5 feet	5 feet
Public Wells	–	150 feet	150 feet
Unstable Land Mass (bluff edge or slide)	100 feet	100 feet	100 feet
Distribution Box	–	–	5 feet

* All septic systems shall maintain a minimum of 400 feet setback from all components to surface water intake.



Application Rates as Determined from Stabilized Percolation Rates per OWTS Policy

Percolation Rate (minutes/in ch)	Application Rate (gallons/day/ft ²)	Percolation Rate (minutes/in ch)	Application Rate (gallons/day/ft ²)	Percolation Rate (minutes/in ch)	Application Rate (gallons/day/ft ²)
1	1.2	31	0.522	61	0.197
2	1.2	32	0.511	62	0.194
3	1.2	33	0.5	63	0.19
4	1.2	34	0.489	64	0.187
5	1.2	35	0.478	65	0.184
6	0.8	36	0.467	66	0.18
7	0.8	37	0.456	67	0.177
8	0.8	38	0.445	68	0.174
9	0.8	39	0.434	69	0.17
10	0.8	40	0.422	70	0.167
11	0.786	41	0.411	71	0.164
12	0.771	42	0.4	72	0.16
13	0.757	43	0.389	73	0.157
14	0.743	44	0.378	74	0.154
15	0.729	45	0.367	75	0.15
16	0.714	46	0.356	76	0.147
17	0.7	47	0.345	77	0.144
18	0.686	48	0.334	78	0.14
19	0.671	49	0.323	79	0.137
20	0.657	50	0.311	80	0.133
21	0.643	51	0.3	81	0.13
22	0.629	52	0.289	82	0.127
23	0.614	53	0.278	83	0.123
24	0.6	54	0.267	84	0.12
25	0.589	55	0.256	85	0.117
26	0.578	56	0.245	86	0.113
27	0.567	57	0.234	87	0.11
28	0.556	58	0.223	88	0.107
29	0.545	59	0.212	89	0.103
30	0.533	60	0.2	90-120	0.1

*per the CPC any leach field with more than 500 linear feet shall require a dosing system approved by the County.



Calculating Area of Disposal Fields: When disposal fields are installed, the required area of trench bottom shall be provided exclusive of any hard pan, rock, clay, or other impervious formations. Incorporating sidewall area in excess of the required twelve (12) inches is not allowed by the RWQCB OWTS Policy 8.1.6. Dispersal systems shall be a leachfield, designed using not more than 4 square feet of infiltrative area per linear foot of trench as the infiltrative surface, and with trench width no wider than 3 feet. A minimum of 100 linear feet of disposal area is required per individual and distinct OWTS.

Disposal Area: The absorption areas in the Application Rate Table located in the Criteria for OWTS are based on the RWQCB OWTS Policy requirement that residential systems be designed for a flow rate of at least 250 gallons per day based on a Single Family Dwelling (3 bedroom). Additional bedrooms are assessed at 75 gallons per bedroom.

Disposal Area Uniformity: Disposal fields will be consistent with the 2019 CPC Appendix H Figure H 101.2A design criteria and be uniform in length, width, and spacing.

Roads or Parking Lots: No dispersal systems or replacement areas shall be covered by an impermeable surface, such as paving, building foundation slabs, plastic sheeting, or any other material that prevents oxygen transfer to the soil. Septic tanks located within a road or parking lot shall meet setback requirements indicated in 2018 CPC Appendix H Table H 101.8 or be traffic rated and be limited to those approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or stamped and certified by a California registered civil engineer as meeting the industry standards.

Sewage Disposal System Not Allowed in Flood Plain: OWTS cannot be installed within 25 year or lesser flood plain. Determinations are made using the County Interactive Land Use Map. The Land Use Map may be located on the County Website. [Land Use Map](#)

Disposal System Not Allowed in Fill: Design shall minimize grading; no more than 2 feet cut or fill in the area of the leach field.

Required Expansion Area: Individual systems shall be designed and constructed to either reserve 100% replacement area, or to include dual leach fields with a diverter valve at the time of initial system installation. The expansion area must meet all setback criteria for disposal fields. No replacement areas shall be covered by an impermeable surface, such as paving, building foundation slabs, plastic sheeting, or any other material that prevents oxygen transfer to the soil. Installation of dual leach fields will be required if site access for installation of the expansion area would not be feasible after initial site development.

Dosing System Required: Per the CPC Appendix H 601.8, any system with more than 500 linear feet of leach line or 1000 linear feet of total line, including sewer line, shall require a dosing system approved by the County. Dosing systems shall include a tank equivalent to one day's sewage flow and a dosing pump designed by a qualified professional. All dosing systems shall



be equipped with a high and low effluent alarm that is both audible and visual. Provide detailed plans for this pumping system, including a pump curve and size of holding tank equal to a minimum of one day flow are required.

Pumping System: Pumping systems shall include a tank equivalent to one day’s sewage flow and a dosing pump designed by a qualified professional. All pumping systems shall be equipped with a high and low effluent alarm that is both audible and visual. Detailed plans for this pumping system, including a pump curve and size of holding tank equal to a minimum of one day flow are required.

Sample calculation: The following example shows how to compute the minimum length of a disposal field.

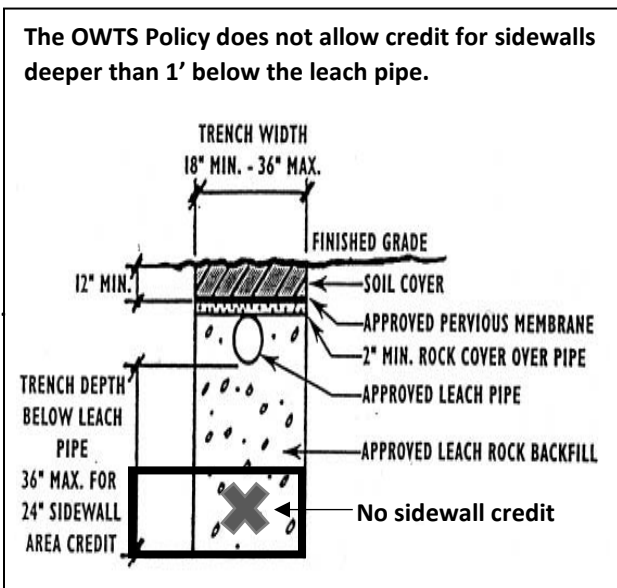
Assumptions:

- Three-bedroom house; 250 gallons per day (gpd)
- Percolation rate = 36 minutes/inch;
- Leach line = 3 feet wide, 1 foot below leach pipe.

Calculation

- Gallons Per Day / Application Rate = Square Feet of Disposal Area
Square Feet of Disposal Area / Leachline Trench = Linear Feet of Trench Required
- Using the stabilized percolation rate 36 mpi and the application table, the application rate would be 0.467.
- Divide the determined 250 gpd by the application rate 0.467 to get 535sf of required dispersal area.
- Calculate the unit trench area at four square feet per linear foot (535sf/4lf) to get 134 feet of required trench length.

Cross Section of Leachline Trench



Trench Design:

- Since the total length required is more than 100 feet, two or more parallel lines totaling 134 linear feet are required.



Nonresidential Domestic gpd Calculations: Require an engineered calculation of gpd of wastewater. Flowrates are calculated using the most recent CPC Appendix H Table 201.1(2) or Chapter 7 Table 702.1 and utilizing whichever is highest to determine gpd of effluent.

Nonresidential Domestic Septic Tank Calculations: Systems sized using the estimated waste/sewage flow rates should be calculated as follows:

- (1) Waste/sewage flow, up to 1,500 gallons/day; flow x 1.5 = septic tank size
- (2) Waste/sewage flow, over 1,500 gallons/day; flow x 0.75 + 1,125 = septic tank size
- (3) Secondary system shall be sized for total flow per 24 hours

Grease Trap/Interceptor size: Calculations for grease interceptor sizing shall be by a California licensed professional.

Hydromechanical Trap/Interceptor use: 2018 CPC Chapter 10 Table 1014.21.

Gravity Trap/Interceptor use: 2018 CPC Chapter 10 Table 1014.3.6.

Grease Trap/Interceptor Location: Location of grease inceptor shall not be installed in building where food is being handled and comply with all setbacks in CPC Appendix H, Table H 101.8. See 2018 CPC Chapter 10 1014.3.4 and 2018 CPC Appendix H 901.2

Disposal Field Construction			
	Minimum	Maximum	Comments
Number of drain lines per field	1	–	Two or more lines must be fed from a distribution box
Length of each line	–	100 feet	Perforated pipe must be capped
Width of trench	18 inches	36 inches	See CPC for leaching beds
Spacing of lines (typical line with 3' of rock)	6 feet center to center, or 3 feet edge to edge	–	
Filter material (rock)	3/4 inch	2 ½ inch	Must be clean rock
Filter material over lines	2 inches	–	Cover with material such as filter fabric to limit earth intrusion
Filter Material Under Drain Lines	12 Inches	-	
Earth cover over lines	12 inches	–	18 inches preferred
Grade of drain lines	level	3 in/100 ft	



Design Changes in the Field: If the contractor wants to change from a standard rock and pipe leach field, to plastic leaching chambers or vice-versa, the qualified professional who designed the system must approve that change in writing. Design changes that would modify the system beyond RWQCB OWTS Policy Tier 1 requirements are not permitted.

Minimum Parcel Size for New Subdivisions: The average density for any subdivision of property served by OWTS, occurring after May 13, 2018 shall not exceed the allowable density of the values in the table below.

Average Annual Rainfall (in/year)	Allowable Density (acres/single family dwelling unit)
0-15	2.5
>15-20	2.0
>20-25	1.5
>25-35	1.0
>35-40	0.75
>40	0.50

*The County will utilize precipitation data from the United States Environmental Protection Agency as the basis for determining average annual rainfall throughout the County.