CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2018-0010

APPROVING THE LOCAL AGENCY MANAGEMENT PROGRAM
FOR
TUOLUMNE COUNTY ENVIRONMENTAL HEALTH DIVISION

WHEREAS, on 19 June 2012, the State Water Resources Control Board (State Water Board) adopted Resolution No. 2012-0032, which in part approved the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy); and

WHEREAS, the OWTS Policy allows Local Agencies to propose Local Agency Management Programs (LAMPs) for California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or Board) approval, as conditional waivers of Waste Discharge Requirements; and

WHEREAS, the OWTS Policy requires Central Valley Water Board staff to solicit comments from the State Water Board's Division of Drinking Water (DDW) regarding a LAMP's proposed setbacks and notifications to water purveyors; and

WHEREAS, on 13 May 2016 the Tuolumne County Environmental Health Division (TCEHD) submitted a formal draft LAMP, along with a preliminary completeness checklist per Board staff's request; and

WHEREAS, on 9 June 2016, Central Valley Water Board staff sought DDW's concurrence on the formal draft LAMP on proposed setbacks and notifications to water purveyors; on 20 September 2016 staff provided TCEHD with comments on the formal draft LAMP; these in part identified lack of an Advanced Protection Management Program (APMP) for Woods Creek, which the OWTS Policy requires as an identified 303d listed impaired water body for pathogens; and

WHEREAS, on 27 April 2017 TCEHD submitted a revised draft LAMP with APMP; on 5 May 2017 staff provided TCEHD with comments on the revised draft LAMP and sought DDWs concurrence on sufficiency of setbacks and notifications to water purveyors; on 15 May 2017 staff and TCEHD resolved issues on the revised draft LAMP and checklist; and on 17 July 2017 DDW concurred with the revised draft LAMP contingent upon an appropriate workshop by 13 May 2018 to define public agency responsibilities and procedures for OWTS Policy implementation; and

WHEREAS, on 14 February 2018, the Central Valley Water Board notified TCEHD and interested persons of its intent to approve the LAMP, and provided them with an opportunity for public hearing, and an opportunity to submit comments and recommendations, both on the LAMP and checklist; and

WHEREAS, on 5 April 2018, the Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to this action.

Therefore, be it RESOLVED, that the Central Valley Water Board hereby approves the Local Agency Management Program submitted by Tuolumne County Environmental Health Division.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the Central Valley Water Board, on 5 April 2018.

Original Signed By

_____

PAMELA C. CREEDON, Executive Officer

Filed : February 20, 2018

No. 9-18

By

Chief Deputy Clerk of the Board of Supervisors

RESOLUTION

OF THE BOARD OF SUPERVISORS OF THE COUNTY OF TUOLUMNE

WHEREAS, under the Porter Cologne California Water Quality Control Act (1971), the State Water Resources Control Board is vested with the authority to require individuals or entities to obtain Waste Discharge Requirements from the appropriate Regional Water Quality Control Board if such individuals or entities intend to dispose of wastewater that has the potential to pollute waters of the state including both surface water and groundwater ("Waters of the State"); and

WHEREAS, Waste Discharge Requirements are designed to ensure that beneficial uses of Waters of the State are not impaired by wastewater discharges; and

WHEREAS, the State Water Resources Control Board has determined that subsurface discharge of effluent from septic systems, now referred to as Onsite Wastewater Treatment Systems ("OWTS"), constitutes a discharge that could affect the quality of Waters of the State and are therefore subject to compliance with Waste Discharge Requirements; and

WHEREAS, on June 19, 2012, the State Water Resources Control Board adopted Resolution No. 2012-0032, which, in part, approves the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* ("OWTS Policy"); and

WHEREAS, the OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS; and

WHEREAS, the OWTS Policy allows local enforcement agencies to continue to implement a local OWTS program, either under the conservative, largely prescriptive low-risk Tier 1 standards, or alternatively under largely performance-based Tier 2 standards as a conditional wavier of Waste Discharge Requirements in a Local Agency Management Program ("LAMP"); and

WHEREAS, the OWTS Policy allows Tuolumne County to propose standards for new and replacement OWTS in a Tier 2 LAMP to the Central Valley Regional Water Quality Control Board ("CVRWQCB") for approval, to provide an alternate method from Tier 1 programs to allow continued use of OWTS while protecting water quality and public health; and

WHEREAS, the Tuolumne County Environmental Health Division finds that a local OWTS program under Tier 1 standards would limit its ability to issue permits for new and replacement OWTS in many areas that warrant different system designs, siting controls, requirements for siting and maintenance agreements, and onsite management districts or zones; and

WHEREAS, Tuolumne County Environmental Health Division staff has instead drafted a LAMP, and conducted public outreach efforts, including public presentations and discussions with local industry professionals and interested parties prior to and during its development; and following a public meeting where all interested parties were invited to attend and make comments at the Tuolumne County Board of Supervisors meeting held on February 6, 2018; and

WHEREAS, the draft LAMP was submitted for tentative approval to the CVRWQCB prior to May 13, 2016, and was found to be acceptable by CVRWQCB staff, and now is required to be adopted for use by the Tuolumne County Board of Supervisors prior to final approval of the LAMP by the CVRWQCB; and

WHEREAS, this resolution adopts the approved Local Agency Management Program (LAMP) facilitating regulation of onsite wastewater treatment systems within County pursuant to the State Water Resources Control Board's adopted Resolution No. 2012-0032 "Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems," in a manner that will provide long-term protection of water resources, the environment and public health and safety.

NOW, THEREFORE, be it resolved that the Board of Supervisors does hereby

1. Finds that adoption and implementation of the Local Agency Management Program is an action taken by the Board of Supervisors to protect water resources, the environment and public health and safety, and is thereby categorically exempt from the California Environmental Quality Act (CEQA) in conformance with CEQA Guidelines sections 15307 and 15308 *Actions by Regulatory Agencies for Protection of Natural Resources* and *Actions by Regulatory Agencies for Protection of the Environment, respectively.* Each exemption stands as a separate and independent basis for determining that the Local Agency Management Program and the Board's adoption thereof is not subject to CEQA; and

2. Hereby adopts the Local Agency Management Program, as attached, for use in Tuolumne County.

BE IT FURTHER RESOLVED, that the Tuolumne County Environmental Health Division is hereby directed to submit the LAMP to the CVRWQCB for final approval and adoption by that board thus allowing implementation of the LAMP consistent with County ordinances in Tuolumne County.

ADOPTED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF TUOLUMNE ON 2/20/18.

AYES:	1st Dist. Absent	NOES:		Dist. —	
	2nd Dist. Hurwelt			Dist.	
	3rd Dist. Royce	ABSENT:	1st	Dist. Brennan	
	4th Dist. Tracy			Dist.	
	5th Dist. Pedigo	ABSTAIN:		Dist. —	

John L. Gray

CHAIR OF THE BOARD OF SUPERVISORS

I hereby certify that according to the provisions of Government Code Section 25103, delivery of this document has been made.

ATTEST: _____ No. 9-10

Chief Deputy Clerk of the Board of Supervisors

ALICIA L. JAMAR
Clerk of the Board

By: _____

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TUOLUMNE COUNTY LOCAL AGENCY MANAGEMENT PLAN
TABLE OF CONTENTS

COMPLETENESS CHECKLIST FOR LAMPS 1

INTRODUCTION 10

ADOPTION PROCESS 11

LOCAL AUTHORITY 11

ADMINISTRATION 14

- OWTS PERMIT PROCEDURE OVERVIEW 14
- PERMIT EXPIRATION & EXTENSIONS 16
- PERMANENT RECORDS 17
- COMPLAINT PROCESS 17
- VARIANCE PROCESS 18
- OUTREACH AND EDUCATION 19
- ANNUAL REPORTS 19

SITE SUITABILITY EVALUATION 19

- SANITARY SEWER CONNECTION 20
- SEPARATION DISTANCES AND SETBACKS 21
- PERCOLATION TESTING 22
- SOIL PROFILING TESTING 22
- GROUNDWATER LEVEL TESTING 23

OWTS DESIGN 23

- GENERAL DESIGN CONSIDERATIONS 23
- NOT SUITABLE FOR ONSITE WASTEWATER DISPOSAL 25
- STANDARD SEWAGE DISPOSAL SYSTEMS 25
- ENGINEERED SEWAGE DISPOSAL SYSTEM DESIGN 27
  - *Gravel Filled Pressure Dosed Systems* 27
  - *At-Grade Bed Systems* 27
  - *Mound Systems* 27
  - *Sand Filled Pressure Dosed Systems* 27
  - *Advanced Treatment with Pressure Distribution Systems* 28

ADVANCED PROTECTION MANAGEMENT PROGRAM 28

OWTS CONSTRUCTION 30

OPERATION AND MAINTENANCE 30

- SEPTIC TANK MAINTENANCE AND PUMPING 30
- SEPTAGE RECEIVING 31

WATER QUALITY ASSESSMENT 32

- ASSESSMENT CONSIDERATIONS 32
- GEOTRACKER GAMA 33
- DRINKING WATER DATA SOURCES 33
- PATHOGEN MONITORING 34
- NITRATE MONITORING 34
- ANNUAL REPORTING 34
- FIVE YEAR ANALYSIS AND REPORTING 34

APPENDICES 36

- APPENDIX A: TUOLUMNE COUNTY CODE: CHAPTER13.08 36
- APPENDIX B: TUOLUMNE COUNTY CODE CHAPTER 13.04 54
- APPENDIX C: TUOLUMNE COUNTY GUIDELINES AND EVALUATION OF SPECIAL DESIGN OWTS 61
- APPENDIX D: TUOLUMNE COUNTY PROCEDURES FOR CONSTRUCTING A STANDARD OWTS 79

Completeness Checklist for LAMPs

GENERAL REQUIREMENTS FOR LAMPs				
OWTS Policy Section	**OWTS Policy Section Summary**	**Region 5 Comments** (These do not replace your review of the OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	**Relevant LAMP Section**	**Legal Authority/ Code Section**
3.3	Annual Reporting	For Section 3.3 et seq., describe your program for annual reporting to Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff in a tabular spreadsheet format.	Annual Reporting	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.	Complaint Process	CHSC §5411 TCOC Chapter 1.10
3.3.2	OWTS Cleaning	Include applications and registrations issued as part of the local cleaning registration pursuant to California Health and Safety Code §117400 et seq.	Septage Receiving	CHSC §117400 et seq.
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.	Annual Reports Appendix A	TCOC §13.08.050
3.4	Permanent Records	Describe your program for permanently retaining records, and means of making them available to Central Valley Water Board staff within 10 working days of a written request.	Permanent Records	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
3.5	Notifications to Municipal Water Suppliers	Describe your program for notifying public well and water intake owners, and the California Department of Public Health. Notification shall be as soon as practicable, but no later than 72 hours upon discovery of a failing OWTS, as described in Sections 11.1 and 11.2, within setbacks described in Sections 7.5.6 through 7.5.10.	Complaint Process	CHSC §5411 TCOC Chapter 1.10 Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.0	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.	N/A	N/A
9.1	Considerations for LAMPs	For Section 9.1 et seq., provide your commitment to evaluate complaints, variances, failures, and inspections in Section 9.3.2 (Water Quality Assessment); and your proposed means of assessment to achieve this Policy's purpose of protecting water quality and human health.	Water Quality Assessment	Throughout Chapter 13.08 and TCEH Guidelines

9.1.1	Degree of vulnerability due to local hydrogeology	*Describe your commitment, and proposed means to identify* hydrogeologically vulnerable areas for Section 9.3.2, *after compiling monitoring data.* Discuss appropriate related siting restrictions and design criteria to protect water quality and public health. Qualified professionals ("Definitions," page 9 in the Policy) should identify hydrogeologically vulnerable areas. *Such professionals, where appropriate during a Water Quality Assessment, should generally consider locally reasonable percolation rates of least permeable relevant soil horizons, best available evidence of seasonally shallowest groundwater (including, but not limited to, soil mottling and gleying, static water levels of nearby wells and springs, and local drainage patterns), threats to receptors (supply wells and surface water), and potential geotechnical issues (including, but not limited to, potentially adverse dips of bedding, foliations, and fractures in bedrock).*	Water Quality Assessment Site Suitability Administration	TCOC §13.08.230 (H) TCOC §13.08.270 and TCEH Guidelines
9.1.2	High quality waters and other conditions requiring enhanced protection	Describe special restrictions to meet water quality and public health goals pursuant to all Federal, State, and local plans and orders. *Especially consider appropriate alternatives to those provided in Section 7.8, Allowable Average Density Requirements under Tier 1. See also: State Water Resources Control Board Resolution No. 68-16.*	Assessment Considerations Minimum Lot Size Advanced Protection Management Program	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.3	Shallow soils requiring non-standard dispersal systems	*We interpret "shallow" soils generally to mean thin soils overlying bedrock or highest seasonal groundwater. Dependent on threats to receptors, highest seasonal groundwater can locally include perched and intermittent saturated zones, as well as the shallowest local hydraulically unconfined aquifer unit. See Section 8.1.5 for Minimum Depths to Groundwater under Tier 1.* Qualified professionals should make appropriate determinations on the design and construction of non-standard dispersal systems due to shallow soils.	Engineered Sewage Disposal 13.08.270 Engineered Systems	TCOC §13.08.270 & Guidelines
9.1.4	High domestic well usage areas	*Our key potential concerns are nitrate and pathogen transport toward receptor wells, especially in areas with existing OWTS already prone to soft failures (OWTS failures not evident at grade). Appropriate qualified professionals should consider reasonable pollutant flow paths toward domestic wells, at minimum based on; publically available nitrate concentrations in local wells, published technical literature on local wastewater and non-wastewater nitrate sources, well constructions, pumping demands, and vulnerability of wells due to local hydrogeology. For pathogens, qualified professionals should ensure that field methods are sufficient to mitigate the potential for false positives.*	Assessment Considerations	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

9.1.5	Fractured bedrock	*Where warranted, appropriate qualified professionals should assess permeability trends of water-bearing fractures, and related potential pathways of effluent toward receptors, including but not limited to, domestic wells and surface water. The professionals should also consider potential geotechnical issues. We suggest consideration of fractured bedrock in concert with percolation rates of overlying soils; either very high or low percolation rates might warrant siting restrictions or non-standard dispersal systems. See also State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment 1, page 1-3, Item A-3.*	Engineered Sewage Disposal 13.08.270 Engineered Systems Assessment Considerations	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.6	Poorly drained soils	*Appropriate qualified professionals should give criteria for determination of representative percolation rates, including but not limited to, general site evaluation, trench logging, pre-soak and measurement methods of percolation tests, and acceptable alternatives for percolation tests.*	Engineered Sewage Disposal Appendix C	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.7	Vulnerable surface water	*Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwater detergents, phosphate is a common cause. At minimum, describe appropriate qualified professionals who will consider potential pathways of wastewater-sourced phosphate and other nutrients toward potentially threatened nearby surface bodies.*	Assessment Considerations	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.8	Impaired water bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*	Local Authority Advanced Protection Management Program Water Quality Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.9	High OWTS density areas	*Where nitrate is an identified chronic issue, at minimum, consider nitrogen loading per area; for example, see Hantzsche and Finnemore (1992), Crites and Tchobanoglous (1998), and more recent publications as appropriate.*	Assessment Considerations	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.10	Limits to parcel size	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.	Local Authority	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.11	Areas with OWTS that predate adopted standards	This refers to areas with known, multiple existing OWTS.	Assessment Considerations	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.1.12	Areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate	This refers to areas with known, multiple existing OWTS.	Assessment Considerations Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

9.2	Scope of Coverage	For Section 9.2 et seq., provide details on scope of coverage, for example maximum authorized projected flows, allowable system types, and their related requirements for site evaluation, siting, and design and construction requirements.	General_Design_Considerations Local Authority	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.2.1	Installation and Inspection Permits	Permits generally cover procedures for inspections, maintenance and repair of OWTS, including assurances that such work on failing systems is under permit; see Tier 4.	OWTS_Permit_Procedure	TCOC §13.12.060-085 TCOC §13.12.160-165
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*	Advanced_Protection_Management_Program	Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified
9.2.3	LAMP Variance Procedures	Variances for new installations and repairs should be in substantial conformance to the Policy, to the greatest extent practicable. Variances cannot authorize prohibited items in Section 9.4.	Variance_Process	Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. *We suggest that Local Agencies review information available from the California Onsite Water Association (COWA), see:* http://www.cowa.org/	OWTS_Qualified_Worker _Qualified Professionals	TCOC §13.08.270 (D)
9.2.5	Education and Outreach for OWTS Owners	Education and Outreach generally supports owners on locating, operating, and maintaining OWTS. At minimum, ensure that you will require OWTS designers and installers to provide owners with sufficient information to address critical maintenance, repairs, and parts replacements within 48 hours of failure; *see also Tier 4.* Also, provide information to appropriate volunteer groups. *At minimum, we suggest providing this information on your webpage.*	Operation_And_Maintenance Administration Outreach_and_Education	http://www.tuolumnecounty.ca.gov/DocumentCenter/View/939
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.	Site Suitability Septage_Receiving	TCOC §13.08.230 CHSC 117400 et. seq.
9.2.7	Maintenance Districts and Zones	*These generally refer to Homeowners Associations, special maintenance districts, and similar responsible entities. Requirements for responsible entities should generally reflect the Local Agency's judgment on minimum sizes of subdivisions that could potentially cause environmental impacts. LAMPs should ensure that responsible entities have the financial resources, stability, legal authority, and professional qualifications to operate community OWTS.*	Local Authority 13.04_Subdivision_Requirements	TCOC §13.04.030
9.2.8	Regional Salt and Nutrient Management Plans	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; *see also State Board Resolution 2009-0011:* http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_regs_policies/rw_policy_implementation_mem.pdf	NA	NA
9.2.9	Watershed Management Groups	Coordinate with *volunteer well monitoring programs* and similar watershed management groups.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified

9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. *See also Section 9.4.9.*	Sanitary sewer connection TCOC 13.08 Sanitary Sewer	TCOC §13.08.150
9.2.11	Public Water System Notification prior to permitting OWTS Installation or Repairs	Give your notification procedures to inform public water services of pending OWTS installations and repairs within prescribed setback distances.	Sanitary sewer connection Separation distances and setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified
9.2.12	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes	Discuss supplemental treatments; see Sections 10.9 and 10.10. A Local Agency can propose alternate criteria; *however we will need rationale in detail.*	Separation distances and setbacks Appendix C Variance Process	TCOC §13.08.280 & TCOC §13.08.270 TCEH Guidelines Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified
9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.	General Design Considerations TCOC 13.08 Cespools Privies	TCOC §13.08.196
9.3	Minimum Local Agency Management Responsibilities:	For Section 9.3 et seq., discuss minimum responsibilities for LAMP management. Responsibilities should generally cover data compilation, water quality assessment, follow-up on issues, and reporting to the Central Valley Water Board:	Throughout LAMP	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.	Variance Process TCOC 13.08 .320 Variance Water Quality Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation once TCOC is modified
9.3.2	Water Quality Assessment Program:	In the Water Quality Assessment Program, generally focus on areas with characteristics covered in Section 9.1. Include monitoring and analysis of water quality data, complaints, variances, failures, and inspections. Also include appropriate monitoring for nitrate and pathogens; you can use information from other programs. *We are available to provide further guidance on reporting requirements. In the interim, to assist with analyses and evaluation reports (Section 9.3.3), we suggest posting data on appropriate maps; for example consider the following links*: http://www.nrcs.usda.gov/wps/portal/nrcs/site/ca/home/ http://www.cdpr.ca.gov/docs/emon/grndwtr/gwpa_maps.htm http://ngmdb.usgs.gov/maps/mapview/ http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/SacValGWContours/100t400_Wells_Spring-2013.pdf	Water Quality Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

		http://www.water.ca.gov/waterdatalibrary/ http://www.waterboards.ca.gov/gama/docs/hva_map_table.pdf http://geotracker.waterboards.ca.gov/gama/ http://msc.fema.gov/portal		
9.3.2.1	Domestic Well Sampling	*Apply your best professional judgment to ensure that well sampling focuses on hydrogeologically reasonable pollutant (primarily nitrate) flow paths. A qualified professional should generally design an appropriate directed, judgmental, sample (i.e., statistically non-random). Of the links provided, the Geotracker GAMA website might be particularly useful to the professional; at minimum we suggest reviews of available nitrate data in relevant domestic wells, up-gradient, within, and down-gradient of an area of interest. For some instances, for example where a developer proposes a relatively large project, a Local Agency might require a special study to distinguish between wastewater and non-wastewater sourced nitrate. In such cases, we suggest your consideration of requiring focused sampling and analyses, for example of $\delta^{18}O$ and $\delta^{15}N$ of nitrate (Megan Young, USGS, 2014 pers comm), and the artificial sweeteners sucralose and acesulfame-K (Buerge et al 2009, Van Stempvoort et al 2011, and more recent publications as they become available).*	NA	NA
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	This applies only if those samples are routinely performed and reported.	NA	NA
9.3.2.3	Water Quality of Public Water Systems	Reviews can be by your agency or another municipality.	Drinking_Water_Data	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.3.2.4	Domestic Well Sampling, New Well Development	This applies if those data are reported.	NA	TCOC §13.16.140
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	*Public beaches include those on freshwater. Note:*	NA	NA
9.3.2.6	Receiving Water Sampling Related to NPDES Permits	This refers to existing data from other monitoring programs.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.3.2.7	Data contained in California Water Quality Assessment Database	This refers to existing data from other monitoring programs.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	This refers to existing data from other monitoring programs.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.3.2.9	Groundwater Sampling Related to GAMA Program	This refers to existing data from other monitoring programs.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Reports are due 1 February, annually, beginning one year after a Regional Board approves LAMP. Every fifth year also include an evaluation report. Submit all groundwater monitoring data in Electronic Delivery Format (EDF) for Geotracker; submit all surface water data to CEDEN.	Water_Quality_Assessment	Adopted by Reference, Pending RWQCB Approval;
9.4	Not Allowed or Authorized in LAMP	For Section 9.4 et seq., ensure that your LAMP covers prohibitions.	Throughout LAMP	Adopted by Reference, Pending RWQCB Approval
9.4.1	Cesspools	Local Agencies cannot authorize cesspools of any kind or size.	Cespools_Privies	TCOC §13.08.190
9.4.2	Projected Flow greater than 10,000 gpd	*Apply professional judgment to further limit projected flows.*	Local_Authority	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.3	Effluent Discharger Above Post-Installation Ground Surface	For example, Local Agencies cannot authorize effluent disposal using sprinklers, exposed drip lines, free-surface wetlands, and ponds.	Local_Authority Engineered_Sewage_Disposal Appendix_C Appendix_D	TCOC §13.08.210 & TCEH Guidelines & Procedures for Standard Systems Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.4	Installation on Slopes greater than 30% without Registered Professional's Report	*See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.*	_Engineered_Systems _Site_Evaluation	TC Septic Guidelines XII Adopted by Reference, Pending RWQCB Approval; To begin implementation 13 May 2018
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier less than 0.70	IAPMO refers to International Association of Plumbing and Mechanical Officials. *Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, less than 1, allows for a reduction in dispersal field area relative to a conventional system.*	gravel_less_leaching	TCOC §13.08.240 & Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.6	Supplemental Treatments without Monitoring and Inspection	*Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.*	_Advanced Treatment OPERATION_AND_MAINTENANCE	TCOC §13.08.270 (G)

9.4.7	Significant Wastes from RV Holding Tanks	*We interpret significant amounts to mean amounts greater than incidental dumping, such that volume, frequency, overall strength, or chemical additives preclude definition as domestic wastewater; see Definitions in OWTS Policy. See also, State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment B-2.*	Local Authority	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.8	Encroachment Above Groundwater	Bottom of OWTS dispersal systems cannot be less than 2 feet above groundwater, or bottom of seepage pits, less than 10 feet above groundwater. *We interpret groundwater to include inter-flow and perched zones, along with the shallowest main unconfined aquifer. Degree of vulnerability to pollution due to hydrogeological conditions, Section 9.1.1, and the Water Quality Assessment, Section 9.3.2., should cover in detail means of assessing seasonally shallowest depth to groundwater.*	Engineered Sewage Disposal Engineered Systems Standard System Design	TCOC §13.08.220 §13.08.230 §13.08.270 & TC Septic Guidelines
9.4.9	Installations Near Existing Sewers	New and replacement OWTS cannot occur on any lot with available public sewers less than 200 feet from a building or exterior drainage facility (exception; connection fees plus construction costs are greater than 2 times the replacement OWTS costs, and Local Agency determines no impairment to any drinking water.)	TCOC 13 Sewer Connection Sanitary Sewer	TCOC §13.08.150
9.4.10	Minimum Setbacks:	These setbacks are from public water systems.	Setbacks Appendix A Appendix B	TCOC § 13.08.280 § 13.04.060 Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.10.1	From Public Supply Wells	If the dispersal system is less than 10' in depth, then the setback must be greater than150' from public water supply well.	Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.10.2	From Public Supply Wells	If the dispersal system is greater than10' in depth, then the setback must be greater than 200' from public water supply well.	Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.10.3	From Public Supply Wells, Regarding Pathogens	If the dispersal system is greater than 20' in depth, and less than 600' from public water supply well, then the setback must be greater than the distance for two-year travel time of microbiological contaminants, as determined by qualified professional. In no case shall the setback be less than 200'.	Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.10.4	From Public Surface Water Supplies	If the dispersal system is less than 1,200' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 400' from the high water mark of the surface water body.	Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.4.10.5	From Public Surface Water Supplies	If the dispersal system is greater than 1,200,'but less than 2,500,' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 200' from high water mark of surface water body.	Setbacks	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

9.4.11	Supplemental Treatments, Replacement OWTS That Do Not Meet Minimum Setback Requirements	Replacement OWTS shall meet minimum horizontal setbacks to the maximum extent practicable.	Setbacks Advanced Treatment System Repairs Sanitary sewer connection	TCOC §13.08.280 TCOC §13.08.150
9.4.12	Supplemental Treatments, New OWTS That Do Not Meet Minimum Setback Requirements	New OWTS shall meet minimum horizontal setbacks to the maximum extent practicable, and meet requirements for pathogens as specified in Section 10.8., and any other Local Agency's mitigation measures.	Setbacks Advanced Treatment System Repairs	TCOC §13.08.280
9.5	Technical Support of LAMP	Include adequate detail to ensure that the combination of all proposed criteria will protect water quality and public health sufficiently to warrant the Central Valley Water Board's waiver of Waste Discharge Requirements, pursuant to §13269, California Water Code.	Throughout LAMP	Throughout TCOC Chapters 13.04 & 13.08 Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. *We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.*	N/A	Adopted by Reference, Pending RWQCB Approval; Begin implementation 13 May 2018

Tuolumne County Local Area Management Plan
for
Onsite Wastewater Management

INTRODUCTION

This document represents the Local Agency Management Program (LAMP) for oversight of onsite wastewater treatment systems (OWTS) within Tuolumne County, California. This LAMP has been prepared in accordance with the requirements of the State Water Resources Control Board (SWRCB) Water Quality Control Policy for the Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems, dated June 19, 2012 (Policy). This Policy describes four "Tiers" of onsite wastewater treatment system management. Tier 2 describes the requirements for developing a LAMP which, when approved, becomes the standard by which authorized local agencies regulate OWTS. An approved LAMP is equivalent to a "Conditional Waiver of Waste Discharge Requirements" for OWTS within the local agency jurisdiction.

This LAMP has been prepared by Tuolumne County to obtain approval for OWTS management under Tier 2 of the OWTS Policy. As noted in the Policy, responsible local agencies are recognized as the most effective means to manage OWTS on a routine basis. As such, the Policy is intended to allow Tuolumne County to continue providing local oversight of OWTS through a local program that is an alternative to the Tier 1 standards but still meets the Policy purpose which is to protect water quality and public health.

Tuolumne County is located within the Sierra Nevada Mountains. The terrain ranges from low rolling foothills in the western portion of the County to rugged high mountains, with elevations over 8,000 feet, in the east. The County is located in central California, approximately 130 miles east of San Francisco.

The California Department of Finance's population projects for 2016 estimate Tuolumne County's current population as 54,900 people. There are 12,030 households served by public sewer. It has been estimated that there are 17,500 OWTS serving the remaining residents of Tuolumne County. This LAMP only applies in areas of the County not served by wastewater treatment systems operating under waste discharge requirements issued by the Regional Board.

The density of development within Tuolumne County is influenced by corridors formed by State Highways 49, 108, 120, and 132. The most intense areas of development radiate out from these highways. The Tuolumne County Environmental Health Division (TCEHD) has been charged with the responsibility for regulating OWTS throughout Tuolumne County. In order for individual dischargers to qualify for the state's conditional waiver of waste discharge requirements, TCEHD operates its onsite wastewater treatment program under the authority granted by the Central Valley Regional Water Quality Control Board (CVRWQCB) and hereby seeks approval of this LAMP for the entire County.

ADOPTION PROCESS

The OWTS Policy requires counties to submit a LAMP by May 13, 2016. This LAMP primarily describes the existing local wastewater management program, but also identifies sections of the Tuolumne County Ordinance Code (TCOC) that will need to be amended and new reporting requirements to satisfy the minimum requirements of the OWTS Policy. These proposed changes will not substantially alter the wastewater treatment program or the way septic systems are installed. Rather, they include items such: increased setbacks to drinking water wells; further notification standards for drinking water intake sources of nearby failing systems; and further defined license and registration requirements of qualified professionals authorized to perform a range of OWTS services. The LAMP also identifies new responsibilities of the Tuolumne County Environmental Health Division (TCEHD) to submit reports to the Regional Water Quality Control Board, both annual reports that summarize permit and inspection activities, and 5-year water quality assessments. Where needed to comply with the OWTS Policy, these changes are identified throughout this LAMP.

The Policy requires citations for specific legal authority for TCEHD to carry out the roles and responsibilities outlined in the LAMP. In order to satisfy these requirements, this LAMP will need to be adopted by reference into the TCOC. Since changes to TCOC will be made to ensure consistency with state law, these changes are not growth inducing and will not result in a significant adverse impact on the environment, as evaluated in the *Onsite Wastewater Treatment System Policy Final Substitute Environmental Document* dated June 19, 2012, that was prepared by the State Water Resources Control Board in accordance with the California Environmental Quality Act (CEQA) has been ensured.

The Central Valley Regional Water Quality Control Board (CVRWQCB) is requesting a Resolution from the Tuolumne County Board of Supervisors confirming their intent to make the specified Code changes contained herein, including adopting this LAMP by reference into the TCOC. The local code change process can begin after LAMP review and concurrence by CVRWQCB staff. Once the local ordinance is updated through our local process, TCEHD will submit the revised ordinance, the LAMP, and an interested parties list to CVRWQCB staff. Assuming no outstanding issues, CVRWQCB staff will then separately prepare and provide public notification for another tentative Resolution for its Regional Board to consider approving Tuolumne County's LAMP as an uncontested item at a regularly scheduled meeting. This entire process must be completed no later than May 2017. Once the LAMP is approved by CVRWQCB, the LAMP provisions of reporting and monitoring will become effective in May 2018.

LOCAL AUTHORITY

Chapter 13.08 and Chapter 13.04 of the Tuolumne County Ordinance Code (TCOC) are the basis for sewage disposal regulation. They specify requirements for prohibited acts, permitting, variances, violations, enforcement and rules and regulations. These Chapters of the TCOC are attached to this LAMP as Appendix A and Appendix B.

The TCOC references the *Tuolumne County Guidelines for Design and Evaluation of Special Design OnSite Sewage Treatment and Disposal Systems or OWTS* (Guidelines) and *Procedures for*

Constructing a Standard OWTS for Onsite Wastewater Treatment Systems (Procedures) which specifies requirements for the development of new and existing lots and parcels throughout Tuolumne County. It prescribes the system design, location, construction and maintenance standards of OWTS to ensure all wastewater that is generated is adequately and safely disposed to protect public health and the environment. These Guidelines and Procedures are attached to this LAMP as Appendix C and Appendix D.

Chapter 13.04 pertains to waste disposal from land developments. Among other things, it specifies surface and subsurface testing and suitability requirements for wastewater disposal during the creation of new lots and parcels in Tuolumne County.

In many specific ways, the requirements for creating a new parcel in Tuolumne County are more stringent than the requirements for constructing an OWTS on an existing parcel. For instance, Chapter 13.04 has density requirements, in the form of designated sewage disposal area, for creating new lots or parcels. Depending on site conditions, a new parcel may need to set aside more than 12,000 square feet of area exclusively for wastewater disposal. For existing lots, the area required is simply leachfield and replacement area. Depending on site conditions, this may only require a few hundred square feet. Other examples where the requirements for creating new parcels are more restrictive than building on an existing parcel include suitable depth to groundwater, acceptable percolation rate range, and separation distances. The Chapter 13.04 requirements are in place for all parcels of a gross area of ten acres or less created on and after January 2, 1975, so all parcels created since that time have satisfied these higher standards.

Local standards may allow new and replacement average OWTS densities greater than the minimum densities allowed in Tier 1 of the OWTS Policy. Tier 1 allowable average densities may seem quantitatively more conservative and therefore more protective of human health and water quality. In fact, Tuolumne County Ordinance Code, Chapter 13.04 procedures for creating new parcels are qualitatively more protective of human health and water quality because only the *suitable disposal area* is considered during tentative parcel creation. Otherwise, potentially unbuildable or marginally suitable 1.0 acre parcels might be developed throughout the County where the average annual rainfall is 35 inches per year.

Suitable disposal areas do not include areas within zoning setbacks, within dedicated easements unless the easements are dedicated for liquid waste disposal purposes, areas not owned or controlled by the property owner, or areas occupied or to be occupied by structures or paved areas or areas that have been proven to be unsuitable for liquid waste disposal during the mandatory TCOC Chapter 13.04 site and soil evaluations. The evaluation will identify and record any unsuitable disposal areas found due to excessive rock, elevated groundwater levels, poor percolation rates, or areas within additional setback requirements to formations such as cutbanks, public water supplies, drainages, and property lines.

We must also consider that Tier 1 and Tier 2 criteria makes provisions for disposal fields and seepage pits to be installed to depths that exceed 20 feet below the ground surface without taking any additional measures for advanced treatment. Most disposal fields installed within Tuolumne County

are only 3.0 feet below the ground surface to maximize effluent treatment within the most aerated soils in the upper soil horizons. Where conditions are favorable deeper systems are installed but rarely exceed 6.0 feet below the ground surface. As an additional safety precaution, TCOC will be modified to prohibit system installation where disposal field depths will exceed 10 feet. Deeper systems may be allowed in repair situations pursuant to the procedures for minor deviations with approval from Environmental Health Division Director.

Because seepage pits disperse effluent in anoxic environments where pathogens may not be treated before they reach the water table and because the US Environmental Protection Agency discourages the use of seepage pits for onsite sewage or septic system effluent disposal, particularly on steep slopes, areas with shallow ground water, and /or areas where groundwater provides the sole source of drinking water, TCOC Chapter 13.08 declares that the use or installation of seepage pits is unlawful and a nuisance.

In addition to the requirements for creating new parcels, the minimum criteria for standard septic systems requires a vertical separation of five feet below the bottom of the effluent dispersal field to a restrictive layer, fractured rock, and groundwater. Furthermore, standard system installations are prohibited in areas of excessive slope (30% or greater), in areas where the percolation rates are less than one minute per inch or greater than 120 minutes per inch, and in areas where there is not sufficient area available for wastewater disposal.

Taken together, these codes are more protective of human health, the environment and water quality than the minimum criteria specified in Tiers 1 and 2 of the OWTS Policy. These codes are the regulatory basis for wastewater disposal throughout Tuolumne County and have been responsible for ensuring that wastewater is adequately treated before returning to the groundwater table and surface water bodies. Throughout this LAMP, references to specific provisions in the TCOC and Guidelines are made.

Though not currently specified in the TCOC or the Guidelines, this LAMP will apply only to projected wastewater flows up to 10,000 gallons per day including small community systems for service of no more than four individual parcels. Similarly, this LAMP will not apply to systems which produce high strength wastewater (as defined in the OWTS Policy), or OWTS dedicated to receiving significant amounts of waste from recreational vehicle holding tanks (per Policy Section 9.4.7). After concurrence from the CVRWQCB, Chapter 13.04 and Chapter 13.08 of the TCOC and the Guidelines and Procedures will need to be amended to state these limitations and ensure the local code is consistent with the SWRCB OWTS Policy. In addition, TCOC Section 13.08.050 will be modified to include the City of Sonora within the County's permitting authority for OWTS. Further recommendations to amend the TCOC and the Guidelines and Procedures for consistency with the OWTS Policy are highlighted throughout this LAMP.

These codes have been effective in protecting groundwater quality and public health in Tuolumne County for many years as evidenced by the lack of impaired water bodies due to OWTS in the County and the lack of impacted public water supply wells. The State has indicated that the County of Tuolumne has an impaired water body (Wood's Creek) due to septic failure. We have challenged this

position in the past and have tried to relay information to the State indicating that the section of contamination of Wood's Creek is correlated to several homeless camps along its banks. The County code will be amended to require available disposal field areas and repair/expansion areas approved for creating new parcels to comply with the maintenance of a mandatory 600 foot setback between the OWTS and any impaired water body as a condition of the construction permit on newly created parcels.

Tuolumne County feels that this past performance of the local program has adequately protected water quality with criteria differing from the Tier 1 standards and is a strong endorsement of the existing local program and this LAMP and should be considered according to section 9.6 of the OWTS policy.

ADMINISTRATION

OWTS Permit Procedure Overview

Pursuant to Section 13.08.010 of the TCOC, the purpose of Chapter 13.08 is to establish minimum requirements for the protection of public health, welfare, and safety in the design, construction, maintenance, and use of private sewage disposal systems and to protect surface and ground water from contamination by inadequately treated sewage.

Section 13.08.050 of the TCOC specifies that no person, whether as principal, servant, agent, employee, owner or tenant, or otherwise, shall construct, install or replace any private sewage disposal system in any area of Tuolumne County without first having obtained a permit from the Environmental Health Division. If such sewage disposal system is to be constructed, the permit therefore shall be obtained prior to the commencement of construction for such new dwelling. Applications for permits to construct any sewage disposal system shall be made in such manner and on such forms as the Environmental Health Division directs and devises. A sewage disposal permit shall be required for modification of any part of the septic tank and/or leach field other than pumping of a septic tank, including the addition or replacement of leach field trenches. Upon adoption of this LAMP by the Regional Board, all new or replacement OWTS permitted in accordance with this LAMP will be Tier 2 systems.

Section 13.08.130 of the TCOC specifies the issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for or an approval of any violation of any provisions of Chapter 13.08. No permit presumed to give authority to violate or cancel provisions of Chapter 13.08 shall be valid except insofar as the work or use which it authorizes is lawful. The issuance or granting of a permit or approval of plans shall not prevent the Environmental Health Director from thereafter requiring the correction of errors in the plans and specifications or from preventing construction operations being carried out thereunder when in violation of this chapter or any other ordinance.

OWTS application requirements are found in Section 13.08.210 of the TCOC. All applications for wastewater permits are filed with the TCEHD and require submittal of a detailed scaled plot plan with detailed information and the appropriate fee. This information is entered into the County's permit

tracking database (CRW/TRAKIT) for financial, permit, and inspection tracking. At the time the application is submitted, staff verifies that the contractor of record holds an appropriate license. The property owner or current California State Contractors with the Licensing Board Class A (General Engineering), Class C42 (Sanitation System) and Class C36 (Plumbing) are issued a permit to install an OWTS.

The other Divisions in the Community Resources Agency also utilize CRW/TRAKIT system for financial and permit tracking. All applications for building, grading, land divisions, and other development entitlements are routed through the TCEHD to verify the required onsite wastewater requirements have been satisfied. When an application is received by TCEHD, Permit Technicians combine the application with any additional site suitability data, or other information in the vicinity of the project which may be relevant to onsite waste disposal. Afterwards, the application is forwarded to the assigned TCEHD Registered Environmental Health Specialist (REHS) for further processing and possible field review.

The assigned REHS performs an office review of the submitted data. If the data is acceptable and satisfies the submittal requirements for the proposed project, the REHS can approve the TCEHD portion of the project. If there is not adequate data to approve the project in the office, additional data will be required or a site visit may be necessary. If additional testing or site information is required (as discussed in the Site Suitability Section of this LAMP), arrangements are made to complete this testing before the process moves forward.

For sites suitable for a standard OWTS, the design criteria (as discussed in the OWTS Design Section of this LAMP) are specified by the TCEHD field REHS. These specifications are included in the Permit to Construct issued by TCEHD. The TCEHD REHS is also responsible to inspect and ensure the system is installed as designed. All EH activities associated with the OWTS application, permit and inspection process are recorded on the field inspection log, application, and in the CRW/TRAKIT database, which becomes a part of the permanent record for that parcel.
For sites requiring alternative design, and for sites within the geographic area of the Woods Creek Advanced Protection Management Program, (APMP), the design criteria are specified by a qualified professional. A qualified professional means an individual licensed or certified by a State of California agency to design OWTS and practice as a professional as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a registered environmental health specialist certificate, or is currently licensed as a professional engineer or a professional geologist. For the purpose of performing site evaluations, soil scientists certified by the Soil Science Society of America are considered qualified professionals. The role of the TCEHD field REHS is to confirm that the proposed system can satisfy the requirements specified in the TCOC and the Guidelines, but they do not design the system in these instances. Instead, the qualified professional's specifications become a condition of the Permit to Construct the system issued by the TCEHD. In this case, the qualified professional is responsible to ensure the system is constructed as designed with additional oversight provided by the TCEHD REHS. The field inspection log, application, and CRW/TRAKIT database are also used to record activities for these systems and become part of the permanent record for the parcel.

The Permit to Construct is valid for a period of one (1) year from the date of issue. The permit and a copy of the approved plot plan is issued to the applicant and/or contractor when the installation permit is issued. The permit and approved plot plan list all of the information necessary to construct the system, including the size, configuration, maximum depth of excavation, and special conditions of installation. Construction may begin once the permit is issued.

During construction, three or four inspections will be completed by TCEHD staff to verify the OWTS was installed as specified. The first inspection (open trench inspection) is done when the disposal trenches have been excavated and the septic tank is in the excavation but not backfilled. The REHS examines the trench for smearing and correct depth/length. If the open trench is satisfactory, the installer has the green light to continue installation and can place the required material in the trench (drain rock, pipe, leaching chambers, distribution box, etc.). At this time, a water tight test on the septic tank is scheduled and inspected. If the open trench inspection is satisfactory, it is recorded on the required forms and in the CRW/TRAKIT Database and the onsite inspection card, then construction can proceed. If installation is found to be contrary to permit conditions or the approved plot plan, corrections must be completed before construction is allowed to continue. When the construction is complete, a final inspection is required. During the final inspection, TCEHD staff will verify items such as proper grading, capping fill depth, monitoring wells, and proper float and pump operation. At this time, an as-built drawing is completed by TCEHD staff to document the location and dimensions of the disposal field and septic tank. If the OWTS is an alternative design, the qualified professional is required to conduct the same inspections and submit a final letter of certification stating the construction of the OWTS was observed and found to be in substantial conformance with approved plans. If TCEHD staff determines the installation satisfies the TCOC and Guidelines, final approval is granted and the required forms are completed and the CRW/TRAKIT database is updated.

Permit expiration and extensions

After a site and soils evaluation has been completed and plans have been approved and the permit is issued, the applicant has one (1) year from the date of permit issuance to construct, install, or replace the proposed system. This approval may be extended for a period not to exceed three hundred sixty five (365) days upon written request by the applicant (TCOC, Section 13.08.070), and approval of the Environmental Health Division.

When the applicant is issued a Permit to Construct, they will receive two copies of plans and specifications stamped "APPROVED." Such plans and specifications shall not be changed, modified or altered without authorization from the Environmental Health Division, and all work shall be done in accordance with the approved plans. Any request for extension shall be subject to conformance with all minimum code standards at the time of request. In order to renew work on a permit after expiration, the permittee shall pay the staff hourly cost with a one hour minimum upon applying for a permit renewal for permits that expired prior to July 1, 2008. The permittee shall pay a new permit fee to renew action on a permit that expired prior to July 1, 2008.

Permanent Records

Once an application is made for the construction or repair of an OWTS, all paperwork associated with the design and installation is placed into a file for that specific Assessor's Parcel Number. All files are

saved and placed into filing cabinets. TCEHD Policy # I-65 specifies that sewage disposal permit and testing records are to be maintained in perpetuity in either a paper copy or electronic format. The TCEHD has records dating back to the early 1970's. In 2010, the Environmental Health Division was transferred from the Tuolumne County Health Department to the Community Development Department (CDD). In 2011, CDD was merged with the Public Works Department in the Tuolumne County Community Resources Agency (CRA). During this time, all of the OWTS were integrated electronically. The CRW/TRAKIT database has information, such as fees paid, inspections completed, permits issued and some limited information on the size of the OWTS (number of bedrooms, overall footage, trench depth and width, etc.). Permitting records are public records of the TCEHD and are subject to disclosure under provisions of the California Public Records Act, (Government Code Section 6250-6260) and are to be made available to the public, including the regional board staff, within two working days pursuant to TCEHD Policy # I-31.

Complaint process

Anyone observing a violation of the TCOC, including a failing OWTS, improper sewage disposal, illegal or unpermitted installation of a sewage disposal system, or other health and safety concerns is encouraged to report this to TCEHD. TCEHD accepts complaints submitted on an official complaint form via electronic webpage submittal, email, fax or in person. The complaint form requires information which allows TCEHD staff to accurately locate the property, contact the complainant and identify the type of hazard. Once a complaint is received, the assigned field REHS performs an investigation. This may include contacting the responsible party, conducting a site visit, or taking other actions as needed to investigate the complaint.

If a complaint investigation leads to discovery of an OWTS failure, an opportunity to correct or a notice of violation is issued to the property owner which identifies the violations and establishes a timeline for abatement and/or repair. A failing OWTS includes, but is not limited to, any system which discharges untreated or incompletely treated wastewater or septic tank effluent directly or indirectly onto the ground surface or into the public water supply that results in the creation of a public nuisance or creates a potential health hazard.

Any OWTS failure specified in OWTS Policy Section 11.1 or 11.2, including but not limited to pooling effluent, evidence of previous discharges to the ground surface, or structural septic tank failure, will be subject to further investigation regarding the location where the failure is occurring. If field REHS determines that the failure is within 150 feet of a public water supply well, or within 2,500 feet of a public water system surface water intake point and located such that it could potentially impact surface water quality at the intake point, the public water supplier and the State Board Division of Drinking Water shall be notified. According to OWTS Policy Section 3.5, this notification needs to be provided within 72 hours of TCEHD discovering this condition.

Hard copies of the written description of the original complaint, along with the REHS field notes describing what was found, notifications made, and how the issue was resolved are maintained in complaint files in the TCEHD office. A brief summary of the location, nature of the complaint and how it was resolved are recorded in the CRW/TRAKiT database under the Assessor's Parcel Number.

Variance process

TCOC Chapter 13.08 regulations are consistent with the provisions of OWTS Policy Sections 9.4.1 through 9.4.9. An administrative variance may only be issued for a requirement specified by TCOC in the case of a repair to an existing system in the event that there is no alternate option available and adequate mitigation measures are prescribed by the qualified professional and verified by the TCEHD. For example, there are a number of challenging developed areas with pre-existing parcel configurations where slope and access restrictions favor the utilization of IAPMO chamber type systems where a necessary size reduction can be effectively mitigated by the qualified professional with the use of pre-treatment, pressure dosed dispersal, and compliance with the Operation Maintenance and Monitoring Program.

The TCOC contains provisions for granting administrative variances of certain OWTS requirements. The Environmental Health Director may grant an administrative variance from any standard set forth in the TCOC and Guidelines where written substantial evidence is submitted by a qualified professional, that an unusual circumstance or unnecessary hardship would result from the application of the standard. Under no circumstance shall the granting of a variance create a hazardous condition or endanger public health, safety or the environment (TCOC, Section 13.08.320).

For instance, a reduction in the required setbacks from a property boundary to a proposed disposal field may be approved by the Environmental Health Director. Historically, such variances are uncommon. When granted, variances are typically issued in response to mitigating limiting site constraints or in repair situations. It is highly unlikely that a variance for the reduction in depth to groundwater or soil separation below bottom of trench would be granted unless an OWTS is actively failing, posing a threat to water quality and public health, and there are no other options. Other mitigating factors are also considered, such as supplemental treatment, off-site disposal options, or other restrictions necessary to protect groundwater quality and public health. Variances for the reduction in the setbacks to water wells have always involved pre-treatment and/or a deeper sanitary seal.

However, supplemental treatment is not practical or even possible in all cases. Property owners on fixed incomes, with upside down mortgages or when the cost of supplemental treatment approaches total property values may not be able to afford such systems. Enforcement action and potentially vacating such residences is not a viable solution. In these cases, professional judgment and discretion are used to make the most of a bad situation and gain the most water quality and public health improvements that are practical in the current situation. This may include meeting replacement standards to the greatest extent practicable as determined by the Environmental Health Director.

Outreach and education

The Onsite Wastewater page of the Tuolumne County website is a primary means of public education and outreach. Here a variety of information is available, such as basic OWTS operation and maintenance, variance forms, fee schedule, plot plan requirements, and complaint forms. This information is updated periodically as conditions and information change. A variety of educational handouts and brochures are also available in the TCEHD Office in Sonora.

After hours contact information will be provided to qualified service providers for use in the event of an emergency at the time the qualified service provider's certifications are verified and they are issued approval to practice within the TCEHD Operation Maintenance and Monitoring Program.

Annual reports

TCEHD will provide annual reports on OWTS program activities to the Central Valley Regional Water Quality Control Board. Reports will be submitted by February 1st for the previous calendar year. Reports will be submitted in tabular format from the Excel spreadsheet and will include:

- Number and location of complaints pertaining to OWTS operation and maintenance, and a summary of how these issues were resolved, and
- Registrations issued as part of the septic tank cleaning registration program (California Health and Safety Code Section 117400 et seq.), with copies of data on septic tank cleaning locations and septage disposal volumes and locations available upon request; and
- Number, location and description of permits issued for new and replacement OWTS, including the regulatory tier under which they were issued. For the past few years, approximately 225 new and replacement OWTS permits have been issued annually.

SITE SUITABILITY EVALUATION

Tuolumne County requires a site and soils evaluation for all parcels prior to the development of an OWTS. A permit for excavation of profile holes is required as part of all site and soils evaluation to establish a log of soil formations and groundwater level in an area that is within the proposed disposal and expansion area. The requirement for a profile permit may be waived when, in the opinion of the TCEHD there is sufficient existing data. Property corners shall be clearly marked for the profile inspector on all parcels.

At a minimum, field Investigations will require the following information:

Minimum effective soil depth. A minimum of two reasonably spaced profile trenches, at least one in the initial and at least one in the replacement area are required to define a disposal area. In areas where soils are known to be variable, or where the initial profiles demonstrate differing or variable soil conditions, additional profiles may be required.

Minimum depth to perched or permanent groundwater. The depth to water shall be based on observations of soil characteristics in the profiles including soil moisture, seepage and mottling.

Soil permeability based on percolation testing. A percolation rate of one-hundred twenty (120) minutes per inch (mpi) at proposed trench depth or faster is required for a standard system. Rates between one hundred-twenty one (121) and two hundred-forty (240) mpi require engineered system designs.

Ground slope. Disposal areas in which the ground slope exceeds thirty (30) percent are unacceptable for standard systems and require that a qualified professional submit a report of evaluation to address the slope and any other site constraints. Ground slope in proposed disposal areas where capping fill is recommended shall not exceed twenty-five (25) percent unless special site specific erosion control and slope stability measures are specified by a qualified professional. The TCEHD may require additional slope stability testing and analysis to be completed by a qualified professional in unstable areas of forty-five (45) percent slope or greater.

Fill Banks. Disposal fields shall not be placed in fill banks.

During a site and soils evaluation, all possible site constraints are observed and evaluated. Additional site constraints may include cut banks, wells, drainages, lakes, ponds, existing development, easements, and area available for OWTS.

Percolation testing and groundwater monitoring requires the services of a registered civil engineer, registered environmental health specialist or registered geologist with specialty certification in engineering geology, as recognized by the State of California Department of Consumer Affairs. Registered geologists without the specialty certification in engineering geology may conduct soils investigations but may not perform designs or submit plans for sewage disposal system construction. These classifications meet the definition of a *qualified professional* as described in the OWTS policy.

Sanitary sewer connection

An OWTS permit shall be required for any development with plumbing fixtures on any parcel not served by a public sewer system unless a connection to a public sewer is available. Section 9.4.9 of the OWTS Policy indicates that the public sewer may be considered as available when such public sewer or any building or exterior drainage facility connected thereto is located 200 feet or less from any proposed building or exterior drainage facility on any lot or premises that abuts and is served by such public sewer.

Section 13.08.150 deviates from Section 9.4.9 due to existing utility infrastructure, local geographical settings and connection feasibility available within the County. Therefore, Section 13.08.150 requires connection to the public sewer when the public sewer is located three hundred feet or less from the proposed building as measured over an existing public right-of-way or public utility easement. If the private sewer to be connected is at a lower elevation than the public sewer, the distance described shall be one hundred feet or less via public easement. In addition, the agency operating the sewer must agree to permit the connection and the character of flow in the public sewer at the point of connection is the type of flow commonly known as open channel flow so that there is an air space above the sewage in a public sewer pipe under normal operating conditions at the time of the sewer connection (TCOC, Section 13.08.150).

If the Environmental Health Division determines that installation of an OWTS will cause an impairment to any drinking water supply, a permit shall not be issued and the applicant may choose to pursue other options such as installation of an approved off-site system or connection of the private sewer to the public sewer where possible even though the public sewer is under pressure, at

a greater distance than specified, or connection fees and construction costs may be greater than twice the total cost of the replacement OWTS.

Separation distances and setbacks
Overall, OWTS will meet the horizontal setback requirements specified in Tier 1. The minimum setbacks are referenced as indicated below.

Setback Requirements
The minimum setback distance from the components of an OWTS shall be as specified by TCOC Section 13.08.280 Table 2 and Section 13.04.060 (Appendices A and B).

County code will be modified to increase the setback from the high water mark of a reservoir, lake or flowing water body to 400 feet if the OWTS is within 1200 feet of a public water supply surface water intake, is located within the drainage catchment, and it is located such that it may impact water quality at the intake point.

Where the effluent disposal area is located more than 1,200 feet, but less than 2,500 feet from a public water system's surface water intake and within the catchment area of the drainage, the disposal area shall be no less than 200 feet from the high water mark of the lake, reservoir or flowing water body. County code is currently consistent with this requirement.

County code, the Guidelines, Procedures, and any additional supplemental guidelines and reference materials will be also be modified to be consistent with the additional setbacks required by OWTS Policy Sections 9.4.10 through 9.4.12. Current TCEHD practices and policies do not allow for the installation of OWTS dispersal trenches at depths that exceed 20 feet since equipment necessary to verify site suitability and installation is not easily obtainable or practical for such a use within the local geography. Additional language will be provided in the document revisions to clarify and demonstrate TCEHD consistence with the OWTS Policy.

It is possible replacement OWTS serving existing facilities would be unable to meet these setbacks. Any replacement OWTS installed within this setback of a drinking water well or surface water intake will require advanced treatment in order to comply with Section 9.2.12 of the OWTS Policy.
This requirement will also include written notification to be submitted to the public water system prior to EH issuing an installation or repair permit according to Section 9.2.11. In addition, all advanced treatment systems, must comply with the TCEHD Operation Maintenance and Monitoring Program for special design, alternative or experimental systems to ensure acceptable operation parameters are consistently maintained based on the type and complexity of the system.

Percolation testing
Following TCEHD review of the results and recommendations from the site and soils investigation, requirements for percolation testing may be waived. Where percolation testing is waived, OWTS design shall be based on the approved design criteria from the soil mantle investigations. Designers are advised that percolation testing is used as a tool for site evaluation and not necessarily as an

absolute rule for justifying the suitability of an area. Modification of the percolation testing depth or procedures may be required in unusual circumstances. When the requirement for percolation testing is not waived, procedures shall be consistent with a recognized and published standard, including presoak and testing under stabilized rate conditions. Percolation testing must be performed at the depth and location of the proposed drainage system.

For the creation of new lots or parcels, rates faster than five (5) minutes per inch or slower than one hundred twenty (120) minutes per inch, additional testing requirements can be found in TCOC Sections 13.04.010 and 13.04.070. Existing parcels where percolation test results exceed one hundred twenty (120) minutes per inch are unacceptable for an OWTS. Rates from one hundred twenty (120) minutes per inch to two hundred forty (240) minutes per inch are acceptable if advanced treatment is utilized in the OWTS.

Soil Profile Testing

Soil mantle profile testing is required for the creation of new lots and on existing parcels. It is an integral part of the site and soils evaluation. Backhoe excavations are conducted in the presence of a representative of TCEHD, and in some situations, the applicant's consultant to identify soil type, soil structure, soil consistency, hardpan, impermeable soils, saturated soils or bedrock. Visual observations are often adequate to determine site and soil suitability, but percolation tests may be required in conjunction with the profile excavations.

All soils mantle profile tests shall be reported on log sheets that utilize the United States Department of Agriculture (USDA) system of soil classification. If the site and soil conditions require an OWTS alternative design, then the applicant's consultant must submit a signed, written summary of the findings of the soil profile mantle testing that includes appropriate soil log descriptions and general observations. This soils summary is submitted in conjunction with the alternative design plans.

These requirements are consistent with the site evaluation requirements of OWTS Policy Section 7.2.

Groundwater level testing

On parcels where seasonal high groundwater is suspected or known, the property owner or their designated representative must demonstrate adequate separation between the highest seasonal groundwater and the bottom of the drainage field. This determination is also made by TCEHD staff and is made based on an historical records search, site and soils investigation, the presence of hydrophilic vegetation, site topography and other information.

The current Chapters 13.04 and 13.08 of the TCOC allow development on existing lots and creation of new lots when the minimum separation from trench bottom to seasonal groundwater is twenty four (24) inches and an advanced treatment OWTS is utilized, in accordance with the Procedures for Constructing a Standard OWTS & Guidelines for Design and Evaluation of Special Design OWTS.

OWTS DESIGN

General Design Considerations

All OWTS must consist of a septic tank and a subsurface drainage system such as a leach bed, trench, or gravel-less chamber. All sewer wells, cesspools or unapproved privies are public nuisances and it is a violation to construct, maintain or operate a sewer well, cesspool or unapproved privy, (TCOC, Sections 13.08.180 and 13.08.190). If the TCEHD discovers an existing sewer well, cesspool, or unapproved privy, it will be destroyed as soon as practically feasible (usually within 30 days) and replaced with a conforming OWTS. In the event that such unapproved facilities are contaminating or threatening to contaminate surface and ground waters or are creating a public health hazard and nuisance, the property owner is directed to pump the septic tank as necessary to abate the health hazard until the system is replaced with an approved system.

Septic tank design and construction requirements are specified in TCOC Chapter 13.08 and the Procedures for Constructing a Standard OWTS. Capacities for septic tanks serving residential applications are based on the number of bedrooms served, see following table:

Number of Bedrooms	Capacity
2–3 bedrooms	1000 gallons
4 bedrooms	1200 gallons
5 bedrooms	1500 gallons

When septic tank effluent cannot be delivered to the drainage system via gravity-flow piping, a septic tank effluent pumping system may be utilized. If a pump is required, an electrical permit issued by the Building and Safety Division may also be required.

Larger residential (6 bedrooms or more) or commercial applications are based on the maximum estimated daily wastewater flows according to the California Plumbing Code, the EPA Onsite Wastewater Treatment Systems Manual or another generally accepted reference manual and must be approved by TCEHD. A qualified professional is required to design any OWTS in these applications. Estimated sewage flow rates can be based on either the type of occupancy or the fixture units served, whichever is greater. Septic tank sizing is also specified by the California Plumbing Code and the EPA Onsite Wastewater Treatment Systems Manual.

In conjunction with estimated wastewater flows, soil profile mantle testing and/or percolation test results determine the absorption area sizing requirements of the drainage system. For residential applications, absorption area requirements are determined by the number of bedrooms served. The Procedures for Constructing a Standard OWTS require specific design flows and that every residential OWTS must be sized for 2 bedroom minimum. Calculations for the design flow = 150 g/d/sq. ft. per the first two bedrooms and any additional bedroom is calculated at 100 d/d/sq. ft.

The following equation is used to determine length of required disposal trench:

$$L = \frac{Q}{q \times a}$$

L = Minimum total length of disposal trench in feet.

Q = Average liquid wastewater flow in gallons per day.

q = Application rate in gallons per day per square foot of effective seepage area.

a = The effective seepage area per foot of trench. The maximum value of "a" allowed is thirteen (13) square feet per lineal foot. Length of trench is determined by the inclusion of sidewall and bottom area for purposes of absorption.

A bedroom is a conditioned room used for sleeping and/or any room within a dwelling which could be used as a bedroom with a constructed closet. Dormitories and loft areas will be considered as multiple bedrooms (up to four bedrooms) based on one hundred and twenty square feet per bedroom unit, based on a floor area with a possible eight feet or greater floor-to-ceiling clearance. This prohibits excessive loading of an OWTS that is inadequately sized for future owners or future wastewater flows. The Environmental Health Director shall have authority in disputes arising over the designation of a bedroom and may consider bedroom exemptions on a case by case basis. When planning bedroom additions, any required septic system upgrade must be approved prior to issuance of the Building Permit and completed before the Building Permit is finaled.

Following these general considerations, a site may be placed into one of the following four design categories: suitable for a standard OWTS, suitable for an engineered/special design OWTS, suitable for an advanced treatment OWTS, or not suitable for OWTS.

Not Suitable for Onsite Wastewater Disposal

New construction on undeveloped lots which cannot satisfy all of the setback, percolation or soil depth requirements, or where public sewer is available, are not suitable for an OWTS installation. Owners of these lots typically need to explore offsite options or connection to an available public sewer system. Connecting to a nearby sanitary sewer system has been successful in some cases, particularly if multiple properties would benefit from that connection and can share costs. If an adjoining parcel has adequate usable area, a sewage disposal easement may be negotiated between the property owners, or occasionally a neighbor is interested in selling a portion of their suitable area and a lot line adjustment or parcel merger can be recorded between the parties. In any case, the site conditions at the location of the OWTS dictate the design and construction requirements for the new system and the proposed location must meet the requirements of the TCOC and the Guidelines. Expansion of existing systems, such as to serve additional bedrooms or other increases in wastewater flow, are treated as new construction and must also meet the requirements of the TCOC and the Guidelines.

For lots with existing structures that cannot meet all of the current site and soils requirements, the offsite options discussed above may be viable alternatives. If none of these can be utilized, an assessment of the property is made to determine the current septic system location and construction and to evaluate 'best available' options. If the best available option will improve a bad situation but fails to meet the current OWTS requirements, a variance may be appropriate. For instance, if the separation distance from the existing OWTS disposal field to the onsite domestic well is seventy five (75) feet, rather than the current code requirement of one hundred (100) feet, a variance can be

considered. Other mitigating factors are also considered, such as pressure distribution, supplemental treatment, or other enhancements as deemed necessary to protect groundwater quality and public health.

Standard Sewage Disposal Systems

The specifications for a standard OWTS are found in Section 13.08.230 of the TCOC. A standard system shall comply with the minimum criteria set forth in this section. Disposal systems shall be designed to utilize the most permeable or absorptive portions of the soil formation. There shall be a minimum of five (5) feet of permeable soil below the bottom of a leach trench or bed. Depth to anticipated seasonal high groundwater below the leaching trench or bed shall not be less than five (5) feet. Greater soil depths are required if soils do not provide adequate filtration. The five (5) foot requirements set forth in subsections B and C of Section 13.08.230 may be reduced by up to six inches (6") pursuant to the procedure for minor deviations. For example, based on professional judgment, the TCEHD field REHS and/or qualified professional may determine that a reduction in the required soil depth may be reduced to a minimum of 4.5 feet below the bottom of a leach trench or bed to allow for greater installation flexibility. Such an allowance may be permitted if it will not compromise the integrity of the system or the protection of public health, ground water, surface water bodies and potable water supplies.

Ground slope in the disposal area shall not be greater than thirty percent. Leaching trenches or beds shall not be installed on benches created for this purpose.

All private sewage disposal systems shall be so situated on the parcel that additional subsurface drain fields, equivalent to at least one hundred percent of the required, original system, may be installed in an area. Area reserved for such use shall not become the site of any surface improvements. The active, working portion of the soil filter media used for treatment of septic effluent shall have a soil texture as defined by zone 2 and 3 of the textural triangle. Application rates shall be determined by either percolation tests or soils textural classifications. Percolation tests shall be conducted as specified in the Guidelines. The percolation rate in the disposal area shall not be slower than one-hundred and twenty (120) minutes per inch for standard leach trenches or beds. The percolation rate in the disposal area shall not be faster than six (6) minutes per inch for standard leach trenches or beds.

As specified in TCOC Chapter 13.08 and the Procedures manual, standard disposal trenches may consist of a rock leach trenches or gravel-less leaching chambers. A disposal trench consists of a shallow, level, rectangular soil excavation, leach rock, perforated distribution pipe, barrier material and soil cover. The excavation bottom area and sidewall to a depth of fifty-four (54") inches is used to calculate the absorptive area of this type of system. The maximum seepage area is 13 square feet per lineal foot of trench. At least eighteen (18") of clean-washed drainage rock (¾" to 2.5" diameter) are placed beneath a four-inch (4") diameter perforated distribution pipe, and at least (2") inches cover the pipe, giving a total rock depth of not less than twenty four (24") inches. Minimum spacing between trenches or leaching beds shall be five feet plus two feet for each additional foot of depth in excess of one and one-half feet below the bottom of the drain line.

The bottom and sides of the bed or trench excavation are to be raked to eliminate any smearing that has occurred during excavation. All lines are installed level, and distribution to each trench is provided via connection to a distribution box or crossover pipe. Maximum length of each line is 100 feet. The entire leach trench area is covered with untreated paper, Geotextile fabric or other suitable material to prevent cover soils from penetrating the leach rock. A minimum of twelve (12") inches of soil is used to cover the bed in a manner which will facilitate surface water run-off. When installed on sloping ground, the bed should be configured and installed so as to parallel slope contour.

A gravel-less leaching system consists of prefabricated interlocking effluent receiving chambers installed in a shallow, level, rectangular trench excavation. All gravel-less chambers must be UPC/IAPMO approved and certified. Gravel-less chambers shall be sized on the bottom absorption area, (nominal unit width), in square feet. The required area shall be calculated using TCOC Chapter 13.08 Table 1 with a 0.70 multiplier, (that is a 30% reduction in calculated length may be used). The bottom and sides of the bed or trench excavation are to be raked to eliminate any smearing that has occurred during excavation. All large rocks and debris are to be removed from the excavation prior to installation of the leaching chambers. All chambers are installed level, and distribution to each trench is provided via connection to a distribution box or crossover pipe. Endplates shall be installed to lessen any erosion of the soil within the open bottom
chamber. The maximum length of each leaching chamber system is 100 feet. A minimum of twelve (12") inches of soil is used to cover a leaching chamber system in a manner which will facilitate surface water run-off. All gravel-less leaching chamber systems are to be installed per the manufacturer's specifications.

Engineered Sewage Disposal System Design

The specifications for an engineered OWTS are found in the "Guidelines for Design and Evaluation of Special Design for OWTS". As with all OWTS installations, engineered sewage disposal systems must consist of primary treatment through a 2-compartment septic tank. The Guidelines require plans for an engineered design OWTS to be submitted by a qualified professional. Plans are then reviewed and approved by the staff Environmental Health Specialist as part of the permit process.

Sites requiring an engineered OWTS typically are not suitable for a standard system due to one or more limiting design factors. Areas where the seasonal high groundwater table is closer than five, (5) feet below proposed disposal trench bottom or where an impermeable layer is closer than five (5) feet below proposed disposal trench bottom are not suitable for standard sewage disposal systems. Such areas may be suitable for a special design sewage disposal system.

The Guidelines allow five types of OWTS depending on specific site and soil conditions. All engineered OWTS are addressed in the Guidelines. The five types of engineered OWTS allowed include:

Gravel filled pressure dosed systems. These systems are designed to uniformly distribute septic tank effluent under pressure to shallow disposal trenches. The disposal trenches can utilize rock aggregate or gravel-less chambers. A minimum of six (6") inches of filter material (rock aggregate) is required below pressure distribution lateral.

At-grade bed systems. Elevated bed systems may be applied in areas where vertical separation to groundwater and/or an impermeable layer is not acceptable for a standard OWTS. The at-grade bed contains a pressure distribution cell consisting of rock aggregate and a distribution network on top of the ground (at grade). The soil directly below the distribution cell is layered with sand (6" typical) and ripped to a depth of six (6") inches to twelve (12") inches. The sand enters the ripped areas to create a pathway for effluent to infiltrate the soil.

Mound systems. Elevated mound systems may be applied in areas where vertical separation to groundwater and/or an impermeable layer is not acceptable for standard system. The mound system can sometimes be used in areas where the soil conditions are not acceptable for an at-grade bed system. The mound utilizes twenty four (24") inches of medium washed sand to treat the effluent before it is dispersed into the soil. See the Guidelines for sand specifications (pg. 13). The mound is similar to the at-grade bed in that the pressure distribution cell is placed on top of ripped soil at the ground surface.

Sand filled pressure dosed systems. These systems are designed to uniformly distribute septic tank effluent under pressure to disposal trenches that have a minimum of twelve (12") inches of medium sand below the distribution lateral. The medium washed sand is used to treat the effluent before it is dispersed into a permeable rock layer.

Advanced treatment systems with pressure distribution trenches. Recognized advanced treatment systems include intermittent sand or other supplemental treatment system as approved by the TCEHD. Other advanced treatment systems may include, but are not limited to, aerobic systems as considered by the TCEHD on a case by case basis.

An advanced treatment system with pressure distribution trenches includes gravel filled pressure distribution systems and recognized advanced treatment systems designed to filter and biologically treat septic tank effluent for purposes of reducing constituents commonly found in effluent as defined in the Guidelines.

Advanced treatment systems are used in conjunction with disposal fields where site and soil conditions are not adequate for standard or typical engineered systems. These conditions include, but are not limited to, slowly permeable soils, inadequate depth of effective soil below trench bottom, and/or inadequate depth to groundwater below trench bottom. Supplemental treatment systems that have been approved by state or nationally recognized testing agencies (NSF Standard 40 or equivalent) may be approved if they have been found to adequately protect surface water and groundwater quality and preclude health hazards and nuisances. Allowable types of supplemental treatment systems are as follows: textile filters, intermittent sand filters, recirculating sand filters and aerobic treatment units. Specific supplemental treatment systems are subject to County approval.

Due to the complexity of advanced treatment systems, proper operation and maintenance of these systems is essential. An Operation and Maintenance Manual must be developed by the system designer and/or manufacturer and provided to the applicant and TCEHD at time of plan submittal. This manual must include diagrams of system components, descriptions of normal system functions,

schedules for routine annual maintenance, descriptions on how to correct common operational problems and other items necessary to ensure proper system function.

All advanced treatment units shall be installed according to the manufacturer's approved design and specifications under the direction of a qualified professional and must satisfy all the requirements of the Guidelines.

ADVANCED PROTECTION MANAGEMENT PROGRAM

A portion of Woods Creek located within Tuolumne County has been listed as an impaired water body due to elevated pathogen levels observed in sample results taken. OWTS Policy Section 9.1.8 requires an Advanced Protection Management Program, (APMP), for the correlated contamination of Woods Creek. The geographic area for the APMP shall be 600 linear feet [in the horizontal (map) direction] of the impaired water body where the edge of that water body is the natural or levied bank for creeks and rivers, and the high water mark for lakes and reservoirs.

A qualified professional will be required to provide plans that include a report of evaluation for suite suitability for installation of any new or replacement OWTS within 600 feet of an impaired water body listed by the State Water Resources Control Board, (SWRCB). Prior to permit issuance, the qualified professional will have to submit sufficient information and evidence to the TCEHD indicating that the system as proposed will not contribute to any further degradation of the impaired water body or ground water and/or surface water bodies included in the watershed. To provide additional performance data in these areas, ground water observation wells shall be included in the design as a condition of the permit to verify that adequate separation to groundwater is consistently maintained. Final approval of the completed installation will be subject to qualified professional and TCEHD verification that the system was installed in fidelity with the approved plans.

Any standard, special design, or engineered OWTS constructed within 600 feet of an impaired water body will be required to comply with the Operation Maintenance and Monitoring Program for the life of the system while the property is occupied. The required maintenance and monitoring standards shall be completed as specified by the design consultant and as required by the TCEHD Operation, Maintenance and Monitoring Program. Standard OWTS system installations in these areas, where allowed, shall be inspected, maintained and monitored on a minimum of an annual basis by a third party qualified service provider for acceptable operating parameters. Any noted deficiencies shall be required to be corrected within a reasonable time frame dependent upon the extent of any health hazard or nuisance associated with the deficiency.

Tuolumne County Ordinance Code, and the TCEHD Guidelines and Procedures for Constructing Standard Septic Systems shall be modified to accurately reflect these necessary changes for implementation May 13, 2018.

Chapter 13.04 of the Tuolumne County Ordinance Code, will be modified to prohibit the use of any areas within 600 feet of an impaired water body as usable OWTS dispersal area when creating a new lot or parcel. Parcels created after the implementation date shall be prohibited from installing any new or replacement OWTS within 600 feet of any impaired water body and no variances shall be issued deviating from this provision.

The TCEHD will complete quarterly representative sampling of the impaired water body for pathogens, including *E.coli* bacteria at previous sample locations and additional sample locations based on local evidence and include the sample results with the annual report to the SWRCB. Additional monitoring for total dissolved solids and general minerals may be completed based on water quality assessment reports. Appropriate confirmation sampling and further action will be completed based upon sample results. In the event that the data can confirm that new or replacement OWTS installation is contributing to further degradation of the impaired water body, the TCEHD will submit a revised APMP with additional requirements including mandatory supplemental treatment system installation to satisfactorily mitigate the contamination to the SWRCB for review and approval.

OWTS CONSTRUCTION

Copies of the installation permit and approved plans for the OWTS are issued to the applicant (owner) or the owner's authorized representative, typically a contractor. This permit is written authorization that construction can begin.

For a standard OWTS, an REHS from the TCEHD functions as the qualified professional and is available for questions or consultation if needed. Construction activities must be coordinated through the TCEHD and notification must be made to the TCEHD when the required inspections are needed. The TCEHD REHS is required to perform an open trench inspection and a final inspection, as stated earlier in the document. During the final inspection, the TCEHD REHS will prepare an as-built drawing of the system construction and location for the permanent records.

For a special design, engineered or advanced treatment system, all construction activities must be coordinated through the design consultant and TCEHD staff. The design consultant is required to oversee the installation, operation of pumps, controls, timers, manuals and other operational parameters of the system. TCEHD and the design consultant will conduct the required construction inspections and witness system operations as necessary prior to final approval. Before final approval, the TCEHD must receive a copy of a letter of certification from the design consultant stating that OWTS construction was observed by a qualified professional and installed in substantial conformance with the approved plans.

OPERATION AND MAINTENANCE

The Tuolumne County Onsite Wastewater Department requires the proper OWTS operation and maintenance through homeowner education and inspection. Owners of standard systems can protect themselves from premature OWTS failure by following simple daily care, routine maintenance, and by knowing what to look for as early signs of trouble. The Residential On-Site

Septic System (ROSS) guide was designed to be a resource for homeowners with standard septic systems and owners with special designed septic systems that were installed prior to the implementation date of the mandatory OM&M program for special design systems (TCOC, Section 13.08.270 (g)). The ROSS Study Guide and presentation can be found on the County's Environmental Health Division webpage: ROSS Study Guide. The website will also include contact information, Guidelines, variance forms, fee schedule, plot plan requirements, and permit requirements. Also, property owners, realtors, contractors and others can contact TCEHD to access the permanent records of OWTS design, construction and locations during regular business hours.

Septic Tank Maintenance and Pumping

As discussed in the education and outreach section, materials such as the Septic Systems for Homeowners Guide and the ROSS Study Guide are helpful information sources available at the TCEHD onsite wastewater website for education about proper care and maintenance of these systems.
All OWTS owners are encouraged to inspect their septic tank every year, depending on use, and pump as needed. Since Tuolumne County has a large number of seasonal homes with varying degrees of occupancy which may extend the time between needed septic tank pumping, countywide mandatory pumping intervals are not uniform or applicable.

In addition to voluntary inspections, many property transactions also require OWTS inspection. These are typically required by the buyer, the buyer's agent, or the buyer's lender. While not regulatory and not enforced by TCEHD, these inspections are effective in further encouraging OWTS education, maintenance and pumping.

Septic tank maintenance is performed by registered professionals as described in the next section. TCEHD recommends that all OWTS inspections are conducted by California Onsite Water Association (COWA) or National Association of Wastewater Technicians (NAWT) certified professionals. A homeowner may be issued a repair permit without an inspection from an OWTS inspector, service provider or qualified professional, if they wish to repair their OWTS. Homeowners are encouraged to use the COWA/NAWT inspection checklist to help ensure consistent inspections while directing the homeowner through the important points of proper OWTS performance.

Septage Receiving

The TCEHD registers businesses and individuals who perform septic tank and chemical toilet pumping /cleaning in Tuolumne County per Section 117400 et seq. of the California Health and Safety Code. Their trucks and equipment are subject to annual inspection by TCEHD. Also, per California Health and Safety Code, each operation is required to submit monthly septage reports showing the locations from where septage is pumped and where it is disposed.

Nearly all of the septage generated in Tuolumne County is transported in County for disposal.
In 2016, an average of 12,000 gallons per day of septage was processed within Tuolumne County at the Tuolumne Utilities District Sonora Regional Wastewater Treatment Facility. Septage volumes have varied over the past ten years but have been primarily influenced by real estate transactions and not by population growth. The majority of septage, (approximately 80%), is generated through

the pumping of residential septic tanks with about 10% from local commercial businesses and 10% from the servicing of holding tanks, approved pit privies in very remote locations, chemical toilets and temporary and special events held within the County.

The septage receiving facility is capable of an average daily loading of 16,000 to 20,000 gallons per day and a peak daily flow of up to 30,000 gallons per day. Increasing the capacity of various processes in the plant would allow the facility to accommodate larger average daily load volumes.

Additional surge storage has not been necessary for the septage receiving facilities because the equipment can handle pumper truck disposal rates. An overflow pond is available to handle storm surges and additional necessary diversions from the treatment facilities. Septage received during a high plant influent can be diluted with the regular influent wastewater flow and be sent to the overflow if needed. The plant has adequate capacity to handle anticipated growth rates and service connections for at least the next five years. A study and master plan is currently being completed by the utility district which will prioritize improvements and maintain or increase plant capacity as required by all applicable code standards and regulations.

A very small percentage of the septage generated in Tuolumne County may be disposed of by septic pumpers licensed to haul septage for disposal at the East Bay Municipal Utility District.

WATER QUALITY ASSESSMENT

The goal of the water quality assessment is to determine the general operational status of OWTS, to evaluate the impact of OWTS discharges, and to assess the extent to which groundwater and local surface water may be adversely impacted. The assessment will include review of complaints, variances, failures, coordination with volunteer groups and any information resulting from field inspections as well as monitoring and analysis of water quality data.

Assessment Considerations

Historic updates and changes to the TCOC and the Guidelines have helped to successfully mitigate potential pollution and nuisance conditions of improper onsite wastewater disposal. Tuolumne County conducted a major overhaul to the TCOC and the Guidelines in 2008. It contained provisions for groundwater protection and density limits for creating new parcels dependent on onsite waste disposal. Tracing back specifics of the onsite disposal ordinance was more difficult, but the ordinance that was in effect in 2008, contained many specific protective measures still relevant today. These include requirements for five (5) feet separation to fractured bedrock or impermeable strata, maximum percolation rates of 120 minutes per inch, and a prohibition on use of cesspools and unapproved privies for sewage disposal, as just a few examples.

Collectively, these regulating documents have largely prevented high concentrations of OWTS being installed or utilized in areas having various characteristics of concern contained in Section 9.1 of the OWTS Policy. Specifically, no concentrated areas with dispersal systems located in an area with fractured bedrock without engineered or advanced treatment OWTS (9.1.5), dispersal system located in an area with poorly drained soils (9.1.6), and vulnerability to pollution due to hydrogeological conditions (9.1.1) are currently known throughout Tuolumne County.

Portions of Lake Tulloch, New Melones Lake, Don Pedro Lake, Phoenix Lake, Pinecrest Lake, and the Stanislaus and Tuolumne Rivers are developed with water front properties within Tuolumne County and have not shown evidence of eutrophication due to OWTS causes, sedimentation, or otherwise. Surface water intakes located at these water bodies used for public drinking water supplies are routinely monitored for bacteria, nitrogen, turbidity, foaming agents, specific conductance, pH, and additional chemicals with levels consistently remaining within acceptable standards. The Tuolumne Utilities District has forecasted that uncontrolled sedimentation of the Phoenix Lake Reservoir may lead to future lake eutrophication. Water quality improvement plans have been adopted by the District that include sediment removal and management activities in order to preserve the lake in a mesotrophic state.

The OWTS Policy identified that Woods Creek was impaired by fecal coliform of human origins. The area in close proximity to Woods Creek will require special monitoring. Well samples will be taken at various locations from existing water wells along the designated area or by other means acceptable to the Water Board. Additional testing is already required for any new water wells that are drilled. Nitrates and fecal coliform are the typical constituents tested for analysis. This data is representative of groundwater conditions throughout the County which provide OWTS performance information. The TCEHD shall ensure public access is available through the Division website to data available from the statewide GeoTracker GAMA-secure (groundwater ambient monitoring and assessment) database.

GeoTracker GAMA

The mission of the GeoTracker GAMA program is to provide data, information, and tools to enable the public and decision makers to better assess groundwater quality and quantity. The GeoTracker GAMA groundwater information system integrates and displays water quality data from various sources on an interactive Google-based map.

Data sources currently include some limited public and private sources, and may eventually include public drinking water data, monitoring data from waste discharge permits issued by the Regional Board, receiving water sampling related to NPDES permits, data collected in California Water Quality Assessment Database and other sources. Analytical tools and reporting features can help TCEHD assess groundwater quality and identify potential groundwater issues throughout Tuolumne County. TCEHD will utilize GeoTracker GAMA to the extent practical. It is anticipated that GeoTracker GAMA-secure may eventually cover Sections 9.3.2.3, and Sections 9.3.2.6 through 9.3.2.9 of the OWTS Policy.

Drinking Water Data Sources

Drinking water data is collected as part of regulatory compliance with the Public Drinking Water Program. The TCEHD was certified by the State Water Resources Control Board as a Local Primacy Agency, however, in 2012, due to the limited staffing of the TCEHD, the LPA program was returned to the Water Board for administration. TCEHD has developed a good working relationship with the Water Board and testing information for water constituents is routinely disseminated to TCEHD from the 138 public water systems. County-regulated systems utilize groundwater and surface water sources and all are required to perform routine water quality monitoring and reporting as a condition of their Permit to Operate.

The inventory of small public drinking water systems includes nearly 16 of these systems across the County. TCEHD administers the State Small Water Program (SSW) for these systems. Data is collected and reviewed. Any anomalies are addressed and documented. All data will be given to the Water Board as required from the OWTS Policy 9.3.2.

Drinking water systems provide more than 156 data points across the County to assess OWTS potential impacts to groundwater. At a minimum, this data includes bacteria (total coliform and, when present, either E.coli or fecal coliform) and nitrates. For some of these systems, general physical, inorganic chemicals, radiological, volatile organic chemicals, synthetic organic chemicals and lead and copper data may also be available. The frequency of data collection will vary by system type, and some data is only collected once while other data may be collected periodically to the extent that this additional drinking water data helps assess OWTS performance.

Pathogen Monitoring

Drinking water systems routinely monitor for pathogens using total coliform bacteria as a general indicator of drinking water contamination. Samples testing positive for total coliform are also analyzed for fecal coliform or E coli depending on the laboratory method used. All positive bacteria analysis results are sent immediately to TCEHD for investigation. Results of the investigation are documented and kept in the appropriate water system file and are available for review. Monthly summary reports of all bacteriological analyses are also sent to EHD to help ensure sampling and testing is completed as required, and for historical archive.

Nitrate Monitoring

Most of the drinking water systems are monitored annually for nitrate concentrations. The nitrate results are sent by the analytical laboratory to the Water Resources drinking water database entitled "Water Quality Inquiry Replacement (WQIR)" in EDF format. The data is assigned to a unique source and water system specific identification number for archive. Once in WQIR, the nitrate analysis data is available by download or inquiry. The database can be queried in a number of ways, including by system, contaminant, and concentration. Results exceeding the nitrate Maximum Contaminate Level (MCL) in drinking water generate an automatic notification to EHD for immediate action. The nitrate data can be evaluated for trends in concentration and changes over time, by geographical location, and in relation to OWTS density.

Annual Reporting

TCEHD will submit an annual report to the Central Valley Regional Water Quality Control Board (CVRWQB) summarizing the data collected from the pathogen and nitrate monitoring and the Woods Creek Water Quality Report fecal coliform analysis. The annual report will be submitted to the CVRWQCB on or before February 1st in accordance with Section 9.3.3 of the OWTS Policy.

Nitrate data submitted by analytical laboratories on behalf of the water systems is submitted to the SWR WQIR database in TCEDF format. While Section 9.3.3 of the OWTS Policy states that all groundwater monitoring data generated by the local agency shall be submitted in EDF format for inclusion into the Geotracker database, TCEHD does not have the staffing or resources to extract data from one SWR database and re-enter it into a different SWR database. Alternatively, TCEHD

recommends SWR access the data directly in the SDWIS, or develop data transfer protocols for SWR staff to move the data from SDWIS to Geotracker as needed.
TCEHD will investigate submitting surface water monitoring data from the Woods Creek Water Quality Report.

Five Year Analysis and Reporting
TCEHD will perform an evaluation of the Water Quality Assessment Program every five (5) years per Section 9.3.3 of the OWTS Policy. The 5 year analysis will assess whether water quality is being impacted by OWTS and will identify any changes in the Tuolumne County LAMP that will be undertaken to address the identified impacts.

TCEHD is working with the Geographic Information System (GIS) Division to develop a GIS layer of all drinking water system well locations. This layer can then be compared with other existing GIS layers, such as parcel boundaries and dwelling locations for spatial representation and analysis of these data. This will allow the nitrate data to be evaluated for trends in concentration and changes over time, by geographical location, and in relation to OWTS density. The spatial representations will also be useful for gap analysis and identifying areas needing additional groundwater monitoring and assessment.

Because TCEHD currently does not have staffing or resources to perform the 5 year analysis of this groundwater assessment data, TCEHD will be requesting assistance for this current requirement.

Appendix A

Chapter 13.08

ON-SITE SEWAGE TREATMENT AND DISPOSAL CODE*

Sections:

13.08.010 Purpose.
13.08.020 Title.
13.08.030 Definitions.
13.08.040 Enforcement.
13.08.050 Permit-Required.
13.08.053 CEQA review required.
13.08.055 Violation penalty.
13.08.060 Permit - Issuance and fee.
13.08.065 Installation or repair under permit.
13.08.070 Permit - Validity.
13.08.080 Permit - Posting.
13.08.090 Permit - Water supply.
13.08.100 Final approval under permit.
13.08.110 Permit conditions; emergencies.
13.08.120 Permit - Inclusion of backfilling abandoned septic tank.
13.08.130 Permit not to be construed to authorize violation.
13.08.140 Liability of County.
13.08.150 Public sewer connections.
13.08.160 Exceptions where community sewers are proposed.
13.08.170 Illegal occupancy.
13.08.180 Privies.
13.08.190 Cesspools, seepage pits and sewage wells.
13.08.200 Plumbing Code exceptions and superseding provisions.
13.08.201 Amendments necessary.
13.08.205 Technical standards - Compliance required.
13.08.210 Onsite wastewater treatment system.
13.08.220 General conditions.
13.08.221 Materials standards.
13.08.230 Minimum criteria for standard systems.
13.08.231 Minimum standards for graywater systems.
13.08.240 Leach field and leach bed design for standard systems.
13.08.249 Septic tank requirements.
13.08.250 Provisions concerning sizing of standard septic tank and disposal field systems.
13.08.260 Fiberglass septic tanks.
13.08.261 Dosing tanks.
13.08.262 Grease interceptors or traps.
13.08.270 Special design systems.
13.08.280 Location of onsite wastewater treatment system.
13.08.290 Abandoned sewers and sewage disposal facilities.
13.08.300 Inspections under sewage disposal permit.
13.08.310 Use and repair of existing onsite wastewater treatment system.
13.08.311 Discharge restrictions - Pollution prohibited.
13.08.320 Minor deviations from ordinance requirements.
13.08.330 Technical advisory committee.
13.08.340 Appeals.
13.08.350 Violation; enforcement.

*Prior ordinance history: Ordinance 1171; prior code Section 24

13.08.010 Purpose. The purpose of this Chapter is to establish minimum requirements for the protection of public health, welfare, and safety in the design, construction, maintenance, and use of sewage disposal systems and to protect surface and ground water from contamination by inadequately treated sewage. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part) 2007; Ord. 1333 § 1 (part), 1984).

13.08.020 Title. This Chapter shall be known and may be cited as the "Tuolumne County On-Site Sewage Treatment and Disposal Code." (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part); Ord. 2078 § 1, 1994; Ord. 1333 § 1 (part), 1984).

13.08.030 Definitions. Unless the context otherwise requires, the following definitions shall be used in the interpretation and construction of this Chapter:

"Approved" or "Approval" means an action of approval by the Environmental Health Director.

"Board" means the Board of Supervisors of the County.

"California Plumbing Code" or "CPC" means the latest adopted edition of the California Plumbing Code, California Code of Regulations, Title 24, Part 5.

"Consultant" means any individual authorized under California law to design individual sewage disposal systems.

"County" means the County of Tuolumne, a political subdivision of the state of California.

"Drainage system" means all the piping within public or private premises which convey sewage or other liquid wastes from a structure to a point of disposal, but shall not include any portion of a public sewage system.

"Effluent" means any liquid wastes or sewage of which a portion of the solids have been removed by a primary treatment method.

"Environmental Health Division" means the Environmental Health Division of the Tuolumne County Community Resources Agency.

"EPA Manual" means the U.S. EPA Onsite Wastewater Treatment and Disposal Systems Design Manual (October 1980) and the U.S. EPA Onsite Wastewater Treatment Systems Manual (February 2002).

"Graywater" means untreated household wastewater which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom washbasins, and water from clothes washing machines and laundry tubs. It shall not include wastewater from kitchen sinks, dishwashers or laundry water from soiled diapers.

"High strength wastewater" means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other onsite wastewater treatment system component.

"Impaired water body" means a surface water body or segment thereof that is identified on a list approved by the State Water Resources Control Board and the US EPA pursuant to Section 303(d) of the federal Clean Water Act.

"Health Officer" means the County Health Officer or his/her duly authorized representative.

"Onsite wastewater treatment system" or "OWTS" means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. OWTS does not include "graywater" systems pursuant to Health and Safety Code section 17922.12.

"Septic tank" means a watertight receptacle which receives the discharge of a drainage system or part thereof, designed and constructed so as to retain solids, digest organic matter during a period of detention, and allow the effluent to drain into a subsurface absorption system or its equivalent.

"Sewage" means any and all waste substance, liquid or solid, associated with human habitation, or which contains or may be contaminated with human or animal excreta or excrement, offal or any feculent matter.

"Sewage disposal system" means any sewer system, OWTS, graywater system, disposal plan, septic tank, drainage system, seepage pit, chemical toilet, privy or other facility constructed for the purpose of receiving sewage or its effluent.

"Sewage well" means any hole used for disposal of sewage that has been dug or drilled into the ground and extends to or into the subterranean water-bearing stratum which is used or may be used as a domestic water source.

"Soil" means the unconsolidated material lying naturally on the surface of the earth that possesses percolative, infiltrative, and filtration capabilities. For the purposes of this Chapter, the USDA system of soil classification will be used including the USDA textural triangle. (Ord. 3134 § 8, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 2, 1994; Ord. 1333 § 1 (part), 1984).

13.08.040 Enforcement. The provisions of this Chapter shall be enforced by the Environmental Health Division. (Ord. 3134 § 9, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part) 2007; Ord. 1333 § 1 (part), 1984).

13.08.050 Permit - Required.

A. No person, whether as principal, servant, agent, employee, owner or tenant, or otherwise, shall construct, install, replace, or repair any OWTS or private sewage disposal system in any area of Tuolumne County without first having obtained a sewage disposal permit from the Environmental Health Division. If such OWTS or private sewage disposal system is to be constructed or installed for a new dwelling, the sewage disposal permit shall be obtained prior to the commencement of construction for such new dwelling. Applications for sewage disposal permits shall be made in such manner and on such forms as the Environmental Health Division directs and devises.

B. A sewage disposal permit shall be required for modification of any part of the septic tank and/or leach field other than pumping of a septic tank, including the addition or replacement of leach field trenches. (Ord. 3134 § 10, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1, (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.053 CEQA review required.

A. A review pursuant to the California Environmental Quality Act (CEQA) shall be conducted prior to the approval or conditional approval of a sewage disposal permit when:

1. A cultural resource is determined to be present on the project parcel pursuant to Chapter 14.10; and
2. The cultural resource cannot be avoided as established in Chapter 14.10.

B. A review of the impacts of the proposal on cultural resources shall be conducted in compliance with Chapter 14.10 of this Code to determine the appropriate conditions necessary to protect cultural resources. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2280 § 12, 1999).

13.08.055 Violation penalty. An applicant for a permit to legalize a violation of this Chapter, after service of a notice and order in accordance with Chapter 1.10 of this Code, shall pay a violation penalty and associated abatement costs as established by the Board of Supervisors and set forth in Chapter 1.10 of this Code. This penalty and abatement costs shall be paid in addition to the regular permit processing fee. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2612 § 4, 2005; Ord. 2296 § 4, 1999; Ord. 2018 § 1 (part), 1993).

13.08.060 Permit - Issuance and fee. The permit required shall be issued on a standard form supplied for that purpose. A fee shall be charged for such permit in accordance with Chapter 3.40 of this Code. (Ord 3134 § 11, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.065 Installation or repair under permit. Construction, installation, replacement, or repair of an OWTS or private sewage disposal system shall be performed by contractors licensed as required in accordance with the provisions of the Contractors' State License Law (California Business & Professions Code section 7000 et seq.). Nothing herein shall be construed so as to prevent a resident or owner from doing his/her own work. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1792 § 1, 1990).

13.08.070 Permit - Validity.

A. It is the responsibility of any and all persons performing any part of the construction, installation, replacement, or repair of an OWTS or private sewage disposal system to ascertain that a valid sewage disposal permit has been issued by the Environmental Health Division prior to initiation of any repair or installation.

B. Upon issuance of a sewage disposal permit, the permittee shall have one year from the date of issue to commence work authorized under the permit. The work authorized under the permit shall be completed with final inspection by the Environmental Health Division within eighteen months of the date of permit issuance.

C. Any permittee holding any unexpired permit may apply for an extension of time within which he/she may commence and/or complete the work under that permit when he/she is unable to commence/complete work within the time required by this Section for good and satisfactory reason, provided no changes have been made or will be made in the original plans and specifications for such work. The Environmental Health Division may extend the time for action by the permittee for a period of up to three hundred sixty five days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. In order to renew action on a permit after expiration, the permittee shall pay the staff hourly cost with a one hour minimum upon applying for a permit renewal for permits that expired on or after July 1, 2008. The permittee shall pay a new full permit fee to renew action on a permit that expired prior to July 1, 2008. (Ord. 3134 § 12, 2010; Ord. 3061 § 1, 2009; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1864 § 1, 1991; Ord. 1333 § 1 (part), 1984).

13.08.080 Permit - Posting. The sewage disposal 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

Environmental Health Division. (Ord. 3134 § 13, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.090 Permit - Water supply. Location of the water supply shall be included as a condition of the permit. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.100 Final approval under permit. No blue tag for electrical hookup shall be issued by the Building and Safety Division of the Community Resources Agency without certification of compliance with all conditions of the sewage disposal permit by the Environmental Health Division. (Ord. 3134 § 14, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2314 § 40, 1999; Ord. 1333 § 1 (part), 1984).

13.08.110 Permit conditions; emergencies. Any person who shall commence any work for which a permit is required by this Chapter without first having obtained a permit therefor or who fails to comply with the terms and conditions of said permit shall be in violation of this Chapter. Work may commence prior to obtaining a permit for emergency work only when it shall be proven to the satisfaction of the Environmental Health Division that such work was urgently necessary and that it was not practical to obtain a permit before commencement of the work. In all such cases, a permit must be obtained as soon as it is practical to do so and if there is any unreasonable delay in filing an application for such permit a double fee shall be charged. For the purpose of this Section, an unreasonable delay shall be considered to be a period of time in excess of seven days. (Ord. 3134 § 15, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2296 § 14, 1999; Ord. 2078 § 3, 1994; Ord. 1333 § 1 (part), 1984).

13.08.120 Permit - Inclusion of backfilling abandoned septic tank. When a permit has been obtained to connect an existing building or an existing facility to the public sewer, backfilling of a private septic tank abandoned consequent to such connection is included in the building sewer permit. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.130 Permit not to be construed to authorize violation.

A. The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for or an approval of any violation of any provisions of this Chapter. No permit presumed to give authority to violate or cancel provisions of this Chapter shall be valid except insofar as the work or use which it authorizes is lawful. The issuance or granting of a permit or approval of plans shall not prevent the Environmental Health Director from thereafter requiring the correction of errors in the plans and specifications or from preventing construction operations being carried out thereunder when in violation of this Chapter or any other ordinance, law or regulatory provision.

B. All installations shall be installed as designed and approved. Any variations from an approved design shall require a revised plot plan and shall be the subject of new approval prior to commencement of construction.

C. Any OWTS or sewage disposal system constructed or used in violation of this Chapter constitutes a public nuisance, is dangerous to health, and may be enjoined or summarily abated in the manner provided by law. (Ord. 3134 § 16, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 4, 1994; Ord. 1333 § 1 (part), 1984).

13.08.140 Liability of County. This Chapter shall not be construed as imposing upon the County any liability or responsibility for damage resulting from any OWTS or sewage disposal system as herein provided; nor shall the County, or any official employee thereof, be held as assuming such liability or responsibility by reason of the activities authorized hereunder. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.150 Public sewer connections.

A. Every building in which plumbing fixtures are installed, including dwellings, places of business, or other structures in which persons reside, congregate or are employed, and any building or structure from which sewage may originate, shall connect to a public sewer when such a public sewer is available. For the purposes of this Section, a public sewer is defined as being available when the following conditions exist:

1. The agency operating the sewer has agreed to permit connections;

2. The public sewer is located three hundred feet or less from the proposed building as measured over an existing public right-of-way or public utility easement. If the private sewer to be connected is at a lower elevation than the public sewer, the distance described herein shall be one hundred feet or less via public easement;

3. The character of flow in the public sewer at the point of connection is the type of flow commonly known as open channel flow so that there is an air space above the sewage in a

public sewer pipe under normal operating conditions at the time of the sewer connection.

B. This Section shall not be construed to prevent the connection of a private sewer to a public sewer if the applicant chooses to do so, provided the condition set forth in subsection A(1) of this Section has been met and approval of the Environmental Health Director has been obtained even though the public sewer is under pressure or at a greater distance than specified herein.

C. When no public sewer is available as defined above, the private sewer shall be connected to an OWTS or private sewage disposal system.

D. Within the limits prescribed by subsection A of this Section, the rearrangement or subdivision into smaller parcels of a parcel for which public sewer available shall not be deemed cause to permit the construction of an OWTS or private sewage disposal system, and all plumbing or drainage systems on any such smaller parcel or parcels shall connect to the public sewer. (Ord. 3252 §1, 2014; Ord. 3134 § 17, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 2, 2000; Ord. 1333 § 1 (part), 1984).

13.08.160 Exceptions where community sewers are proposed. In any area of the County where a public entity has proposed community sewers and has obtained all required approval and funding for such community sewers and has established a plan and time schedule for the installation of community sewers, the Environmental Health Director may allow such standards and equipment for a temporary septic tank and effluent disposal system that the Environmental Health Director shall determine is adequate to serve any building or dwelling or mobilehome on a temporary basis until the scheduled community sewers are available. The Environmental Health Director may revoke his/her permission to utilize such temporary systems if at any time he/she determines such temporary systems are a detriment to the public health. Any property owner seeking permission to utilize a temporary OWTS under the provisions of this Section shall present to the Environmental Health Director an agreement in a form suitable for recording to connect to the community sewer as soon as it is available to the property. (Ord. 3134 §18, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.170 Illegal occupancy. It is unlawful for any person to maintain or use any dwelling, place of business, or other building or place where a person resides, congregates or is employed in violation of the terms and conditions of the sewage disposal permit or which is not provided with or having access to means for the disposal of human wastes, either by connection to an approved OWTS or sewage disposal system or to a public sewer. Where he/she deems it impractical or impossible to do otherwise, the Environmental Health Director, in consultation with the Health Officer, may allow privies or chemical toilets, provided that approved methods of construction and maintenance are adhered to in such installations. Such privies or chemical toilets may be installed and used only with written permission of the Environmental Health Director. (Ord. 3134 § 19, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 5, 1994; Ord. 1333 § 1 (part), 1984).

13.08.180 Privies.

A. No person shall construct, maintain or use any privy permitted by the provisions of this Chapter unless the following conditions are complied with:

1. The sewage deposited therein shall fall into a vault or pit in the ground constructed especially for the purpose.
2. The privy building and privy vault or pit shall be at all times inaccessible to rodents and insects.
3. The privy building and vault or pit shall be constructed in such a manner as to prevent the entrance of rainwater and surface water into the vault or pit.
4. Seat covers and door shall be self-closing. The base shall be banked with earth and the vent pipe shall extend from the vault or pit to one foot above the roof. The top shall be screened with 16 mesh screen.
5. All parts of the privy building shall be maintained in a clean and sanitary condition at all times.

B. The privy shall not be allowed to become filled with excreta to a point within one foot of ground surface. The excreta in the pit shall be covered with earth, ashes, lime or some similar substances at regular intervals, or if a concrete vault, it shall be pumped out as needed. It shall be maintained in a sanitary condition and in good repair. (Ord. 2863 § 1, 2007, Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.190 Cesspools, seepage pits and sewage wells. Cesspools, seepage pits and sewage wells are unlawful and are declared to be a nuisance. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.200 Plumbing Code exceptions and superseding provisions. The following provisions and sections of the CPC are amended, modified and superseded as follows:

A. Chapter 1 (Administration), Sections 104.0 (Permits), 105.0 (Inspections and Testing) and 106.0 (Violations and Penalties), in regards to onsite sewage treatment and disposal, are replaced by the organization, enforcement, permit and inspections provisions shall be as set forth in Chapter 1.10 and Sections 13.08.040 through 13.08.130 and Section 13.08.350 of this Code to provide for local permitting and management of sewage disposal systems by the Environmental Health Division.

B. Sections 713.1, 713.2, 713.3, and 713.4 of Chapter 7 are replaced by Section 13.08.150 of this Code.

C. Section H101.8 of Appendix H is replaced by Section 13.08.310(C) of this Code to clarify requirements for use of an adjacent parcel for sewage treatment and disposal.

D. Sections 722.4 and 722.5 of Chapter 7 are replaced by Section 13.08.290 of this Code so that the terms "Department having jurisdiction" and "Administrative Authority" are replaced with "Environmental Health Director".

E. Table 721.1 of Chapter 7 is replaced by Table 2, set forth in Section 13.08.280 of this Code.

F. The following provisions and sections of Appendix H are amended, modified and superseded by Sections 13.08.190, 13.08.210, 13.08.220, 13.08.230, 13.08.240, 13.08.249, 13.08.262, 13.08.270, 13.08.280, 13.08.290 and 13.08.310 of this Code.

1. CPC Appendix H, Sections H201.0, H301.0, H401.0, H501.0, H601.0, H701.0, H801.0, H901.0, H1101.0 and Table H101.8.

2. Table H201.1(1) is amended to provide that the minimum septic tank capacity for a single-family dwelling shall be one thousand gallons.

(Ord. 3134 §§ 20, 21, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 3, 2000; Ord. 2078 § 6, 1994; Ord. 1333 § 1 (part), 1984).

13.08.201 Amendments necessary. The modifications, deletions and amendments of standards enacted by this Chapter are merely a continuation of the Tuolumne County onsite sewage treatment and disposal code, and all changes and modifications to the CPC, whether previously enacted or contained in this Chapter, are reasonably necessary because of local climatic, geographical, or topographical conditions.

A. Sections 713.1, 713.2, 713.3 and 713.4 of Chapter 7 are replaced by Section 13.08.150 of this Code because of topographic conditions along the route of the Twain Harte sewer interceptor, which was installed primarily to transport Twain Harte's sewage to the Sonora treatment facility, and is pressurized along much of its route to overcome elevation differences. Although many homes are within two hundred feet of the sewer line, often the nearest open-channel connection point is much farther away, making connection impractical or impossible.

B. Table 721.1 of Chapter 7 and Table H101.8 of Appendix H are replaced by Table 2 of Section 13.08.280 of this Code for the following reasons:

1. Geographic conditions in Tuolumne County such as high seasonal groundwater, shallow soil mantles, and highly fractured bedrock, prevent the safe use of seepage pits and cesspools. Because their installation is not allowed, that portion of the table was deleted.

2. Many topographic features common to Tuolumne County are not specifically addressed by the CPC. Therefore, sanitary setbacks for drainage courses, ephemeral, and intermittent streams, cutbanks and fill banks, water supply canals, and lakes or reservoirs where use is, or may be intended as a public water supply, etc. have been included in the above-referenced table.

C. Seepage pits as referred to in Appendix H, Section H701.0 are prohibited by Section 13.08.190 of this Code due to the fractured rock geology in Tuolumne County.

D. The CPC does not adequately address soil types found in Tuolumne County. Therefore, Sections H301.0 and H401.0 of Appendix H are replaced by Sections 13.08.220, 13.08.230 and 13.08.240 of this Code which are based on the USDA soil textural triangle, commonly used by this area's consultants, nationally recognized experts, and the EPA Manual.

E. Seepage pits and cesspools as referred to in Sections H701.0 and H801.0 of Appendix H are prohibited by Section 13.08.190 due to the fractured rock geology in Tuolumne County. Geographic conditions in Tuolumne County such as high seasonal groundwater, shallow soil mantles, and highly fractured bedrock, prevent the safe use of seepage pits and cesspools.

F. In Appendix H, Section H101.0 is replaced by Sections 13.08.210, 13.08.220, 13.08.230, and 13.08.270 to present a more modern, clear, and regulatory mechanism than the CPC wording, and to be integrated with other local ordinances, state Regional Water Quality Control Board standards, and the Tuolumne County general plan.

G. The last sentence of Section H201.1 is deleted because sizing of septic tanks should be based on the daily liquid waste production instead of percolation rates. It is the leach field that is to be sized on the percolation and application rates of the soil. Because a good indicator of soil permeability is the texture and structure of the soil mantle (which is

surveyed for each new installation), percolation tests are not always required, thereby making the use of the referenced Table H201.1(4) inapplicable.

H. Sections H301.0 and H401.0 of Appendix H are replaced by Sections 13.08.220, 13.08.230 and 13.08.240 which are based on the USDA soil textural triangle, commonly used by this area's consultants, nationally recognized experts, and the EPA Manual. These changes are based upon local geography and topography and were reviewed by local consultants.

I. Section H601.0 of Appendix H is replaced with the provisions of Section 13.08.240 to be more responsive to local geographic conditions than in the CPC. It contains all of the elements of the CPC except that seepage pits and cesspools are not allowed due to local geographic conditions.

J. Sections H701.0 and H801.0 of Appendix H are replaced with Section 13.08.190 which deems seepage pits and cesspools to be unlawful due to previously mentioned local geographic conditions.

K. Section H901.0 of Appendix H is amended by Section 13.08.262, which is essentially similar to the CPC but allows grease traps in addition to two-compartment interceptors. Grease traps are commonly used and are more easily inspected and cleaned. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 4, 2000; Ord. 2078 § 7, 1994).

13.08.205 Technical standards - Compliance required. All OWTS and private sewage disposal systems shall comply with the Tuolumne County Local Agency Management Plan, (LAMP), approved by the State Water Resources Control Board pursuant to the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (June 19, 2012), the CPC, and the EPA Manual, and this Code. In the event of a conflict among these standards, resolution shall be determined in the order set forth as follows:

A. The LAMP.
B. This Code.
C. The CPC.
D. The EPA Manual.

(Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 8, 1994).

13.08.210 Onsite wastewater treatment system.

A. Where permitted by Section 713 of the CPC as modified by this Chapter, the building sewer for a building containing not more than five dwelling units may be connected to an OWTS complying with the provisions of this Chapter if allowed by the general plan and Title 17. The system, except as otherwise provided, shall consist of a septic tank with effluent discharging into a subsurface disposal field. The size and arrangement of such systems shall be determined on the basis of location, area and slope of land in the disposal area, soil character, and groundwater level and shall be designed to receive all sanitary sewage from the property based on potential occupancy of the dwellings served.

B. Where the system is intended to serve any use other than dwellings as described above, where the disposal area is insufficient for a standard system or the slope in the disposal area exceeds thirty percent, or where soil or groundwater conditions may impose limitations on standard OWTS, plans for a special design OWTS shall be required. Plans for special design systems shall be prepared and signed by a consultant. Plans for all such special design OWTS shall be submitted to the Environmental Health Director for review and approval prior to commencement of construction unless exempted by federal law or other County ordinance.

C. Where the system is intended to serve projected wastewater flows in excess of 10,000 gallons per day, small community systems for service of more than four individual parcels, and systems which produce high strength wastewater or significant amounts of waste from recreational vehicle holding tanks, the existing, new and replacement OWTS shall be regulated separately by the applicable Regional Water Quality Control Board and no Environmental Health permit shall be required. (Ord. 3134 § 22, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 5, 2000; Ord. 1333 § 1 (part), 1984).

13.08.220 General conditions.

A. If the Environmental Health Director determines that there is insufficient disposal area, or that soil conditions, groundwater conditions, or topographic restraints will not permit installation of a standard OWTS, no sewage disposal permit shall be issued, and no OWTS shall be permitted unless a special design OWTS is first approved by the Environmental Health Director.

B. Nothing contained in this Chapter shall be construed to prevent the Environmental Health Director from requiring compliance with higher requirements than those contained herein where such higher requirements are essential to maintain a safe and sanitary condition, and therefore the Environmental Health Director may impose reasonable conditions on the permit.

C. The Environmental Health Director and his/her authorized representatives shall have the right of entry during usual business hours to inspect any and all buildings and premises in the performance of their duties connected with this Chapter.

D. No property shall be improved in excess of its capacity to properly absorb sewage effluent in the quantities and by the means provided in this Code.

E. The Environmental Health Director may grant exceptions to the provisions of this Chapter, for permitted structures which have been destroyed due to fire or natural disaster, and which cannot be reconstructed in compliance with these provisions, if the exception is found to meet current public health standards equivalent to this Code. The Health Officer shall be notified regarding any granted exceptions.

F. The Environmental Health Director may approve, conditionally approve, or deny sewage disposal permits. A decision to deny a permit shall be made by the Environmental Health Director with concurrence by the Health Officer and shall be set forth in writing and shall specify the grounds for the denial. In granting a permit, the Environmental Health Director shall attach whatever conditions are reasonable and necessary to fulfill the intent and purposes of this Chapter and Title 14. Such conditions and the proposal of the applicant as considered and approved shall be a part of such permit. Issuance of a permit may be made subject to guarantees, executed by the Environmental Health Director, and evidence that attached conditions are being or will be met. Such conditions may include compliance with an Operation Maintenance and Monitoring Program. (Ord. 3134 § 23, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2280 § 13, 1999; Ord. 2078 §§ 9, 10, 1994; Ord. 1333 § 1 (part), 1984).

13.08.221 Materials standards. All perforated pipe, piping, inlet/outlet piping and other materials used in the construction, installation, replacement, alteration or repair of OWTS or sewage disposal systems shall conform to the standards of the CPC as revised by this Code.
(Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 11, 1994).

13.08.230 Minimum criteria for standard systems. A standard system shall comply with the minimum criteria set forth in this Section.

A. Disposal systems shall be designed to utilize the most permeable or absorptive portions of the soil formation.

B. There shall be a minimum of five feet of permeable soil below the bottom of a leach trench or bed.

C. Depth to anticipated seasonal high groundwater below the leaching trench or bed shall not be less than five feet. Greater soil depths are required if soils do not provide adequate filtration.

D. The five foot requirements set forth in subsections B and C of this Section may be reduced by up to six inches pursuant to Section 13.08.320.

E. Ground slope in the disposal area shall not be greater than thirty percent. Leaching trenches or beds shall not be installed on benches created for this purpose.

F. All OWTS and private sewage disposal systems shall be so situated on the parcel that additional subsurface drain fields, equivalent to at least one hundred percent of the required original system, may be installed in an area. Area reserved for such use shall not become the site of any surface improvements.

G. The active, working portion of the soil filter media used for treatment of septic effluent shall have a soil texture as defined by zone 2 and 3 of the textural triangle shown in Figure 1.

H. Application rates shall be determined by either percolation tests or soils textural classifications. Verification of initial field tests by Environmental Health Specialists will be conducted using the field test methods outlined in the EPA Manual. Percolation tests shall be conducted as specified in the EPA Manual. The percolation rate in the disposal area shall not be slower than one-hundred and twenty minutes per inch for standard leach trenches or beds. The percolation rate in the disposal area shall not be faster than six minutes per inch for standard leach trenches or beds. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2208 § 1, 1997; Ord. 2078 § 13, 1994; Ord. 1333 § 1 (part), 1984).

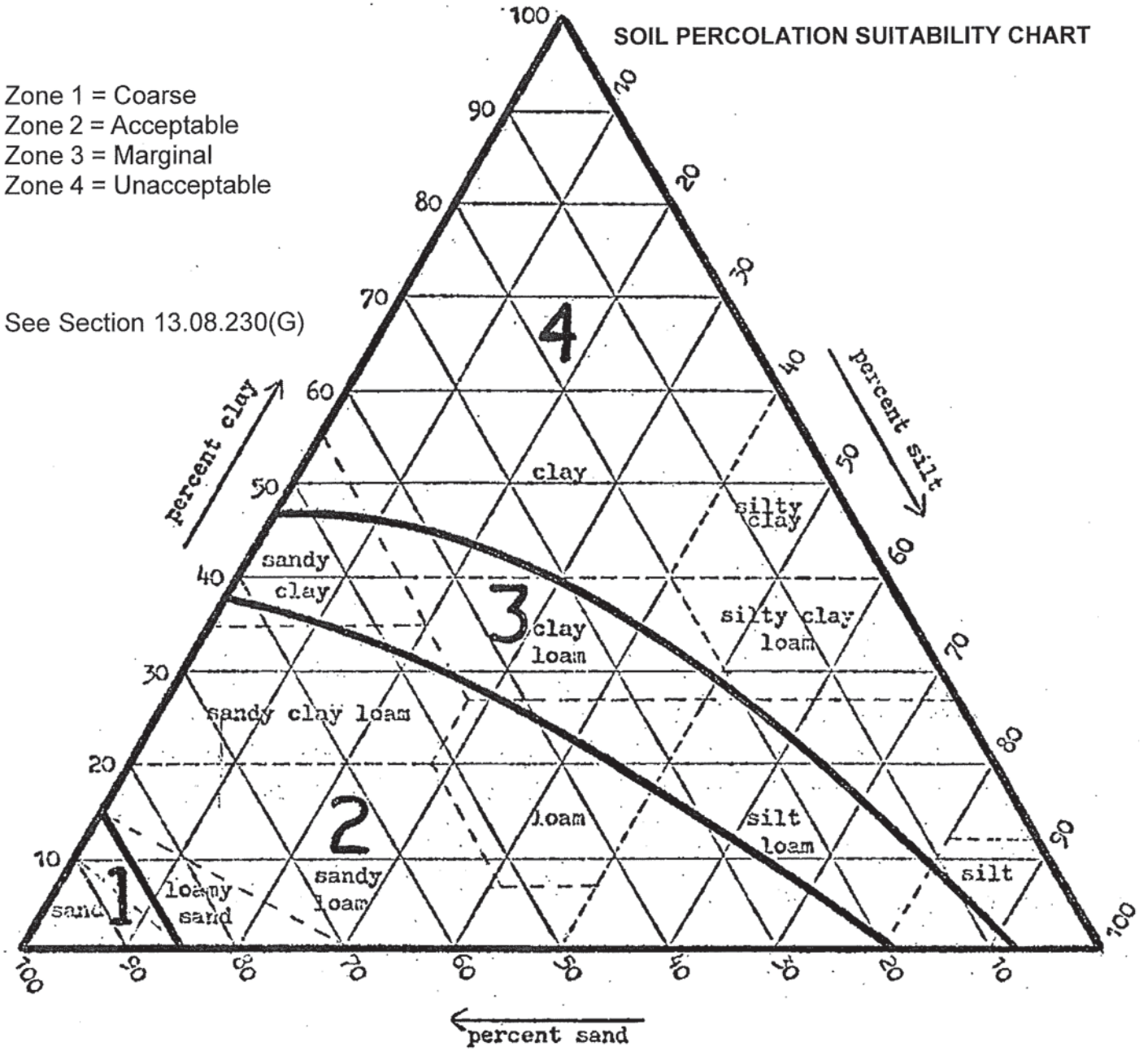
(See percolation chart on next page)

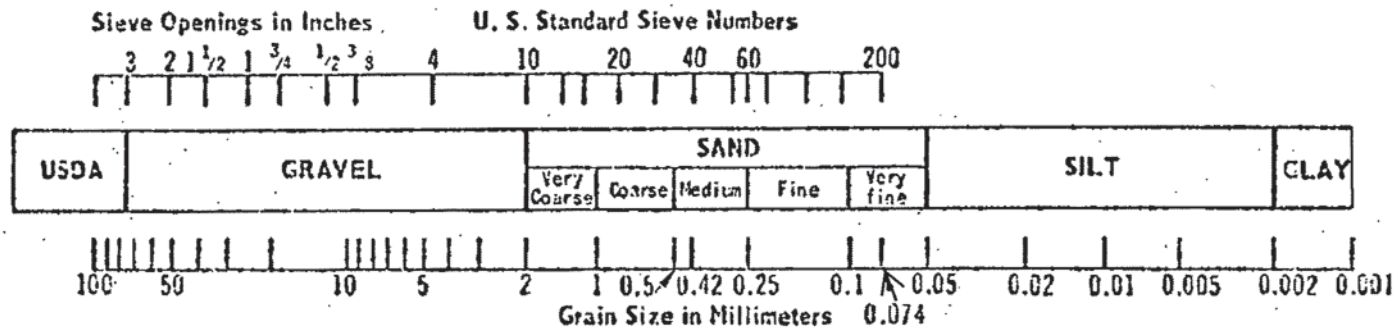
FIGURE 1

SOIL PERCOLATION SUITABILITY CHART

Zone 1 = Coarse
Zone 2 = Acceptable
Zone 3 = Marginal
Zone 4 = Unacceptable

See Section 13.08.230(G)





In case of dispute, the following instructions will be followed:

1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2 percent for each 10 percent (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15 percent for soils having a bulk-density greater than 1.7 gm/cc. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord.

1333 § 1 (part), 1984).

13.08.231 Minimum standards for graywater systems. All graywater systems shall be sized using the application rate criteria specified in Section 13.08.230. Graywater systems shall comply with any additional standards contained in the CPC. (Ord. 3252 §2, 2014; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 6, 2000; Ord. 2078 § 12, 1994).

13.08.240 Leach field and leach bed design for standard systems.

A. Flow rates for single and multiple-family dwellings shall be based on a minimum of three hundred gallons per day plus one hundred gallons per day for each bedroom beyond two in a residential unit.

B. Sewage application rates for leach trenches and beds and leaching chambers shall be as described in Table 1. (See Table 1 below)

TABLE 1

Sewage Application Rates		
Soil Type	Percolation rate Minutes/Inch	Application Rate Gallons/Ft^2/Day
Gravel and coarse sand	<1	Not suited for standard system
Coarse to medium sand	1-5	Not suited for standard system
Fine sand, loamy sand	6-15	0.80
Sandy loam, loam	16-30	0.60
Loam, porous silt loam	31-60	0.45
Silty clay loam, clay loam	61-120	.20[a]
Any soil type producing percolation rate in excess of 120 minutes/inch	>120	Not suited for standard system

a. These soils may be easily damaged during construction and shall require special care during construction as specified by the Environmental Health Division to avoid compaction, smearing and other soil damage.

Absorption surfaces for leach trenches shall be based on trench bottom area and sidewall area below the drainpipe. The absorption surface for leach beds shall be considered to be the base of the leach bed. Leaching chambers shall be sized on the bottom absorption area (nominal unit width) in square feet. The required area shall be calculated using Table 1 with a 0.70 multiplier (that is a 30% reduction in calculated length may be used).

C. Distribution lines shall be constructed of perforated plastic pipe authorized by the CPC. All bends used in the disposal field shall be made with manufactured fittings. The mitering of drainpipe is prohibited.

D. Before placing filter material in a prepared excavation, all smeared or compacted surfaces shall be removed from trenches by raking to a depth of one inch and the loose material removed. Clean stone, gravel, slate or similar filter material acceptable to the Environmental Health Director, varying in diameter from three-fourths (¾) inch to two and one-half (2½) inches, shall be placed in the trench to the depth and grade required by this Section. Drainpipe shall be placed on filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this Section and covered with untreated building paper, filter fabric, straw or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance.

E. There shall be at least one distribution box for each OWTS. The distribution box shall be constructed at the head of each disposal field and must be of sufficient size to receive lateral line. The crowns of all outlets shall be level and the inlet invert shall be at least two inches higher than any lateral outlet invert. The overflow invert shall be two inches higher than a lateral invert. Plastic and fiberglass distribution boxes shall be built on a level concrete slab installed in natural or compacted soil.

F. All laterals from distribution box to the disposal field shall have approved pipe with watertight joints. Multiple field laterals, wherever practicable, shall be of uniform length.

G. Connections between a septic tank and a distribution box, or between a distribution box and drain field, shall be laid with approved watertight joints on natural ground or compacted to the natural equivalent.

H. Disposal fields shall be constructed as follows:

Minimum number of drain lines per field	1 line
Maximum length of each line	100 feet
Minimum bottom width of trench.....	12 inches
Maximum depth of trench.....	10 feet
Minimum spacing of lines, edge to edge	5 feet
Minimum depth of earth cover over lines	12 inches
Minimum filter material under drain lines	18 inches
Minimum filter material over drain lines...	2 inches

I. Perforated pipe shall be laid level up to a maximum of three inches per one hundred feet slope and with the end of the line capped.

J. Minimum spacing between trenches or leaching beds shall be five feet plus two feet for each additional foot of depth in excess of one and one-half feet below the bottom of the drain line.

K. No part of the absorption field shall be placed under a paved area, roadway or structure. If necessary to cross under such construction, watertight lines of material acceptable for the building sewer shall be used.

L. Where intercept drains are required on new installations, a complete engineered plan shall be submitted by a consultant to the Environmental Health Division.

M. The OWTS shall be so designed to receive all domestic sewage from the property. No cooling water, water softener brine, groundwater, oil, hazardous wastes or materials, roof or other surface drainage shall be discharged into any OWTS.

N. Inspection risers shall be required at the terminal end of each leach line. The riser shall be separate from the distribution line. The risers shall be capped and constructed to preclude entrance of rain or surface water and shall allow a determination of the depth of sewage effluent in each trench. (Ord. 3134 §§ 24, 25, 26, 2010; Ord. 3061 § 2, 2009; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 7, 2000; Ord. 2208 § 2, 1997; Ord. 2078 §§ 14, 15, 1994; Ord. 1777 § 1, 1990; Ord. 1333 § 1 (part), 1984).

13.08.249 Septic tank requirements.

A. All water from bathrooms, kitchens, laundry fixtures and other household plumbing shall pass through an approved septic tank or other approved sedimentary tank prior to its discharge into the soil. The septic tank design shall be such as to produce a clarified effluent consistent with accepted standards, and shall provide adequate space for sludge and scum accumulation.

B. Structural plans for the construction of all septic tanks shall be submitted to the Tuolumne County Community Resources Agency for approval prior to approval of the sewage disposal permit. Such plans shall show all dimensions, reinforcing, structural calculations, and such other pertinent data as may be required to ensure compliance with the CPC as revised by this Chapter.

C. The required minimum septic tank capacity shall be as follows:

Number of Bedrooms	Gallons
1-3	1,000
4	1,200
5-6	1,500

Note: Extra bedroom, 150 gallons each.

D. For all other uses not specified in subsection C of this Section, the capacity of all septic tanks shall conform to Table H201.1(1) or Table H201.1(2) of the CPC as determined by the number of bedrooms or apartment units in dwelling occupancies and the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 702.1 of the CPC, whichever is greater.

E. All in-place septic tank construction shall require a building permit from the Tuolumne County Community Resources Agency. The liquid capacity of the septic tank shall be approved by the Environmental Health Division.

F. Approved aerobic systems may be substituted for conventional septic tanks provided that the Environmental Health Director is satisfied that such systems will produce results at least equivalent to septic tanks, whether their aeration systems are operating or not. (Ord. 3134 §§ 27, 28, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 8, 2000; Ord. 2314 §§ 41 & 42, 1999; Ord. 2078 § 16, 1994).

13.08.250 Provisions concerning sizing of standard septic tank and disposal field systems. No septic tank and disposal field sizing shall be considered for a residential structure to be less than that for a two-bedroom dwelling. Dormitories and loft areas will be considered as multiple bedrooms based on one hundred twenty square feet per bedroom unit, based on floor area with a possible eight feet or greater floor-to-ceiling clearance. No single-family residence containing dormitory or loft area or areas shall have more than a four-bedroom value assigned to the dormitory or loft area or areas. Any room in a proposed residence classified as a sewing room, den or recreation room will be considered a bedroom if a provision for a permanently constructed closet is present. The expansion of a residence premises to add one or more bedrooms shall require the septic tank and leach field sizing of the premises to be as provided in this Chapter.
(Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.260 Fiberglass septic tanks. The following specifications shall apply to the installation of all fiberglass septic tanks:

A. The trench shall be excavated to provide sixteen inches of clearance against each side of the tank so as to allow hand or foot compaction under tank. Bottom of trench shall be level and base of trench shall be free of large or sharp rocks;

B. Backfill material shall be free of large or sharp rocks within six inches of tank. Backfill material shall be hand or foot tamped under tank to achieve a balanced bedding. Backfill shall be placed at a maximum of four-inch even layers and shall be hand or foot tamped before placing next layer;

C. The minimum fill over the top of tank shall be thirty inches unless an equivalent restraint and protection is provided;

D. Fiberglass septic tank shall be equipped with schedule 40 plastic pipe four-inch tees at the inlet and outlet. Tank shall be filled with water above the joint level to prove water tightness before the tank is backfilled. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.261 Dosing tanks. When the quantity of sewage exceeds the amount that can be disposed in five hundred lineal feet of leach line, a dosing tank shall be used. Dosing tanks shall be equipped with an automatic siphon or pump which discharges the tank at least once every three or four hours. The tank shall have a capacity equal to sixty to seventy-five percent of the interior capacity of the pipe to be dosed at one time. Where the total length of leach pipe exceeds one thousand lineal feet, the dosing tank shall be provided with two siphons or pumps dosing alternately and each serving one-half of the leach field. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 17, 1994).

13.08.262 Grease interceptors or traps.

A. Required. In commercial or industrial premises when liquid wastes contain excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients which may affect the operation of an OWTS or private sewage disposal system, an approved interceptor or trap for such wastes shall be installed.

B. The installation and location of such interceptors or traps shall comply with the CPC as revised by this Chapter.

C. Grease traps or interceptors shall be installed under permit and inspection from the Tuolumne County Community Resources Agency. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2314 § 43, 1999; Ord. 2078 § 18, 1994).

13.08.270 Special design systems.

A. Where the criteria set forth for a standard system cannot be attained, the Environmental Health Director may approve a special design system. Special design systems shall include Modified systems, Alternative systems and Experimental systems. Guidelines formulated for special design systems and alternative systems shall be maintained by the Environmental Health Division.

B. The Guidelines shall provide for a possible reduction of the required soil depth to a minimum of two feet below the bottom of the leaching trench or bed or to groundwater. Specific, written factual justification shall be provided for any reduction granted, as well as a library of referenced publications. All systems included in the EPA Manual, as well as systems with a historical record of reliability in the local area shall be considered by the Guidelines.

C. Any proprietary supplement treatment system used in a special design system shall meet NSF/ANSI (National Sanitation Foundation/American National Standards Institute) Standard 40. NSF approved proprietary components shall not be used independently. Proprietary components may be used as part of the overall wastewater treatment system as tested and approved by NSF.

D. Applicants may request, at applicant's cost, a review of the plans for special design systems by a Qualified Professional under contract to the County. This Qualified Professional shall have the following qualifications:

1. Contemporary experience, knowledge and expertise in the field of OWTS design,

2. Be either a registered civil engineer or a certified engineering geologist in the State of California,

3. Have no conflicts of interest relative to the given special design OWTS plan under review.

E. These systems shall be located, designed and installed under the direction of a consultant. After installation is completed, the consultant shall certify in writing to the Environmental Health Division that the system was located and installed in fidelity with the plans and specifications as approved. Minor deviations from the approved plan and specifications arising from prior unknown site conditions shall be accurately included in the certification. Major deviations shall be reported to the Environmental Health Division prior to installation and new written approval shall be required.

F. The Guidelines developed and approvals granted pursuant to this Section shall be based on valid information and extensive field and test data from conditions similar to the proposed site or from additional data as may be necessary to provide assurance that approved special design or alternative systems will produce continuous and long-range results, at the proposed site, at least equivalent to systems which are specifically authorized.

G. No person shall fail to comply with an Operation, Maintenance and Monitoring Program for a special design system as required pursuant to Section 13.08.220(F). (Ord. 3134 § 29, 2010; Ord 3061 § 3, 2009; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 19, 1994; Ord. 1333 § 1 (part), 1984).

13.08.280 Location of OWTS or sewage disposal system. OWTS or sewage disposal systems constructed on parcels or lots created or approved on or after January 2, 1975, shall meet the setback requirements of Chapter 13.04. For those horizontal distance setbacks not set forth in Chapter 13.04 and for those parcels or lots created prior to the above named date, the following setback requirements are applicable:

TABLE 2

Location of OWTS or Sewage Disposal System			
Minimum horizontal distance in clear required from:	**Building Sewer**	**Septic Tank**	**Disposal Field**
Building or structures (A)	2'	5'	8'
Property line adjoining private property	Clear	5'	5'
Private water wells	50' (B)	50'	100'
Public water wells	50'	150'	150'
Lakes or reservoirs where use is, or may be, intended as a domestic water source	50'	50'	200'
Streams, irrigation ditches, springs or other perennial water courses or impoundments. Category 1 drainage course Ephemeral Stream (C) Intermittent Stream (C) Perennial Stream (D) Impaired water body (E) Surface water body drinking water supplies (F)	10' 10' 25' 25' 50' 50' 50'	10' 10' 25' 25' 50' 600' 50'	25' 25' 50' 75' 100' 600' 200-400'
Trees over 24" in diameter		10'	
Disposal field		5'	5' min (G)
Domestic water line	1' (H)	5'	10'
Distribution box		4'	4'
Driveway or parking area		Clear	Clear
Pressure public water main	10'	10'	10'
Cutback or fillbank when facility above bank	10'	10'	4xH (I)
Domestic water supply canal: Above Below	 50' 10'	 50' 10'	 100' 25'

(A) Including porches and steps whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
(B) All nonmetallic drainage piping shall clear domestic water supply wells by at least fifty feet. This distance may be reduced to not less than twenty-five feet when the drainage piping is constructed of materials approved for use within a building.
(C) As measured from the apparent edge of channel.
(D) As measured from the high water mark which would result from a ten-year frequency flood.
(E) For parcels created prior to May 13, 2018, OWTS may be located within 600 feet of an impaired water body if the proposed system meets the requirements set forth in the LAMP Advanced Protection Management Program.

(F) Where the effluent dispersal system is within the catchment of a public water system's surface water intake point, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies and the dispersal system is located:

1. Within 1,200 feet from a public water system's surface water intake point, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
2. More than 1,200 feet but less than 2,500 feet from a public water system's intake point, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

(G) See Section 13.08.240(J).

(H) Comply with CPC Section 720.0.

(I) Four times the height of the bank, measured from the top edge of the bank. Maximum setback thirty-five feet from top of bank.

(Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2351 § 9, 2000; Ord. 2078 § 20 1994; Ord. 1333 § 1 (part), 1984).

13.08.290 Abandoned sewers and sewage disposal facilities.

A. Every abandoned building (house) sewer, or part thereof, shall be plugged or capped in an approved manner within five feet (1.5m) of the property line.

B. Every cesspool, septic tank, and seepage pit which has been abandoned or has been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed therefrom and be completely filled with earth, sand, gravel, concrete, or other approved material.

C. The top cover or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical portions of the sidewalls or above the level of any outlet pipe until inspection has been called and the cesspool, septic tank, or seepage pit has been inspected. After such inspection, the cesspool, septic tank, or seepage pit shall be filled to the level of the top of the ground.

D. No person owning or controlling any cesspool, septic tank, or seepage pit on the premises of such person or in that portion of any public street, alley, or other public property abutting such premises, shall fail, refuse, or neglect to comply with the provisions of this Section or upon receipt of notice so to comply from the Environmental Health Director.

E. Where disposal facilities are abandoned consequent to connecting any premises with the public sewer, the permittee making the connection shall fill all abandoned facilities as required by the Environmental Health Director within thirty days from the time of connecting to the public sewer. (Ord. 3134 §§ 30, 31, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 21, 1994; Ord. 1333 § 1 (part), 1984).

13.08.300 Inspections under sewage disposal permit.

A. The applicant will deliver the number of plot plans required by the Community Resources Agency and such plot plans shall contain all required information.

B. At the time of delivery of this packet to the Community Resources Agency, the applicant or representative shall uncover and flag all recorded boundary monuments so as to make them visible. When the monuments are not intervisible, the boundary line shall be clearly marked between the same. A sign clearly stating the name of the property owner shall be clearly placed at a spot easily visible from the road or entry abutting the parcel.

C. The following soil profile test requirement may be waived by the Environmental Health Director where he/she determines there is adequate soil data for that area of the parcel. A test trench at least eight feet deep must be provided in the initially proposed leach field area and expansion area to assure the soil depth is adequate, to determine the most permeable strata for discharge of effluent, and to indicate the depth of groundwater. Each test trench shall be of an adequate dimension to allow an unobstructed view to the bottom of the trench. The Environmental Health Division shall be notified prior to the completion of the trenches and the trenches shall be covered or protected immediately after inspection. This inspection and all further discussed inspections must be requested at least twenty-four hours in advance.

D. The Environmental Health Director or his/her representative shall then visit the site to determine if the proposed improvements meet the requirements of this Chapter or any other applicable County ordinance or state law. If this determination is made, a sewage disposal permit shall be issued as provided in this Chapter. Notwithstanding any other provision of this Section, the Environmental Health Division shall not be required to issue any permit if, in the opinion of the Environmental Health

Director, in consultation with the Health Officer, such approval would result in a public hazard or be detrimental to the health, safety or welfare of the residents of the area.

E. The Environmental Health Director may also require percolation tests when history and experience in the area indicate such tests are advisable. The percolation tests shall be conducted as specified in Section 13.08.230(H).

F.Inspections of construction of the OWTS shall be performed when:

1. The disposal field, septic tank hole, distribution box and solid line areas are dug, trench walls are scarified, and the distribution box bases are compacted;

2. The septic tank, drain rock, drain pipe, solid lines, distribution boxes, and building paper are in place in their respective trenches.

Covering installed improvements prior to inspection shall be limited solely to those portions of the work where the open excavation impedes necessary movement of equipment required to complete the system design as approved. If each inspection has disclosed satisfactory compliance of the provisions of this Chapter and the CPC, the Environmental Health Director or his/her representative shall sign off the work as completed on the sewage disposal permit copy mandated to be kept on the job. The owner or contractor may then cover the installed improvements. (Ord. 3134 § 32, 2010; Ord. 2863 § 1, 2007; Ord 2838 § 1 (part), 2007; Ord. 2351 § 10, 2000; Ord. 2314 §§ 44 & 45, 1999; Ord. 2078 § 22, 1994; Ord. 1333 § 1 (part), 1984).

13.08.310 Use and repair of existing OWTS or sewage disposal system.

A. Every part of each OWTS or sewage disposal system is to be maintained in good repair at all times, and operated in such a manner as not to cause odors, pollution or contamination of adjacent lands or surface waters or useable subsurface waters of the County nor create any other nuisance.

B. With respect to the repair of an existing OWTS or sewage disposal system, the Environmental Health Director may allow such lesser distances than those shown elsewhere in this Chapter, except as to structures, as he/she shall determine necessary to avoid undue hardship, but that will accomplish the general purpose and intent of this Chapter.

C. Nothing contained in this Chapter shall prevent utilization of another parcel for the construction of an OWTS or sewage disposal system or a portion of an OWTS or sewage disposal system providing the following conditions are met:

1. The land on which the system is to be constructed is owned by the owner of the system provided that the parcels are legally merged or a notice of action is filed with the County recorder's office reflecting restrictions on the use of each parcel for purposes consistent with the existence of the OWTS or sewage disposal system. Alternatively, another parcel may be used if the owner of the system has a legally recorded easement on the land which expressly provides that he/she has the right to use the land for sewage treatment and disposal purposes;

2. The recorded easement shall stipulate that the easement may not be revoked or extinguished and that an effort to do shall be of no force and effect unless and until there has been recorded an affidavit signed by an authorized representative of the agency owning the public sewer stating that the structure which the OWTS or sewage disposal system was originally intended to serve has been permanently connected to a public sewer. (Ord. 3134 §33, 2010; Ord. 2863 § 1, 2007; Ord 2838 § 1 (part), 2007; Ord. 2078 § 23, 1994; Ord. 1333 § 1 (part), 1984).

13.08.311 Discharge restrictions - Pollution prohibited. All sewage and other liquid waste shall be disposed of by an approved method of collection, treatment and effluent discharge. Sewage or sewage effluent shall not be disposed of in any manner that will permit it to rise to the surface or flow over the top of the ground or cause pollution of the ground surface, groundwater, bathing area, lake, pond, or watercourse, or create a nuisance. It shall not be discharged into any abandoned or unused well or into any crevice, sinkhole or other opening either natural or artificial in the rock formation. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2078 § 24, 1994).

13.08.320 Minor deviations from ordinance requirements. Minor deviations from a requirement of this Chapter regulating OWTS or sewage disposal systems may be granted by the Environmental Health Director. Specific, written, factual findings shall be made in each case justifying the minor deviation. (Ord. 3134 § 34, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.330 Technical advisory committee. The Environmental Health Director, with the concurrence of the Health Officer, shall appoint an ad hoc technical advisory committee made up of three consultants. Any project may be referred to the technical advisory committee at the request of the applicant, the Environmental Health Director, or the Health Officer. The technical advisory committee shall make its recommendation within thirty days unless a longer time is agreed to by the applicant. (Ord. 3134 § 35, 2010; Ord. 3061 § 4, 2009; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 1333 § 1 (part), 1984).

13.08.340 Appeals. If the Environmental Health Director denies an application for a permit, issues a conditional permit, or denies a minor deviation from requirements of this Chapter which is contrary to law, an appeal may be made to the Board of Supervisors, whose decision shall be final. The appeal shall be filed with the clerk of the Board of Supervisors within ten calendar days following giving or mailing notification by the Environmental Health Director of the decision subject to the appeal, and shall specifically state the grounds on which the appeal is based. Appeals not submitted in a timely manner will not be considered and will be returned. (Ord. 3134 § 36, 2010; Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord. 2280 § 14, 1999; Ord. 1333 § 1 (part), 1984).

13.08.350 Violation; enforcement. A violation of this Chapter shall be enforced as provided for in Chapter 1.10 of this Code. (Ord. 2863 § 1, 2007; Ord. 2838 § 1 (part), 2007; Ord 2296, § 5, 1999; Ord. 1333 § 1 (part), 1984)

Appendix B

Chapter 13.04

ONSITE WASTEWATER TREATMENT SYSTEMS

Sections:

13.04.010 Definitions.
13.04.020 Purpose - Construction.
13.04.030 Compliance - Exceptions.
13.04.040 Authority to enforce Uniform Codes.
13.04.050 Enforcement authority.
13.04.060 Horizontal distances.
13.04.070 Minimum criteria.
13.04.080 Procedures.

13.04.010 Definitions. For the purposes of this Chapter, the following words or phrases have the following meanings:

A. "Disposal area" is the potential disposal area available for the installation of an onsite wastewater treatment system within any lot or parcel, excluding therefrom all unsuitable areas. Unsuitable areas include all areas within required zoning setbacks, areas within dedicated easements unless the easements are dedicated for liquid waste disposal purposes, areas not owned or controlled by the property owner, areas occupied or to be occupied by structures and paved areas.

B. "Ground slope" shall be measured in percent of grade and is classified in the following categories:

Category	Slope Percent
I	Less than 10 percent
II	11-20
III	21-30
IV	Greater than 30

C. "Horizontal distance" is the distance in lineal feet measured in a horizontal plane from the nearest edge of any structure, opening or excavation.

D. "Impaired water body" means a surface water body or segment thereof that is identified on a list approved by the State Water Resources Control Board and the US EPA pursuant to Section 303(d) of the federal Clean Water Act.

E. "Net area" of a lot or parcel means the area of such lot or parcel measured in acres less any road rights-of-way, whether dedicated or not.

F. "Onsite wastewater treatment system(s)" (OWTS) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. OWTS do not include "graywater" systems pursuant to Health and Safety Code section 17922.12.

G. "Percolation rate" is the rate determined in accordance with procedures contained in the current United States Department of Health, Education and Welfare "Manual of Septic Tank Practice."

H. "Public sewer" is a common sewer directly controlled by a public authority.

I. "Shall" is mandatory and "may" or "should" is permissive.

J. "Soil" is a granular or weathered material that can be excavated and handled with a pick and shovel.

K. "Uniform Plumbing Code" is the latest version of such code adopted by Section 15.04.010.

L. Any other word or phrase shall be interpreted and construed in a manner consistent with the Uniform Plumbing Code. (Ord. 784 § 1 (part), 1974; prior code § 7-18.1).

13.04.020 Purpose - Construction. The Board of Supervisors finds that the uncontrolled installation and maintenance of OWTS have the potential to degrade water quality and to cause health hazards and nuisance conditions, and, therefore, enacts this Chapter to regulate such systems in order to protect the public health and safety. Every effort should be made to connect to a public sewer where reasonably available. This Chapter shall be liberally construed to effectuate its purposes. (Ord. 784 § 1 (part), 1974; prior code § 7-18.0(a)).

13.04.030 Compliance - Exceptions.

A. Notwithstanding any other provision of this Code except as provided in subdivisions B, C, D, E or F of this Section, no lot or parcel of a gross area

of ten acres or less, shall be created or approved on and after January 2, 1975, pursuant to Title 16, unless a tentative subdivision or parcel map including such lot or parcel was approved prior to January 2, 1975, without fully complying with this Chapter.

B. This Chapter shall not apply to a lot or parcel that is required to be connected to a public sewer by the Uniform Plumbing Code as adopted by Chapter 15 or unless each such lot or parcel is guaranteed connection to a public sewer, which guarantee shall be in writing from the authority operating the public sewer; if such guarantee is received, resulting in the creation and approval of such lot or parcel, no building permit shall be issued thereafter for any building on such lot or parcel unless such building will be connected to the public sewer.

C. A lot or parcel zoned as an Open Space (O) District may be created and approved without complying with this Chapter. Such a parcel may not be rezoned to any other zoning district unless and until it fully complies with this Chapter. This restriction shall be noted by a certificate on the map. However, failure to place such a certificate on the map shall not affect the enforceability of this restriction.

D. A lot or parcel may be created and approved if an OWTS connected to an approved structure exists on the parcel and the Environmental Health Division of the Community Resources Agency determines that the required subsurface drain field for expansion of the system will exist on the parcel, minimum horizontal distances will be maintained, and that compliance with other provisions of this Chapter are not required to protect the public health or safety. The Environmental Health Division may require an inspection of the existing system and proof of one or more of the minimum criteria pursuant to Section 13.04.070. The applicant may obtain approval of the lot or parcel under subsection A of this Section without reference to this subsection.

E. Existing lots may be combined by merger or reversion to acreage as defined in Title 16, without complying with this Chapter. The reestablishment of the original lot configuration or a proposal to resubdivide shall fully comply with this Chapter.

F. A lot line adjustment or resubdivision shall not be approved without complying with this subsection:

1. Lots developed after March 6, 1974: A lot line adjustment or resubdivision may be approved, as provided for in Title 16, without otherwise complying with this Chapter if an acceptable OWTS connected to a structure exists on the lot or parcel, if the Environmental Health Division determines that existing OWTS will meet setbacks pursuant to Chapter 13.08, or Chapter 13.04 for developed lots created or approved for individual wells after January 2, 1975, and that the minimum required subsurface drainfield expansion area for repair of the existing OWTS will exist on each applicable lot or parcel after the lot line adjustment or resubdivision.

2. Lots developed prior to March 6, 1974: For purposes of this Section, on lots or parcels with OWTS installed before March 6, 1974, minimum required expansion area shall be any existing expansion area up to 100 percent of that required for the original system, unless a reduction of that area is approved by the Environmental Health Division. A reduction may be approved only upon a determination by the Environmental Health Division that doing so does not create a condition that upon failure of the existing system will create a greater potential to degrade water quality, or to cause health hazards or nuisance that existed before the proposed lot line adjustment or resubdivision.

3. Vacant lots created after January 2, 1975: For a lot line adjustment or resubdivision on a lot or parcel created or approved on or after January 2, 1975, unless a tentative map including such lot or parcel was approved prior to January 2, 1975, and where such a lot or parcel is not developed with a structure requiring an OWTS:

a. May be approved without complying with this Chapter if the adjustment or resubdivision will not eliminate any portion of the lot or parcel that was the site of any testing for purposes of originally complying with this Chapter.

b. May not be approved until compliance with this Chapter if the adjustment or resubdivision will eliminate any portion of the lot or parcel that was the site of acceptable testing for purposes of originally complying with this Chapter.

4. Vacant lots created prior to January 2, 1975: A lot line adjustment or resubdivision on a lot or parcel created or approved prior to January 2, 1975, and that is not developed with a structure requiring a septic disposal system, may be approved without complying with this Chapter.

5. An appeal from decisions concerning lot line adjustments or resubdivisions may be made to the Board of Supervisors pursuant to the procedure set forth in Section 13.04.050(B).

(Ord. 3134 §§ 3, 4, 2010; Ord. 2351 § 1, 2000; Ord. 2132 § 9 (part), 1996; Ord. 1863 §§ 1, 2, 1991; Ord. 1803 § 1, 1990; Ord. 1253 § 1, 1983; Ord. 784 § 1 (part), 1974; prior code § 7-18.0(b)).

13.04.040 Authority to enforce Uniform Codes. The enactment of this Chapter is not intended to,

and does not, supersede the authority of the Building and Safety Division of the Community Resources Agency to enforce the Codes adopted pursuant to Section 15.04.010 on lots or parcels created before or after January 2, 1975. Further, the enactment of this Chapter does not relieve anyone from complying with all other ordinances, statutes, rules and regulations pertaining to the creation or approval of lots or pertaining to the permit requirements of Chapter 13.08 of this Title. (Ord. 3134 § 5, 2010; Ord. 2314 § 38, 1999; Ord. 1863 § 3, 1991; Ord. 784 § 1 (part), 1974; prior code § 7-18.0(c)).

13.04.050 Enforcement authority.

A. Enforcement authority. The Environmental Health Division of the Community Resources Agency of the County shall enforce this Chapter and is delegated full authority to do so. No parcel shall be approved without the written approval of the Environmental Health Division. The Environmental Health Division shall not approve any parcel unless each complies with this Chapter. In conjunction with a tentative map application, the owner or his/her agent shall submit to the Environmental Health Division the information necessary to evaluate the disposal area as prescribed by the Director of Environmental Health and include, but not be limited to: soil percolation rates (where required), soil depth to groundwater, ground slope, and horizontal distances. The Director of Environmental Health may require additional information or data which shall be supplied prior to the approval of the parcel. In areas with known groundwater problems, the Environmental Health Division may require additional testing during the crucial months of March through May.

B. Appeals to the Board. In the event that approval of a parcel proposed by a tentative subdivision or parcel map is denied by the Environmental Health Director with the concurrence of the Tuolumne County Health Officer, and the owner or his/her agent have reason to believe that one or more procedural errors had been made, an appeal may be made to the Board of Supervisors whose decision shall be final. The decision to deny the approval of a parcel shall be set forth in writing and shall specify the grounds for the denial. The appeal shall be filed with the clerk of the Board of Supervisors within ten calendar days following the date of the written denial, and shall specifically state the grounds on which the appeal is based. (Ord. 3134 § 6, 2010; Ord. 2314 §39, 1999; Ord.1560 § 1, 1987; Ord. 784 § 1 (part), 1974; prior code § 7-18.2).

13.04.060 Horizontal distances.

A. The following minimum horizontal distances are necessary to provide protection to water quality and for public health:

HORIZONTAL DISTANCES

HORIZONTAL DISTANCES													
	WELLS		SURFACE DRAINAGE										
Facility	Domestic	Public	Drainage Course	Ephemeral Stream (1)	Intermittent Stream (1)	Perennial Stream (2)	Impaired Water Body	Drinking Water Supply Surface Water Body (3)	Lake or Reservoir (above) (4) or Spring	Domestic Water Supply Canal, Above	Domestic Water Supply Canal, Below (7)	Cut or Fill Bank	Property Line (6)
Septic Tank	50'	150'	10'	25'	25'	50'	600'	50'	50'	100'	25'	10'	25'
Sewer Line	50'	100'	10'	25'	25'	50'	50'	50'	50'	100'	25'	10'	25'
Leaching Field	100'	150'	25'	50'	75'	100'	600'	200-400'	200'	250'	25'	4xH (5)	50'

Explanatory Notes:

1. As measured from the apparent edge of channel.

2. As measured from the high water mark which would result from a ten-year frequency flood.

3. Where the effluent dispersal system is within the catchment of a public water system's surface water intake point, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies and the dispersal system is located:

a. Within 1,200 feet from a public water system's surface water intake point, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

b. More than 1,200 feet but less than 2,500 feet from a public water system's intake point, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

4. As measured from the high water line.

5. Distance in feet equals four times the vertical height of the cut or fill bank. Distance is measured from the bottom of the bank. Setback is not required if the top of the drain rock is one foot below the bottom of the cut bank. Total distance need not exceed thirty-five feet from top of the bank.

6. When individual wells are used.

7. Below canal means below the bottom of the canal (invert).

B. Encasement in approved pressure pipe or other special protection required if at less distance than shown.

C. Lesser setbacks may be permitted with approved safety provisions. No part of an OWTS shall be located closer than the above minimum horizontal distance for each part of such system. (Ord. 784 § 1 (part), 1974; prior code § 7-18.3).

13.04.070 Minimum criteria.

A. The following minimum criteria are necessary for the proper functioning of an OWTS on each lot or parcel:

1. The percolation rate in the disposal area should not be greater than sixty minutes per inch.

2. Soil depth should not be less than eight feet. Greater depths shall be required if soils have a percolation rate less than ten minutes per inch.

3. Depth to groundwater shall not be less than eight feet. Greater depths shall be required if soils have a percolation rate less than ten minutes per inch.

4. Ground slope in the disposal area should not be greater than thirty percent.

5. The minimum disposal area should conform to the following:

Minimum Useable Disposal Area

Percolation Rate	Area in Square Feet
41-60	12,000
21-40	10,000
11-20	8,000
10 or less	6,000

6. Percolation rate tests shall be required in accordance with the following:

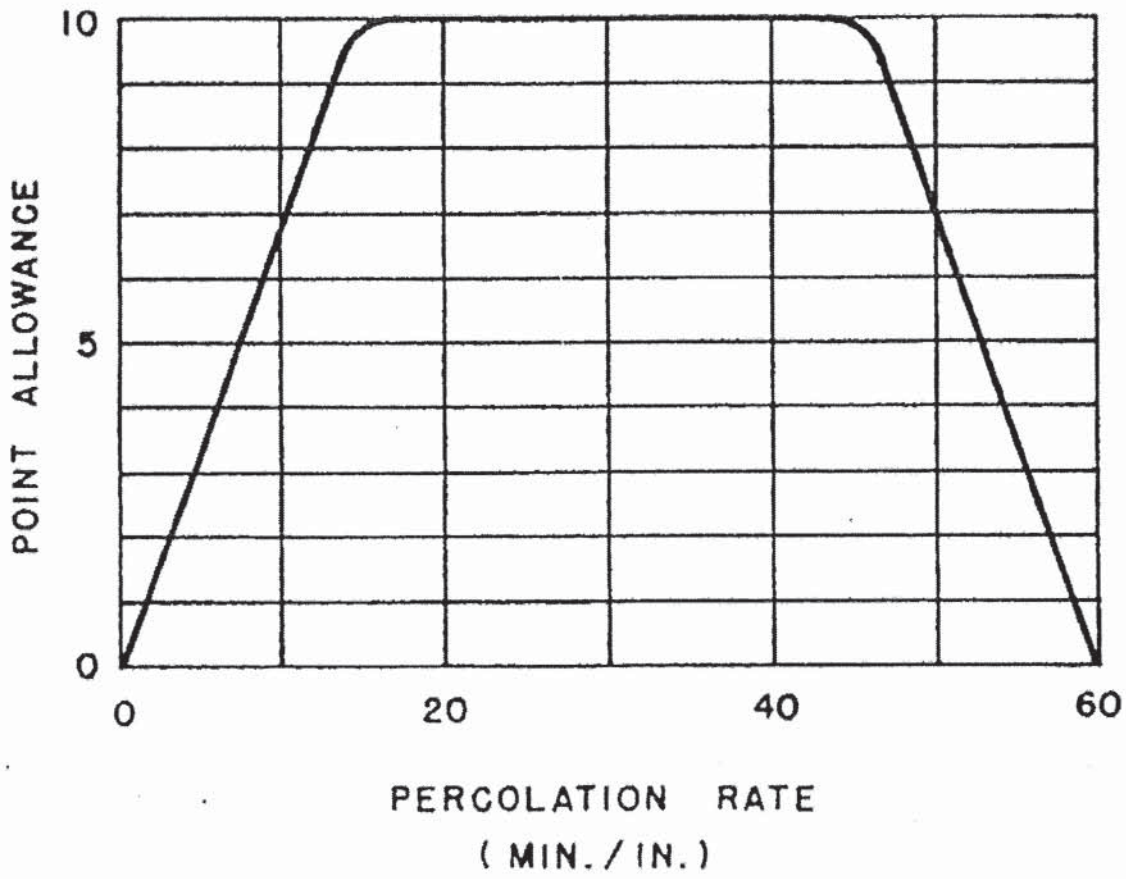
Parcel Size	Test Requirements
5-10 acres	If slope in category IV
2.5-5 acres	If slope in category III or IV
Less than 2.5 acres	Test required for all slope categories

B. A failure to meet the minimum criteria may be negated by other favorable conditions except where a criterion is required. For example, the installation of an OWTS may be allowed in areas steeper than thirty percent if the percolation rates are good, the soils are deep and the available disposal areas are large. Where minimum criteria are not met, a predevelopment engineered system may be required by the Environmental Health Division. (Ord. 3134 § 7, 2010; Ord. 784 § 1 (part), 1974; prior code § 7-18.4).

13.04.080 Procedures.

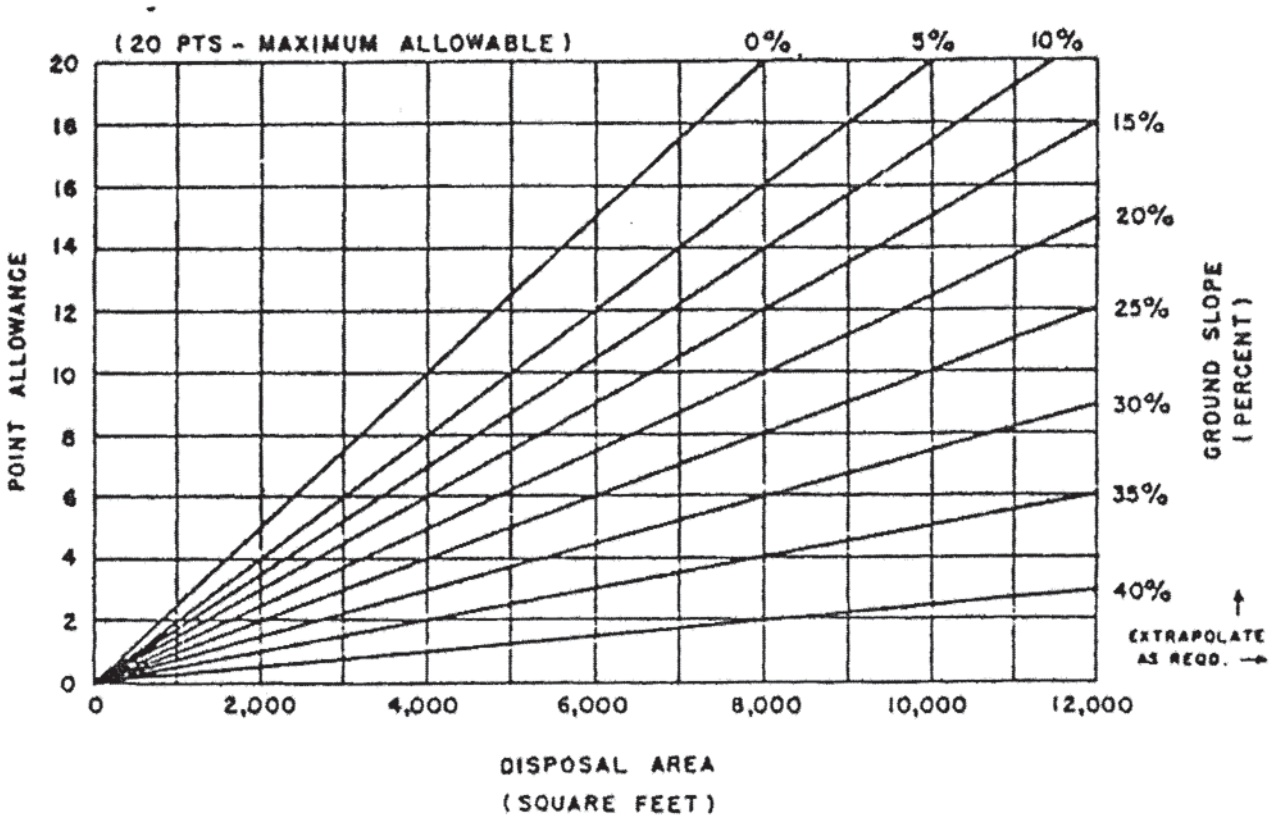
A. The following procedure has been formulated to recognize the interplay among the minimum criteria set forth in Section 13.04.070. Point allowances are provided for the magnitude of each factor set forth in such criteria. No lot or parcel shall be approved on which a single-family residence could be physically located unless such lot or parcel attains at least thirty-five points by applying the facts relating to each such lot or parcel to the four following graphs:

SOIL ABSORPTION CAPACITY

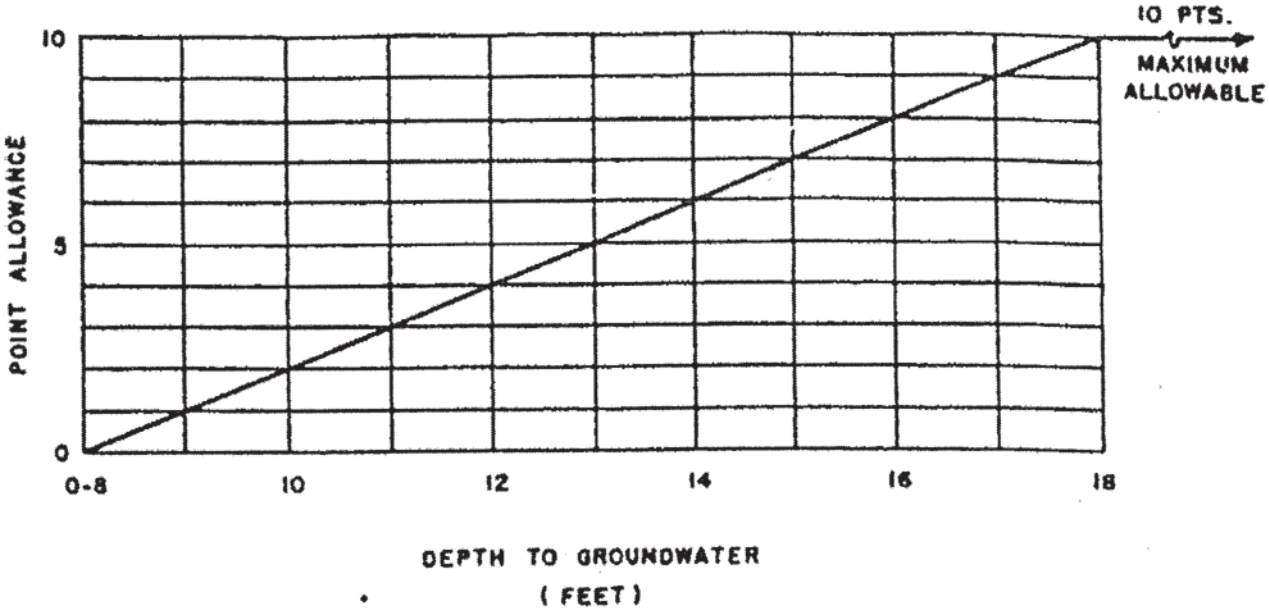


NET USABLE

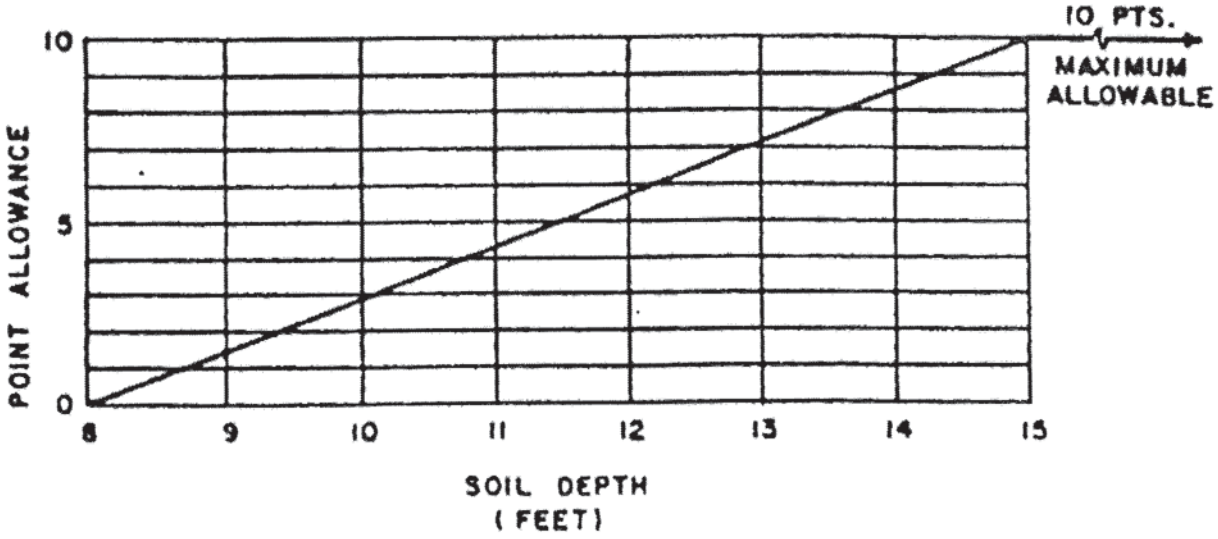
DISPOSAL AREA vs. SLOPE



DEPTH TO GROUNDWATER



SOIL DEPTH



B. Land divisions in areas mapped as "limestone" on the general plan geotechnical maps shall meet the following requirements:

1. Computation of the points needed for approval of each parcel to be created shall include not less than six points for soil depth and not less than ten points for ground water pursuant to subsection A above. These points may be added to points attained through slope-area and percolation to meet minimum total required per parcel.

2. Percolation rate shall not be faster than fifteen minutes per inch at a depth of three feet below the ground surface. (Ord. 1560 § 2, 1987; Ord, 784 § 1 (part). 1974; prior code § 7-18.5)

APPENDIX C

GUIDELINES FOR DESIGN AND EVALUATION OF SPECIAL DESIGN ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS

These minimum design and evaluation standards have been developed pursuant to Tuolumne County Ordinance Code Section 13.08.270A

April 2017

Tuolumne County Division of Environmental Health

(209) 533-5633

OFFICE HOURS

8 A.M. to 3 P.M.

NOTE

It is the responsibility of the owner, agent or person in control of the property to repair, fence, eliminate or in some other acceptable manner abate the hazard created by any excavation. (Reference: Uniform Building Code, Section 7004 and Health and Safety Code, Section 24400).

TABLE OF CONTENTS

Page #

I.	Summary	3
II.	Introduction	4
III.	Purpose and Objectives	4
IV.	Definitions	4
V.	Roles of the Consultant and Environmental Health Specialist	6
VI.	Method of Evaluation	6
VII.	General Requirements	7
VIII.	System Design	8
IX.	Procedure For Permit Application & Final Certification	10
X.	Special Requirements	11
XI.	Soil, Site & Design Criteria	12
	1. Mounds	
	2. Evapotranspiration Systems	12
	2. Intermittent Sand Filters	13
	3. Sand Trenches & Beds	14
	4. Intercept Drains	15
XII.	Operation, Maintenance and Monitoring Program for Special Design Onsite Wastewater Treatment Systems	15

I. SUMMARY

A. Application for Plan Check and Test Trench evaluation for a standard on-site sewage treatment and disposal system must be made. In some instances, a conventional system cannot be approved and a special design or alternative sewage disposal system can be explored. (Tuolumne County Code Section 13.08.270A)

B. Registered Engineers, Environmental Health Specialists or Geologists familiar with sewage treatment and disposal are required to proceed with special design or alternative systems per these guidelines.

C. Submit 3 copies of a special design sewage disposal system construction proposal with a complete plot plan (see pg. 6) at the Division of Environmental Health, 48 W. Yaney, Street, fourth floor, (Mailing: 2 S. Green Street, Sonora, CA 95370) and Special Design/Alternate Plan Check fees.

D. Arrange for a site and soil profile evaluation if needed and percolation testing.

E. After receipt of an approved permit, construction can proceed.

   If work is not ready for inspection at arranged time or follow-up for compliance with approved permit is necessary, an hourly stand-by/follow-up fee will be assessed.

F. Inspections must be arranged in advance for all required inspections as a part of the approved permit. (Tuolumne County Code Section 13.08.300)

G. The Registered Consultant must notify this Division of any deviations from the approved plan, and new written approval will be required for major deviations. (Tuolumne County Code Section 13.08.270 C)

H. The Registered Consultant shall certify in writing to this Division that the system was located and installed in accordance with the approved plans and specifications. Minor deviations shall be included in the certification. (Tuolumne County Code Sections 13.08.290 C)

I. After everything is in order, the Division of Environmental Health will notify the Building Department of the septic approval so building permits can be issued.

II. INTRODUCTION

Where soils are suitable, an on-site sewage treatment and disposal system is a viable alternative to a public sewer. In 1981, Tuolumne County adopted a sewage treatment and disposal ordinance to manage the installation of standard septic systems on existing parcels. The ordinance established a "minimum

criteria" or soil and site standard pursuant to Regional Water Quality Control Board guidelines and accepted environmental health practices. On parcels where "minimum criteria" for a standard system is lacking, a special or alternative design may be approved provided water quality and environmental health objectives are met. These guidelines were developed in accordance with Section 13.08.270 of the Tuolumne County Ordinance Code for all special design and alternative private sewage treatment and disposal systems.

III. PURPOSE AND OBJECTIVES

1. Provide a method of evaluation, procedure for approval and minimum standards.

2. Delineate the Environmental Health Specialist's and Consultant's role in system design.

3. Encourage the use of special designs and alternative systems in solving critical sewage disposal problems on existing lots.

4. Maintain water quality and environmental health objectives.

5. Ensure and improve communication between the Health Department, consultant and homeowner.

6. Establish minimum information necessary to review plans and delineate minimum standards.

7. Allow for flexibility (creativity) in design.

8. Provide a standardized procedure for submitting special and alternative designs to the Health Department for review and approval.

9. Protect the homeowner and public from poorly designed or installed systems.

IV. DEFINITIONS

1. Standard System: A septic tank and leach field installed in accordance with the requirements of the Tuolumne County Ordinance Code Chapter 13.08 and portions of the currently adopted edition of the UPC. This Division may approve minor modifications with satisfactory written reasons justifying the modification from the contractor/consultant, (Sections 13.08.320). The basic standard system consists of a septic tank; one or more distribution boxes; 4" solid distribution pipe and 4" perforated leaching pipe, and 3/4" – 2.5" washed drain rock. The leach field may consist of leaching trenches or a leaching bed located on a suitable soil mantle with adequate separation from groundwater or fractured rock. Septic effluent is distributed by gravity flow throughout the leach field through perforated pipe and drain rock. A system in which effluent is actively pumped to a gravity distribution system (a "pump-to-gravity" system) is considered a category of standard system. However, pump-to-gravity system plans must have a Consultant's stamp to certify the design.

2. Special Design: Any consultant-designed system designed for commercial premises or to mitigate

lack of minimum criteria necessary to approve a standard system. Examples include the following:

a. Modified Systems
b. Alternative Systems
c. Experimental Systems

3. Modified Design: For purposes of this guideline, a standard system that may have some minor deviation from code requirements. Modified designs include the following:

   a. Shallow trenches (to bedrock i.e. 6" of backfill)
   b. Intercept drains (for repairs or new systems)
   c. Commercial systems with standard designs
   d. Culverts

4. Alternative Systems: For purposes of these guidelines, a special design system where reliability and performance is documented. Examples of alternative systems include:

   a. Mounds
   b. Intermittent filters
   c. Recirculating sand filters
   d. Sand trenches
   e. Drip emitters
   f. Aerobic systems with non-standard disposal
   g. Shallow leach fields (to ground water)
   h. Pressure distribution systems
   i. Commercial systems other than standard designs
   j. Fills (site preparation only, does not include engineered fill)

5. Experimental Systems: For purposes of these guidelines, a special design system where further monitoring and evaluation is needed to establish reliability and performance. Examples include the following and all systems not listed above:

   a. Evaporation ponds
   b. Evaporation disposal

6. Consultant: For the purposes of these guidelines a "consultant" is a registered civil engineer, registered environmental health specialist, or certified engineering geologist who possesses satisfactory experience with on-site sewage treatment and disposal. A consultant is required on all special design, alternative and experimental systems.

V. ROLES

1. The Environmental Health Specialist (EHS) may assist the property owner in assuring that the location, design and installation of a standard septic system meets all minimum requirements under County ordinance. If a modified design is needed, the EHS is authorized to assist the applicant in all modifications that are approved by the Environmental Health Director (listed under modified designs). For minor deviations other than those listed, specific written, factual

findings shall be submitted to the Specialist to justify the deviation for their consideration. On special design, alternative and experimental systems, the EHS would be available to the consultant for technical consultation and for interpretation of code requirements. The EHS will organize, manage, educate, enforce and consult on matters concerning the approval, installation, and maintenance of private sewage disposal and treatment systems.

2. A Consultant is required for all specially designed septic systems, including all alternative and experimental systems. A consultant is also required for any septic system located within the geographic boundary of the Advanced Protection Management Program. The consultant is responsible for site evaluation, testing, test evaluation, feasibility study, design and location of the system, for supervising the installation of the system and monitoring devices and for monitoring the system and certifying that the system was located and installed according to the design.

VI. METHOD OF EVALUATION

The performance of each system will be determined by its reliability, safeguards, and effect on the environment. Although the Health Department will maintain files on approved tanks, pumps, pipes, etc., the structural and mechanical reliability of the system and equipment is primarily the responsibility of the manufacturer and/or consultant. Where performance has not been well established, especially on system design, the system will be designated "experimental" and further monitoring will be required. Safeguards such as alarms, monitoring devices, and shutoffs, if needed, are described under "Special Requirements" for each type of system. Safeguards will be required where immediate health hazards could occur due to system failure.

The environmental effects of the system will be measured by the following parameters:

1. Removal and destruction of pathogens
2. Reduction of biochemical oxygen demand (BOD)
3. Reduction of suspended solids (SS)
4. Removal of nitrogen
5. Removal of phosphorus
6. Disposal of water
7. Absorption of heavy metals
8. Absence of odors

Readily available reference materials used to evaluate a system's performance include the following:

1. "EPA Design Manual, Onsite Wastewater Treatment and Disposal Systems". Oct. 1980, U.S. Environmental Protection Agency, Office of Water Program Operations, Washington DC 20460 or Office of Research & Development, Municipal Environmental Research Laboratory, Cincinnati, OH 45268.

2. "Uniform Plumbing Code", 1985 (or current) edition, International Association of Plumbing and Mechanical Officials, Headquarters at 5032 Alhambra Ave., Los Angeles, CA 90032.

3. "Manual of Septic Tank Practice", U.S. Department of Health, Education, & Welfare, Public

Health Service, Cincinnati, Ohio, 45202, PHS publ. #526, 1st print 1957, revised 1967.

4. "Guidelines for Evapotranspiration Systems", State of California, Water Resources Control Board, Jan. 1980.

5. "Guidelines for Mound Systems", State of California, Water Resources Control Board, Jan. 1980.

6. "Drainage of Agricultural Land", SCS National Engineering Handbook, May 1971, U.S.D.A., Soil Conservation Service.

7. "EPA Onsite Wastewater Treatment Systems Manual" February 2002 update, U.S. Environmental Protection Agency, Office of Water Program Operations, Washington DC 20460 or Office of Research & Development

When systems are designed using reference materials not listed above, the consultant must list the source and provide a copy of the reference. **Submitting as much information as possible will help smooth and shorten the evaluation process. Lack of documentation and supportive information could lead to serious delays in evaluation and approval of a system.**

VII. GENERAL REQUIREMENTS

1. All Tuolumne County Ordinance Code Chapter 13.08 requirements apply to special design systems unless otherwise provided for under "Special Requirements". Any variation must be supported by specific, written, factual justification.

2. All surface discharges, including evaporation ponds, must be approved by the Regional Water Quality Control Board - Central Valley Region.

3. A 100% replacement area must be set aside to provide for expansion or to replace a failed system and must be shown on the plot plan.

4. Field work on percolation tests and soil profiles must be done under the supervision of the consultant and be available for inspection by the EHD. The consultant shall locate, design, and supervise installation of the system. The consultant assumes responsibility for the work performed.

5. The consultant shall certify in writing to the EHD that the system was located and installed in accordance with the approved plans and specifications. Any minor deviation from the approved plan shall be accurately included in the certification. (13.08.270)

6. The consultant shall notify the EHD of any major deviations from the approved plan and new written approval shall be required. (13.08.270C)

7. All site testing and system installation must be available for inspection and verification. The

Health Department shall be notified at least twenty-four (24) hours in advance of such work. (13.08.300C)

8. All alternative and experimental systems must be provided with facilities for further monitoring as approved by the Health Department, performance monitoring, after installation of a special design or alternate system will be at the discretion of the Health Department. Continued monitoring of experimental systems is mandatory until such time the system proves reliable to the Health Department and consultant. All costs associated with monitoring and sampling will be the responsibility of the property owner. The results of any monitoring and sampling must be sent to the Health Department. Approval for specific monitoring devices and requirements will be based primarily upon the recommendation of the consultant.

9. Flow reduction credit will not be allowed for low flow fixtures. These devices depend upon uses and operation of an on-site sewage treatment and disposal system that are not covered under the construction and installation permit. Daily flow rates shall be determined from the County Ordinance Code and/or most recently adopted U.P.C. (If applicable flow rates are not contained in these two codes, the rates shall be subject to approval by H.D.).

10. The consultant shall supply the homeowner with information regarding operation and maintenance of the system and equipment. Name, address and phone number of the manufacturer and a qualified service agent should be included.

11. Experimental systems are restricted to repair situations only and only if alternative systems outlined in this guideline cannot be sited.

VIII. SYSTEM DESIGN

Information to be submitted by the consultant for on-site sewage disposal and treatment systems includes a plot plan, grading plan, description of groundwater and soils; description of monitoring devices, system operation and function; and a site evaluation. Minimum details of each are described below:

1. Plot Plan
   a. Topography
      (1) Slope and contour if needed (see soil and site design criteria).
      (2) Drainage courses, water courses
      (3) Rock outcroppings, cut banks and fills
      (4) Springs, canals, ponds, reservoirs within 250 feet of disposal area).
   b. Easements: road, utility, drainage, etc.
   c. Existing and proposed water wells: domestic, irrigation, abandoned, etc. (within 200 ft. of proposed disposal area)
   d. Trees greater than 24" trunk diameter.
   e. Location of test trenches, soil borings, and percolation test holes, etc.
   f. Existing and proposed structures, swimming pools, driveways and parking areas. (On dwellings, indicate number of bedrooms)
   g. Location and construction details of proposed system and 100% expansion area.
   h. Show location and construction details of system facilities: tanks, (including size), pumps, intercept drains, leach areas, etc.

i. Lot identification
   (1) Name and mailing address of legal owner.
   (2) AP Number
   (3) Boundary monuments (location and tag number) show size and shape of lot.
j. Consultants name, address, phone, license number with wet stamp and/or signature.

2. Grading -- describe:
   a. Existing graded areas, cut banks, and fills
   b. Proposed graded areas and estimated cut bank heights, fills, and stump (greater than 24 in.) removals.

3. Groundwater
   a. Describe:
      (1) Condition: perched water, groundwater, water table, mottling, etc.
      (2) Testing done and/or needed.
      (3) If no groundwater or evidence thereof is observed, so state.
      (4) Presence or absence of hydrophilic vegetation (tubes, etc.)
   b. Where observations differ, observation wells, and winter testing may be required.

4. Soils: (Tabulate all final results, including tests that fail).
   a. Soil profiles adequate for system design, at least two (2) per site.
      (1) Soil borings or trenches.
      (2) Describe soil horizons using USDA soil classification system.
      (3) Describe texture, structure, color, mottling, and moisture content of each horizon.
      (4) Describe hard pans.
      (5) Describe presence or absen dwater or evidence of groundwater.
   b. Percolation test at depth of bottom of proposed absorption field; at least three tests per soil type shall be utilized.
      (1) The MSTP method is mandatory for meeting soil criteria. (Other methods may be approved for sizing).
      (2) Representation: distribute test holes to provide a representative range of soil conditions.

5. Monitoring, describe:
   a. The necessity of monitoring
   b. Type of monitoring
   c. Type of samples
   d. Duration and frequency of monitoring

6. System operation and function, describe.

7. Site evaluation, summary
   a. Site inspection
   b. Tests
   c. Calculations
   d. Groundwater and flooding
   e. Feasibility and conclusions.
      (1) Based on findings

(2) What type(s) of system(s) would be best suited.
(3) Comparison of estimated cost for alternatives.

IX. PROCEDURE FOR PERMIT APPLICATION AND FINAL CERTIFICATION

From permit application to final certification, the following procedures are required:

1. Revised Proposal - with the proposal, consultant submits to Environmental Health Office:
   a. Plot Plan
   b. Reports (See Section VII)
   c. Data and Calculations
   d. Manufacturers information and specifications.
   e. Maintenance and operation information (for homeowner)
   f. Current fee established by the BOS

2. Site and soil profile inspection by Health Department (if needed):
   Notify the Environmental Health Office twenty-four (24) hours in advance when tests are available for inspection (joint inspection is preferred).

3. Evaluation Results (Health Department):

   A. If approved, conditional permit is written and discussed with applicant. After agreement, permit is issued.

   B. Denials
      1. Appeals (if needed).
         (a) Environmental Health Director & Health Officer.
         (b) Technical Advisory Committee (13.08.330)
         (c) Board of Supervisors (13.08.340)

4. Approval on appeal, permit sent to applicant and consultant.

5. Installation inspections (by Health Department and Consultant).

6. Certification and as-builts (by consultant)

7. Health Department certification to Building Dept

8. Notice of Action to Assessor's Office (by Health Dept.)

9. Monitoring: <u>See XII Operation, Maintenance and Monitoring Program for Special Design Onsite Wastewater Treatment Systems</u>.

X. SPECIAL REQUIREMENTS

1. Distribution of effluent. For alternative and experimental disposal systems, pressure distribution and dosing is required. Pressure distribution may be accomplished through a pump or siphon.

2. Sizing Minimums: Based on percolation rates, disposal fields should be sized as follows:

Perc. Rate MPI	Application Rate gpd/ft_2
6-15	0.8
16-30	0.6
31-60	0.45
61-90	0.375
91-120	0.25
121-180	0.17
181-300	0.105
301-600	0.06

(For trenches, count the sidewall and bottom area below the drainpipe. For beds, count the bottom area. Beds are not recommended where percolation rates exceed 120 MPI.)

3. Where intercept drains are provided, resulting soil conditions must meet minimum guidelines for special design or standard system.

4. Pumps:
   a. Problems Addressed
      (1) Leach field of higher elevation than home site.
      (2) As required for alternative systems.

   b. Minimum Required Information
      (1) All information and calculations to show total dynamic head (TDH), gallons per minute (GPM) including but not limited to:
         (a) Flow determination in GPM.
         (b) Elevation differences between low-water cut off and the high point of distribution system.
         (c) Friction loss over delivery system at design flow rate.
         (d) Drain field required and configuration.
         (e) Pipe diameter.
         (f) Orifice diameter and discharge pressure.
         (g) Pipe length from pump to the drain field and to each lateral.
      (2) Specific pump required including name, model number, and pump curve for the specified pump on plot plan.
      (3) Schematic of pump and switch installation detail on plot plan.

   c. Minimum Required Safeguards
      (1) Dosing Tank - Adequately sized to provide one (1) day storage capacity, above alarm switch, at minimum daily sewage flow (13.08.240).
      (2) Alarms (Audio-Visual) wired separately from pump circuit.

(3) 1/8" maximum noncorrosive screening at pump.
(4) Gate valve and back check valve.
(5) Mercury switches or equivalent shall be required to withstand the humid and other corrosive atmosphere inside th Page 12
(6) All electrical contacts and relays must be mounted outside the chamber and provisions should be made to prevent the gases from following the electrical conduits into the control box.

XI. SOIL, SITE & DESIGN CRITERIA MINIMUMS

The following descriptions have been developed to give detailed information on specific designs. These may be modified and updated as further information is obtained and experience is gained.

1. Mounds

   a. Problem conditions addressed
      (1) High groundwater
      (2) Shallow soils

   b. Soil/site criteria minimums
      (1) Percolation rate faster than 120 MPI @ 1-2 ft.
      (2) Depth to impermeable layer: at least 3 ft.
      (3) Depth to groundwater or very rapidly permeable soils or fractured rock: at least 2 ft.

   c. Design Criteria Minimums: In accordance with the State RWQCB "Mound Guidelines".

2. Evapotranspiration/Infiltration (ETI) Systems

   a. Problem Conditions Addressed
      (1) Slow percolation

   b. Soil and Site Criteria
      (1) The limit for observed percolation shall be 500 MPI.
      (2) ETI systems shall require a minimum depth of 3 ft. of soil under the system with a minimum depth of 3 ft. to high groundwater if the percolation rate is equal to or greater than 240 MPI.

   c. Design Criteria: In accordance with the State RWQCB's "Guidelines for Evapotranspiration Systems", January 1980.

2. Intermittent Sand Filters (ISF) - (Buried)

   a. Problem conditions addressed
      (1) Shallow soils
      (2) Slow percolation

b. Soil/Site Criteria Minimums
   (1) Slope: < 30%
   (2) Percolation rate: < 600 mpi
   (3) Soil depth; no requirement but substratum must be digable with a backhoe.

c. Design Criteria Minimums
   (1) Effluent application rate to the filter shall be based on the effective grain size (E.S.) of the filter media as follows:

Media	Loading Rate gpd/ft²
E.S. = 0.40 mm	1.5
E.S. = 0.25 mm	1.0
E.S. = 0.20 mm	0.75
E.S. = 0.17 mm	0.5
E.S. = 0.16 mm	0.4

   (2) Filter media:
      (a) Depth: 2 ft. min.
      (b) Media: medium ("concrete") sand
          25% 0.25-0.50 mm
          <25% <0.25 mm
      (c) Uniformity coefficient: <4.0
      (d) Effective grain size: 0.16 mm to 1.0 mm; 0.16 mm minimum.
   (3) Soil cover over filter: 1 ft.
   (4) Doses per day: 2 to 5
   (5) Gallons dosed/ft_2/cycle: 0.25-0.36 gpd/ft_2
   (6) Gallons applied/dose: 100-250 gal.
   (7) Pressure distribution and dosing of the filter media by siphon or pump is required on all systems.
   (8) Disposal field: trench or bed.
   (9) References: EPA manual; "Final Report, Oregon On-site Experimental Systems Program".
   (10) If a pump is used for dosing an alarm system must be provided for Pump failure.
   (11) A maximum reduction of 20% will be allowed when sizing disposal fields after effluent has passed the sand filter.
   (12) The filter and disposal field must be protected from infiltrating water by installation of surface drains and/or intercept drains. The filter may be protected by installation of an impermeable liner.

d. Other Conditions

   (1) If the consultant does not specify the source of the filter media, an E.S. of 0.16 mm and corresponding application rate of 0.4 gpd/ft_2 will be assumed.

   (2) Where the filter media source is described by the consultant a laboratory certified textural

analysis must be submitted. The analysis must state the effective grain size. The E.S. described in the analysis may be used for sizing.

3. Sand Trenches & Beds

   a. Problem conditions addressed:
      (1) Shallow soils
      (2) Slow percolation rates

   b. Soil/Site Criteria Minimums
      (1) Percolation rate: <120 mpi
      (2) Soil depth: >3 ft. and substratum must be dig able with a standard backhoe. (Note: in very shallow soils a "wide trench: with 1 ft. of filter sand on each side of the drain rock may be used).

   c. Design Criteria Minimums
      (1) Effluent application rate to filter media: (see the application rates for ISF systems)
      (2) Filter media:
         a. Depth: 2 ft. min.
         b. Media: medium ("concrete" sand
            25% 0.25 - 0.50 mm
            <25% <0.25 mm
         c. Uniformity coefficient: <4.0
         d. Effective grain size: 0.16 mm to 1.0 mm; 0.16 mm minimum.
      (3) Soil cover over trench: 1 ft. min.
      (4) Pressure distribution and dosing by siphon or pump is required on all systems.
      (5) Gallons dosed/$ft.^2$ of filter media per cycle: 0.25 - 0.36 gpd/$ft.^2$
      (6) If a pump is used for dosing, an alarm should be provided for pump failure.
      (7) The disposal field must be protected from infiltrating water by installation of surface drainage and/or intercept drains.

   d. Other Conditions: same as for ISF systems.

4. Intercept Drains

   a. Problem conditions addressed
      (1) Free water tables
      (2) Water tables over artisan aquifers
      (3) Perched water tables
      (4) Lateral groundwater flow problems

   b. Soil/Site Criteria Minimums
      (1) Slope: >5%

   c. Design Criteria Minimums
      (1) Distance of leach line or bed to drain.
         a. Above the leach field: 15 ft.

b. Laterally to the leach field: 15 ft.
c. Below the leach field: 25ft.

(2) Intercept (French) drains must be terminated in an impermeable layer.
(3) Vertical drains must be terminated in an unsaturated well-drained soil below the impermeable layer.

XII. OPERATION, MAINTENANCE AND MONITORING PROGRAM FOR SPECIAL DESIGN ONSITE WASTEWATER TREATMENT SYSTEMS

1. The following operation, maintenance and monitoring standards are added pursuant to Onsite Wastewater Treatment System Ordinance 13.08.270F. The property owner is responsible to ensure all requirements for maintenance, inspection and correction set forth in this Article are completed as required.

2. Maintenance and Monitoring Standards - required maintenance and monitoring standards shall be:

a. For Modified Systems- Modified systems shall be inspected, maintained and monitored a minimum of once every twelve months by a qualified service provider (QSP), according to consultant specifications on the approved plans, the specifications of the equipment manufacturer and to the operation standards outlined below. Any condition of nonconformance discovered during maintenance or an inspection shall be corrected to conform to the applicable standards within a reasonable time. The owner shall have work to correct a nonconformance performed by the QSP, or by a contractor with the appropriate contractor's license and experience with OWTS. System maintenance is the responsibility of the Property Owner. Modified systems include, but are not limited to:
(1) Pump to gravity systems
(2) Pressure-distribution systems
(3) Shallow pressure-distribution systems on slopes greater than 30%
(4) Shallow pressure-distribution systems with capping fill
(5) Intercept drains used in conjunction with any OWTS design
(6) Commercial systems using standard OWTS design
(7) Shallow trenches (to bedrock i.e. 6" of backfill)

b. For Alternative Systems –Alternative systems shall be inspected, maintained and monitored a minimum of once every six months by a QSP, according to consultant specifications on the approved plans, the specifications of the equipment manufacturer and to the operation standards outlined below. Any condition of nonconformance discovered during maintenance or an inspection shall be corrected to conform to the applicable standards within a reasonable time. The owner shall have work to correct a nonconformance performed by the QSP, or by a contractor with the appropriate contractor's license and experience with OWTS. System maintenance is the responsibility of the Property Owner. Alternative systems include, but are not limited to:
(1) Sand-lined trenches and beds
(2) Mound systems
(3) At-grade systems

(4) Recirculating media filters
(5) Aerobic treatment units
(6) Commercial systems using modified or alternative OWTS design
(7) Sub-surface drip dispersal
(8) Intermittent filters

c. For Experimental Systems – Experimental systems shall be inspected, maintained and monitored a minimum of once every three months by a QSP, according to consultant specifications on the approved plans, the specifications of the equipment manufacturer and to the operation standards outlined below. Any condition of nonconformance discovered during maintenance or an inspection shall be corrected to conform to the applicable standards within a reasonable time. The owner shall have work to correct a nonconformance performed by the QSP, or by a contractor with the appropriate contractor's license and experience with OWTS. System maintenance is the responsibility of the Property Owner. Experimental Systems include, but are not limited to:
(1) Non-standard dispersal
(2) Any OWTS with disinfection unit
(3) Any proposed OWTS design without valid, reliable performance data for sites similar to that for which the system is proposed
(4) Evaporation ponds
(5) Evaporation disposal

d. For Standard Systems located within the geographic boundaries of an Advanced Protection Management Program. These systems shall be inspected, maintained and monitored a minimum of once every twelve months by a qualified service provider (QSP), according to consultant specifications on the approved plans, the specifications of the equipment manufacturer and to acceptable industry operation standards. Any condition of nonconformance discovered during maintenance or an inspection shall be corrected to conform to the applicable standards within a reasonable time. The owner shall have work to correct a nonconformance performed by the QSP, or by a contractor with the appropriate contractor's license and experience with OWTS. System maintenance is the responsibility of the Property Owner.

3. Operation Performance Standards - because modified, alternative and experimental OWTS are designed to mitigate site constraints and/or a lack of minimum criteria necessary to approve a standard system, these systems MUST operate at specified performance standards to insure that adequate protection of public health and water quality will be maintained. Required operation performance standards shall be:

a. For Modified Systems
(1) Tank watertight and in good operating condition, scum and sludge layers within acceptable industry parameters; all risers, sanitary T's, baffles and any other tank components in good operating condition; all pumps, siphons, pump controls/alarms, flow meters, elapsed time meters, and cycle counters in good operating condition.
(2) Observation of disposal field does not indicate seepage, surfacing, excessive vegetation compared to local vegetation, compaction, excavation, or uses incompatible with use as a disposal field.

(3) Observation of inspection risers does not show constant, substantial saturation that indicates imminent surfacing and failure of system.
(4) Additional operation performance standards required by the equipment manufacturer that is not listed above.

b. For Alternative Systems – all of the above requirements PLUS the following observations/field tests and acceptable parameters for effluent collected from post-treatment sampling port:
(1) Sniff test – slightly musty OK; (strong rotten egg smell not OK)*
(2) Turbidity - to correlate with TSS at or below 25 mg/L, effluent clear*
(3) Dissolved oxygen – to correlate with BOD_5 at or below 25 mg/L
(4) pH – 6-8
(5) Nitrate: at or below 20 mg/L
*Unusual effluent smell, or test results for items 2-5 outside the ranges specified above, may require additional testing.

c. For Experimental Systems
(1) Experimental systems without disinfection unit – all of the above, PLUS:
(a) Testing every twelve months of effluent collected from post-treatment sampling port for TSS, BOD_5, pH, and nitrate. Tests to be conducted at a state certified laboratory.
(b) Acceptable parameters for test results– as for 1-5 above, for alternative systems.

(2) Experimental systems with disinfection unit – all of the above, PLUS:
(a) Testing every twelve months of effluent from post-treatment sampling port and post-disinfection sampling port for total and fecal coliform using MPN test. Tests to be conducted at a state certified laboratory.
(b) Acceptable parameters for MPN results: fecal coliform <200/ml

4. QSP Minimum Qualifications and Reporting Procedures

a. Minimum Qualifications
(1) QSP shall have satisfactorily completed National Association of Wastewater Transporters (NAWT) Operation & Maintenance Training and Certification Course, Parts 1 and 2, or equivalent; and shall maintain certification as specified by NAWT (or equivalent) through continuing education.
(2) QSP shall have satisfactorily completed manufacturer-required training(s) for a particular OWTS or OWTS component(s).
(3) It is the responsibility of the QSP to provide documentation of minimum qualifications to the TCEHD. The TCEHD shall maintain copies of these documents on file.
(4) All maintenance shall be performed by the QSP.

b. Reporting Procedures
(1) The owner shall have an Operation, Maintenance and Monitoring Report Summary performed by the QSP and delivered annually to the TCEHD within three months of completion of the services required under section 2 Maintenance and Monitoring Standards, above.
(2) Report format shall be approved in advance by the TCEHD after consultation with the

OWT Work Group, OM&M Subcommittee.

5. Enforcement Procedures

   a. TCEHD may perform random joint inspections to verify that maintenance and monitoring are being performed by QSP's in a consistent and timely manner, and/or to verify that operation performance standards are achieved for a particular system at a given site.

   b. Failure of the Property Owner to meet maintenance, inspection and correction requirements and/or failure of the OWTS to meet required operation performance standards shall be subject to enforcement procedures outlined in TCOC, Chapter 1.10.

APPENDIX D

TUOLUMNE COUNTY
ENVIRONMENTAL HEALTH DIVISION

*PROCEDURES FOR CONSTRUCTING A STANDARD ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM

Pursuant to Tuolumne County Code Chapter 13.08

***This informational document is to be used as an instruction manual and does not exempt or supersede any requirements of the Tuolumne County Ordinance Code.**

April 2017

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TABLE OF CONTENTS

SECTION		PAGE
I	Introduction	3
II	Site Evaluation Process Summary	3
III	Plan Check and Permit Approval Process	4
IV	Minimum Design Standards	5
	Septic Tank Requirements and Sizing	5
	Disposal Field Sizing	6
Table 1	Minimum Leach Line length (feet) for Various Soil Types	6
V	Disposal Field Minimum Requirements	7
	Effluent Lift Pump	8
VI	Installation and Construction Inspections	10
	Major and Minor Revisions to the Approved Plans	11
VII	Enforcement	12
VIII	Reference Documents	13
Table 2	Minimum Horizontal Setback Distances	14

Note: It is the responsibility of the owner, agent, or person in control of the property to repair, fence, eliminate or in some other acceptable manner, abate the hazard created by an excavation. Uniform Building Code, Section 7004, California Health and Safety Code, 24400.

I. INTRODUCTION

Where public sewer is not available and soil and site conditions are suitable, a standard conventional on-site sewage treatment

and disposal system is an option. In 1984, Tuolumne County adopted Ordinance 13.08 to manage the installation of standard onsite wastewater and treatment systems (OWTS) on parcels. This ordinance established minimum criteria pursuant to Regional Water Quality Control Board guidelines and accepted environmental health practices for soil and site condition standards for a standard system.

If the public sewer connection is available to the parcel within 300 feet downhill or 100 feet uphill from the parcel, the wastewater generated at the dwelling must connect to the sewer system unless this Division receives written notification from the public agency with justification for denying a connection.

In accordance with the Tuolumne County Ordinance Code Chapter 13.08, a basic standard system consists of the following components:

- Septic tank sized for the number of proposed bedrooms.
- The leaching trenches are located in an area of 30% slope or less and in a suitable soil mantle with adequate separation from groundwater or fractured rock (greater than five (5) feet).
- Septic effluent is distributed by gravity flow into the leach field.

With prior approval from this Division a standard system design may have some minor deviation from code requirements. Examples of a minor deviation of a standard system include the following:

- Reduction or increase of trench depth of six (6) inches of trench bottom to restrictive layer (standard of five (5) feet below trench bottom).
- Pump Systems (gravity distribution in disposal trenches).
- Serial Distribution of gravity fed disposal trenches.

II. SITE EVALUTATION PROCESS SUMMARY

A site evaluation is the procedure where this Division will evaluate the site's ability to dispose of sewage. This is where the initial soil evaluation is done (i.e., soil observation pit/or test trenches). The purpose of a site and soil evaluation is to verify that the parcel any limiting factor that may exist at the site meets the minimum criteria of five (5) feet below the proposed trench bottom and all required setbacks are met. (Table 1).

Once a site evaluation is completed, this Division will prepare and provide to applicant a site evaluation report documenting the sites ability to support a standard sewage disposal system. A copy of the report, field notes, any photographs, and other pertinent documents on the site's ability to support an on-site wastewater disposal system will be included in the parcel file. A site approval report may not be required where soil testing was conducted if this Division finds that the previous soil and site evaluation are acceptable. For details on how to conduct a site and soil evaluation, refer to the Tuolumne County, Environmental Health Division "Guidelines for a Site and Soil Evaluation for the Purpose of Creating an On-Site Sewage Treatment and Disposal System Procedures."

LIMITING SITE CONDITIONS

On parcels where a minimum criterion for a standard system is lacking, a special design system proposed by a consultant may be approved provided water quality and environmental health objectives are met. Guidelines developed in accordance with Section §13.08.270 of the Tuolumne County Ordinance Code are available from this Division to provide the minimum criteria for special design, alternative, or experimental private sewage treatment and disposal systems. Consultant includes the following professionals that possess knowledge and experience in the design and installation of onsite wastewater sewage disposal systems; a Registered Professional Geologist, Registered Professional Engineer, Registered Environmental Health Specialist.

WET WEATHER TESTING

To verify that the site is not under the influence of groundwater, this Division may require the site be tested during the wet weather months of March 1st through May 31st. Under the supervision of a consultant, wet weather testing will require the installation of monitoring wells in the proposed treatment, disposal, and expansion areas in early March and provide access to those same wells for groundwater observations through the end of May.

III. PLAN CHECK AND PERMIT APPROVAL PROCESS

A completed septic permit application package, along with the current fee established by the Board of Supervisors, must include:

1. Plot Plan – Three (3) copies on maximum 8.5" by 14" paper to engineer scale (e.g. 1"=40'/ 1'=50")
2. Site Evaluation Reports
3. Data and Calculations
4. Manufacturer's information and specifications.
5. System Design
6. Current fee established by the Board of Supervisors

1. Plot Plan

a. Lot identification information

- Assessor's Parcel Number, subdivision and lot number, address, and location
- Name and mailing address of legal owner.
- Boundary monuments (location and tag number) show size and shape of lot.
- Consultants name, address, phone, license number with wet stamp and/or signature

b. Topography

- Slope and contour (see soil and site design criteria).
- Drainage courses, water courses, streams or other bodies of water including springs.
- Rock outcroppings, cut banks and fills or other restrictive natural or man-made land formations.
- Springs, canals, ponds, reservoirs within 250 feet of disposal area.
- Easements: road, utility, drainages, water supply lines, or other easements.
- Existing and proposed water wells: domestic, irrigation, abandoned, etc. (within 200 ft. of proposed disposal area)
- Trees greater than 24" trunk diameter.
- Location of test trenches and percolation test holes.
- Existing and proposed structures, swimming pools, structures, driveways, slope, and parking areas.
- Indicate number of bedrooms proposed for the dwelling.
- Location and construction details of proposed system and 100% expansion area.
- Show location and construction details of system facilities: tanks, (including size), pumps, intercept drains, leach areas, etc.

c. Grading -- describe:

- Existing graded areas,
- Cut banks
- Fills
- Proposed graded areas: Estimated cut bank heights, fills, and stump (greater than 24 inches) removals.

d. Site and soil evaluation, wet weather, and percolation data reports completed by consultants (where

applicable).

e. System design information and specifications:

- Setback distances to water wells, drainages, property lines, easements, cut banks, etc. to the septic tank, disposal area, and 100% expansion area.
- Septic tank size and manufacturer.
- Design calculations to provide adequate sizing for number of bedrooms.
- Depth, width, and length of disposal field.
- Cross section of trench illustrating construction design (depth of rock, pipe and cover).
- Distance from septic tank to distribution box (D-boxes).
- Location of D-boxes, cross-over and diversion valves (if applicable).
- Distances between disposal trenches (center to center).
- Equipment specifications (pump manufacturer, curve, alarms, etc.).
- Pump calculations, curve, and installation specifications.
- Pump chamber size and manufacturer.
- Tightline and perforated pipe material specifications (e.g. ABS Schedule 40, SDR 35).
- Other operational components.

VI. MINIMUM DESIGN STANDARDS

1. Septic Tank Requirements and Sizing

Approved, watertight septic tanks must meet the following minimum sizing criteria:

Number of Bedrooms	Minimum Tank Size
1 Bedroom	1000 gallons
2 Bedrooms	1000 gallons
3 Bedrooms	1000 gallons
4 Bedrooms	1200 gallons
5 bedrooms	1500 gallons
6 bedrooms	1500 gallons

The septic tank must be installed on a stable level base with a watertight riser with a securable access lid extending to at least 12 inches below the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole, with sufficient, unobstructed width to access pump for service and repair.

2. Disposal Fields Sizing

Area of disposal fields are sized based on the proposed sewage flow, soil application and where applicable, the percolation rate. Standard and deep trench systems are sized by the following formula:

The percolation application rate is calculated: $(Q) = 5 / \sqrt{T}$ T = stabilized percolation rate

Absorption area (A) = daily sewage flow divided by the application rate (Q) - The required absorption area is calculated by the following formula: $A = 2 (W + L) \times (D - 1.5)$

Where: L = length of trenches; W = width of trenches; D = depth of trenches

Minimum Daily Sewage Flows

Individual sewage disposal systems must be designed to accommodate a flow of a minimum 300 gallons per day plus 100 gallons for each additional bedroom according to the following minimum sizing criteria.

Single Family Residence	Gallons per Day
1 Bedroom	300
2 Bedrooms	300
3 Bedrooms	400
4 Bedrooms	500

Table 1 Minimum Leach Line length (feet) for Various Soil Types (13.08.240)[1]

Soil Type	Number of bedrooms	Minimum Tank Size (Gallons)	24" Wide Leaching Chambers	36" Wide Leaching Chambers	Standard Trenches[2] (3'X3')	Double Depth[3] Trenches	Triple Depth[4] Trenches
Fine Sand, Loamy Sand (6-15 mpi, 0.8 gpd/ft^2)	1 or 2	1000	130	90	65	50	40
	3	1000	175	120	85	70	50
	4	1200	220	150	105	85	60
	5	1500	265	175	125	100	75
	6	1500	310	205	150	120	85
Sandy, Loam, Loam (16-30mpi, 0.6 gpd/ft^2)	1 or 2	1000	175	120	85	70	50
	3	1000	235	160	115	90	65
	4	1200	295	195	140	115	80
	5	1500	350	235	170	135	100
	6	1500	410	295	195	160	115
Loam, Porous Silt Loam (31-60 mpi, 0.45 gpd/ft^2)	1 or 2	1000	235	160	115	90	65
	3	1000	315	210	150	120	85
	4	1200	390	260	190	150	110
	5	1500	470	317	225	180	130
	6	1500	545*	365	260	210	150
Silty Clay Loam, Clay Loam (61-120 mpi, 0.2 gpd/ft^2)	1 or 2	1000	525*	350	250	200	145
	3	1000	700*	470	335	270	195
	4	1200	875*	585*	420	335	240
	5	1500	1050*	700*	500*	400	290
	6	1500	1225*	820*	585*	470	335

[1]An equal area on the lot must be reserved for leachfield replacement or repair (13.08.230)

[2]Trenches 3 feet deep, 3 feet wide, drainpipe at 1 ½ feet with 1 ½ feet of clean drainrock below pipe.

[3]Trenches 4 ½ feet deep, 1 ½ feet wide, drainpipe at 1 ½ feet with 3 feet of clean drainrock below the pipe.

[4]Trenches 6 feet deep, 1 ½ feet wide, drainpipe at 1 ½ feet with 4 ½ feet of clean drainrock below the pipe.

*When total leachfield length exceeds 500 feet, a dosing tank equipped with an automatic siphon or pump must be provided (13.08.261).

V. Disposal Field Minimum Requirements

Pursuant to Sections 13.08.221, 13.08.230, 13.08.240, disposal fields are to be constructed as follows:

1. Maximum length of each line 100 ft.
2. Minimum spacing of lines, center-to-center 8ft.
    - Standard Trenches (3' X 3'), 8 feet on center.
    - Double Depth Trenches (4 ½' X 1 ½'), 9 ½ feet on center.
    - Triple Depth Trenches (6' X 1 ½'), 12 ½ feet on center.
3. Minimum filter material over drain lines 2 inches.
4. Minimum trench width 18 inches, maximum trench width is 48 inches.
5. Tight line must have minimum slope to the distribution system required in the Uniform Plumbing Code or 1/4 inches per feet
6. Minimum depth of natural earth over the entire disposal field as measured from the lowest point of natural grade 12 inches.
7. Minimum Slope Requirements: Slopes greater than 30% are required to have a consultant evaluate and design an onsite wastewater sewage treatment and disposal system.
8. Maximum "drop" in leach line (bottom of trench and drain pipe) 3 inches per 100 feet. Drain line pipe ends must be capped, holes in pipe must face downward. A minimum of one observation riser is to be installed at the end of each trench.
9. Drain rock shall be clean, sound gravel or crushed rock ranging in size from 3/4 to 2.5 inch diameter, with <5% outside this range. Rock and gravel is to contain no more than one percent (1%) fines, dust, sand, or clay by weight (less than (1%) percent by weight passing the #200 sieve).
10. Leach lines shall be constructed of approved material. All bends and connections used in the disposal field shall be made with appropriate fittings. The mitering of drainpipe is not acceptable. Leach line piping will be installed tight with no open joints and capped at end.
11. Effluent sewer pipe, header pipe, and fittings (all tight line). Header pipe is to extend a minimum of feet (4) feet out of the distribution box. Effluent sewer and header pipe and fittings are to be a minimum four (4) inch diameter, watertight and one of the following:
    a. Schedule 40 PVC that meets the most current ASTM D-2672 for minimum four (4) inch pipe.
    b. Schedule 40 ABS (Acrylonitrile-Butadiene-Styrene) that meets the most current ASTM Specification D-2468.
    c. ASTM SDR 35 with solvent-welded or rubber-gasket joints.
    d. Other material approved by the Division.
    e. Distribution piping for gravity flow systems will be a minimum four (4) inches diameter 3000 HDPE or equivalent that meets the most current ASTM Specifications F-810, or other material approved by the Division.
12. All smeared or compacted surfaces will be removed from trenches by raking to a depth of one (1) inch and then removing the loose material.
13. Clean drain rock conforming to specifications stated in this section are to be placed in the trench to the depth and grade required by the design. Drain pipe will be placed on drain rock level or with a down slope not to exceed 3 inches per 100 feet. The drain lines are to be covered with a minimum 2" of drain rock, then covered with an

approved soil barrier cover of filter fabric, untreated paper, or straw to prevent closure of voids with earth backfill. No earth backfill is to be placed over the soil barrier cover until after inspection and approval.

14. Connections between a septic tank and a distribution box, or between a distribution box and a leach line, are to be laid with schedule 40 or SDR 35, having watertight joints on natural ground.
15. Tight line under driveways must be Schedule 40, SDR 35 or other approved pipe with at least twelve (12) inches of natural soil cover. No part of the disposal field shall be placed under a paved area, roadway or structure.
16. Multiple disposal field laterals, wherever practical, are to be of uniform length.
17. Even distribution shall be used for gravity fed systems where multiple trenches are utilized. There shall be at least one distribution box for each sewage disposal system. Plastic and fiberglass distribution boxes shall be built on a level concrete slab installed in natural or compacted soil.
18. Suspended tight line crossing streams or drainage courses are to be piped and will be installed within a protective sleeve of approved material that extends ten (10) feet on each side of the seasonal or high water mark for the seasonal drainage course or twenty five (25) feet for a year-round stream. Crossings above streams or drainage courses must be designed to support the weight of the sleeve, the tight line flowing full, and other loading conditions as set forth in the Uniform Building Code. Crossings above the stream or drainage course must be installed above the 100 year recurrence interval high water level.
19. Disposal fields are to be protected from vehicle traffic, and confined animal and livestock areas, and will remain unencumbered by structures, above ground swimming pools, and any other use that may damage or compact the soil above the disposal field.
20. Disposal trenches or beds shall not be installed on benches.

Effluent Lift Pump

A pump system for a standard system is utilized to enable the installation of a disposal field up slope of the structure to be served. The effluent is distributed to the disposal field by gravity flow following pumping to a higher elevation.

1. Minimum Required Information

All information and calculations to show total dynamic head (TDH), gallons per minute (GPM) including but not limited to:

a. Flow determination in GPM.

b. Elevation differences between low-water cut off and the high point of distribution system.

c. Friction loss over delivery system at design flow rate.

d. Pipe diameter.

e. Orifice diameter and discharge pressure.

f. Pipe length from pump to the drain field.

g. Specific pump required including name, model number, and pump curve for the specified pump on plot plan.

h. Schematic of pump and switch installation detail on plot plan.

2. Minimum Required Safeguards

a. Dosing Tank - Adequately sized to provide one (1) day storage capacity according to the number of bedrooms, above alarm switch, at estimated daily sewage flow.

b. Alarms (Audio-Visual) wired separately from pump circuit.

c. 1/8" maximum non-corrosive screening at pump.

d. Gate valve and back check valve.

e. Mercury switches or equivalent will be required to withstand the humid and other corrosive atmosphere inside the tank.

f. All electrical contacts and relays must be mounted outside the chamber and provisions should be made to prevent the gases from following the electrical conduits into the control box.

3. Criteria for approval

a. Approved, watertight sewage disposal system pump well. The sewage disposal system pump well shall receive septic tank effluent only.

b. The drainage and venting systems, in connection with the sewage disposal system pump well, will be installed under the same requirements as for gravity systems.

c. All pump systems will have a surge tank or D-box to intercept pumped effluent prior to distribution into drain fields.

d. Unless otherwise indicated on the permit, installation requirements shall conform to the provisions of the Tuolumne County Ordinance.

4. Pump Tank Requirements

a. The sewage disposal system pump well shall be so located as to receive the sewage waste by gravity drainage.

b. Sewage disposal system pump wells will be watertight and shall be constructed of approved materials. Sewage disposal system pump well tanks will be constructed in accordance with specifications for septic tanks.

c. The pump tank is to have capacity sufficient to deliver the design dose and have a minimum capacity of 500 gallons.

d. Each pump tank is to be installed on a stable level base and shall be watertight with a watertight riser with a securable access lid extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole, with sufficient, unobstructed width to access pump for service and repair. The lids to the pump wells are to be water and gas tight, accessible, but child proof.

e. If the second compartment of the septic tank will be utilized as the dosing chamber tank it will be considered a special design system and the installation must be under the supervision of a consultant.

5. Piping Requirements

a. The drainage piping connecting the septic tank and the sewage disposal system pump well will be at least four (4) inches in diameter.

b. The pump discharge piping is to be sized to adequately handle all expected flows.

c. The discharge piping will be provided with an accessible check valve and ball valve.

6. Mechanical Devices Requirements

a. Check valves, ball valves, pumps, motors, switches, and other mechanical devices required are to be located where they will be readily and easily accessible for inspection and repair at all times must be enclosed in a watertight pit fitted with an adequately sized removable cover.

b. Check valves, ball valves, pumps, motors, switches, and other mechanical devices are to be designed and manufactured to operate in septic tank effluent or sewage.

c. The pumps will be made specifically for sewage.

d. All devices and equipment associated with sewage disposal system pump wells, which are exposed to the elements are to be protected by a weatherproof structure.

e. All pumps will be equipped with a high water alarm system and be operational at time of final inspection.

f. If required by this Division, pump control panel is to have a cycle counter and an elapsed time meter.

VI. INSTALLATION AND CONSTRUCTION INSPECTIONS

Inspections will only be performed on sewage disposal systems done under a valid permit. After receipt of an approved permit, construction can proceed. If work is not ready for inspection at arranged time or follow-up for compliance with approved permit is necessary an hourly stand-by/follow-up fee will be assessed. Inspections must be arranged in advance for all required inspections as a part of the approved permit. The Environmental Health Division will inspect all sewage disposal systems.

Instructions to schedule an inspection:

You may reach the inspection line at (209) 533-5992 to schedule an inspection any time during the day. The inspection must be scheduled by 3:00 p.m. for the following business day. Inspections scheduled on holidays and on Mondays may be scheduled by 8:00 a.m. for that same day. The recording on the inspection line will ask the following information:

Assessor's Parcel Number

Owner's Name

Job Location

Date of Inspection

Designate AM or PM inspection

Installer's name and field phone number

Type of inspection: Open or Final

NOTE: The environmental health specialist will be setting up the daily septic inspection schedule based upon the geographic location of the inspections requested that day. The schedule will then be available after 9:00 a.m. Monday through Friday, excluding holidays, by calling: (209) 533-5633.

1. Open Trench Inspections: At the time of the open trench inspection, all the following must be completed.

   a. All excavations necessary for the system at designed depth, width, and length.

   b. All smeared or compacted surfaces shall be removed.

   c. Bottom of the trenches shall be level.

   d. Minimum setbacks shall be in accordance with the approved plot plan.

2. Final Inspections

   All systems must receive a final inspection by the Division. Some systems may have special requirements for the final inspection. The plot plan is to indicate all revisions and be on site at the time of the final inspection.

   a. At the time of final inspection by the Division all the following shall be completed: The trenches filled with rock to the specified level with the filter material in place or the gravel-less chambers installed.

   b. Approved distribution boxes, with covers, installed level on undisturbed soil and at the proper elevation.

c. All pipe, other than in trenches, must be installed on undisturbed soil (1/8 in./ft. minimum) and grouted or sealed to tank or distribution boxes.

d. All pipe in trenches installed level (maximum drop of 3" in 100 ft.) to the full length of trenches with ends capped. Pipe leading in or out of distribution boxes are to be installed with water-tight seals.

e. The septic tank set level in place on undisturbed soil and a layer of approved bedding material may be used.

f. All trenches must be uncovered to the filter material and visible for inspection - do not backfill.

g. Pump systems and alarms must be operational at the time of final inspection.

h. Observation risers are to be installed at ends of leach lines.

3. Minor/Major Deviations from Approved Plans

Prior to any deviation of the approved plan, the applicant must submit to the Environmental Health Division revised plans for written approval prior to the installation of the system. Any major deviation of the approved plan requires revisions to be submitted by the applicant to this Division for review and approval prior to the alteration/re-location of the system.

MINOR REVISION: A change in tank location, a change in distribution box location or line location adjustments for contour or obstructions within the approved sewage disposal area shall be considered minor revisions. Minor revisions shall be drawn clearly and to-scale on the original approved plot plan and submitted at the time of final as an "as-built" system.

MAJOR REVISION: Changes in depth, width or location of the sewage disposal system shall be considered major revisions. A revised plot plan shall be prepared and submitted by the applicant, showing these major revisions, and shall be re-approved by the Division prior to any inspections. Major revision may require routing to the Planning, Fire, or other agencies for review prior to approval.

4. Permit Final Approval

a. Prior to a permit final approval and verification to the Building and Safety Division that the installed onsite wastewater treatment and sewage disposal system meets the requirements of the Tuolumne County Ordinance Code 13.08 for design and installation the following must be completed and provided to the Environmental Health Division for review and approval:

b. Completed inspections by the Environmental Health Division that records the onsite wastewater treatment and disposal system was installed to the minimum standards of TCOC 13.08.

c. An accurate as-built is signed, dated, and submitted by the consultant, contractor, or property owner that show accurate dimensions and installation specifications of the installed system.

d. For new construction, verification of an approved potable water source serving any building with plumbing fixtures shall be provided prior to occupancy and final approval of the sewage disposal system.

VII. ENFORCEMENT

Enforcement Actions will be required when there is a violation of the Tuolumne County Ordinance Code 13.08. The Division may exercise enforcement action in any or all of the following manner(s).

1. The Division may issue a notice of violation, correction notice, stop work order and suspend a permit as necessary to ensure that the design meets the minimum criteria of the TCOC 13.08 criteria.
2. The violator(s) may be issued a citation for violations pursuant to Tuolumne County Code 1.10 & 13.08.
3. As necessary, the Division may instigate criminal proceedings by referring the matter to the Tuolumne County Counsel and District Attorney for prosecution.

Enforcement Action Procedures

Notice of Violation: The Division may direct the cessation or correction of a violation or public health hazard. The notice will direct immediate measures required to eliminate a potential or actual public health hazard or a public nuisance. Failure to comply with the requirements of a Notice of Violation is a violation of the Tuolumne County Ordinance Code Chapters 13.08 or 1.10 and is subject to any or all of the enforcement actions prescribed in this Section.

Correction Notice: The Division may issue a Correction Notice upon a person responsible for working on a system or operating a system where that work or operation is in violation of the ordinance and/or conditions of the sewage disposal system permit or operating permit. The Correction Notice will state the violation(s). Failure to correct the stated violation(s) is a violation of this resolution and is subject to any or all of the enforcement actions prescribed in this Section.

Stop Work Order: The Division may issue a Stop Work Order for work that is in violation of the ordinance TCOC, the sewage disposal system permit, or is occurring in an unsafe and dangerous manner. The Stop Work Order will be issued to the person responsible for the work, and will specify the reason for the Stop Work Order. It may also direct corrective measures necessary to abate the violation. Work may only recommence upon written release by the Division. Failure to comply with the requirements of a Stop Work Order is a violation of the Tuolumne County Ordinance Code and is subject to any or all of the enforcement actions prescribed in this Section.

Permit Suspension: When the construction or operation of a system is in violation of the Tuolumne County Ordinance or conditions of the permit, or where a person has misrepresented any material fact in the application for a permit, the Division may suspend the permit.

The Division will provide the owner a written notice of intent to suspend a permit. The owner will be given the opportunity to request a hearing with the Division. The Division within ten (10) days of the Division's written notice must receive a written request for a hearing. A failure to request the hearing within the ten (10) days is deemed a waiver of the right to a hearing.

The Division will schedule a hearing within ten (10) days from the receipt of a written request for a hearing. The Director of Environmental Health or designee shall conduct the hearing. The decision resulting from the hearing may be appealed in accordance with Tuolumne County Ordinance Code.

No work, use, or operation may continue on a system where the permit has been suspended. Work or operation on a system with a suspended permit may recommence upon reinstatement of the permit in writing by the Division. Before the permit will be reinstated, any fees pending must be paid in full.

VIII. REFERENCE DOCUMENTS

Approved reference material to evaluate a system's ability to perform in accordance with local, state, federal and industry standards include the following:

1. Tuolumne County Environmental Health Division "Site and Soil Evaluation Process for the Purpose of Creating an On-Site Sewage Treatment and Disposal System" July 2006
2. Tuolumne County Environmental Health Division "Guidelines for the Design and Evaluation of Special Design and Modified On-Site Sewage treatment and Disposal System." April 2017.
3. "EPA Design Manual, Onsite Wastewater Treatment and Disposal Systems". Oct. 1980, U.S. Environmental Protection Agency, Office of Water Program Operations, Washington DC 20460 or Office of Research & Development, Municipal Environmental Research Laboratory, Cincinnati, OH 45268.
4. "EPA Design Manual, Onsite Wastewater Treatment and Disposal Systems". 2002, U.S. Environmental Protection Agency, Office of Water Program Operations, Washington DC 20460 or Office of Research & Development, Municipal Environmental Research Laboratory, Cincinnati, OH 45268
5. "Uniform Plumbing Code", current edition, International Association of Plumbing and Mechanical Officials, Headquarters at 5032 Alhambra Ave., Los Angeles, CA 90032.
6. "Manual of Septic Tank Practice", U.S. Department of Health, Education, & Welfare, Public Health Service, Cincinnati, Ohio, 45202, PHS publication #526, 1st print 1957, revised 1967.

13.08.280 Location of Sewage Disposal System

TABLE 2

Location of Sewage Disposal System			
Minimum horizontal distance in clear required from:	Building Sewer	Septic Tank	Disposal Field
Building or structures (A)	2'	5'	8'
Property line adjoining private property	Clear	5'	5'
Private water wells	50' (B)	50'	100'
Public water wells	50'	150'	150'

Lakes or reservoirs where use is, or may be, intended as a domestic water source	50'	50'	200'
Streams, irrigation ditches, springs or other perennial water courses or impoundments. Category 1 drainage course Ephemeral Stream (C) Intermittent Stream (C) Perennial Stream (D) Impaired water body (E) Surface water body drinking water supplies (F)	 10' 25' 25' 50' 50' 50'	 10' 25' 25' 50' 600' 50'	 25' 50' 75' 100' 600' 200-400'
Trees over 24" in diameter		10'	
Disposal field		5'	5' min (G)
Domestic water line	1' (H)	5'	10'
Distribution box		4'	4'
Driveway or parking area		Clear	Clear
Pressure public water main	10'	10'	10'
Cutback or fillbank when facility above bank	10'	10'	4xH (I)
Domestic water supply canal: Above Below	 50' 10'	 50' 10'	 100' 25'

(A) Including porches and steps whether covered or uncovered, breezeways, roofed portecocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
(B) All nonmetallic drainage piping shall clear domestic water supply wells by at least fifty feet. This distance may be reduced to not less than twenty-five feet when the drainage piping is constructed of materials approved for use within a building.
(C) As measured from the apparent edge of channel.
(D) As measured from the high water mark which would result from a ten-year frequency flood.
(E) For parcels created prior to May 13, 2018, OWTS may be located within 600 feet of an impaired water body if the proposed system meets the requirements set forth in the LAMP Advanced Protection Management Program.
(F) Where the effluent dispersal system is within the catchment of a public water system's surface water intake point, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies and the dispersal system is located:
1. Within 1,200 feet from a public water system's surface water intake point, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
2. More than 1,200 feet but less than 2,500 feet from a public water system's intake point, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
(G) Minimum spacing between trenches or leaching beds shall be five feet plus two feet for each additional foot of depth in excess of one and one-half feet below the bottom of the drain line (see Section 13.08.240(J)).
(H) Comply with CPC Section 720.0.
(I) Four times the height of the bank, measured from the top edge of the bank. Maximum setback thirty-five feet from top of bank.

All systems submitted for approval must follow the Tuolumne County Ordinance Code Chapters 13.04 and 13.08

13.08.205 – All on-site sewage treatment and disposal systems shall comply with the Uniform Plumbing Code and the EPA On-Site Wastewater Treatment and Disposal Systems Design Manual.

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ORDINANCE NO. 3324

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF TUOLUMNE COUNTY REPEALING AND REPLACING CHAPTERS 13.04 AND 13.08 OF THE TUOLUMNE COUNTY ORDINANCE CODE TO IMPLEMENT THE LOCAL AGENCY MANAGEMENT PLAN, UPDATE PROVISIONS TO CONFORM WITH THE 2016 CALIFORNIA PLUMBING CODE, CLARIFY THE TERM OF A SEWAGE DISPOSAL PERMIT, AND APPLY STANDARDIZED STYLE AND FORMATTING THROUGHOUT THE CHAPTERS

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The Board of Supervisors of the County of Tuolumne ordains as follows:

SECTION 1: Chapter 13.04 of the Tuolumne County Ordinance Code is repealed and replaced to read as follows:

Chapter 13.04

ONSITE WASTEWATER TREATMENT SYSTEMS

Sections:

13.04.010 Definitions.
13.04.020 Purpose - Construction.
13.04.030 Compliance - Exceptions.
13.04.040 Authority to enforce Uniform Codes.
13.04.050 Enforcement authority.
13.04.060 Horizontal distances.
13.04.070 Minimum criteria.
13.04.080 Procedures.

13.04.010 Definitions. For the purposes of this Chapter, the following words or phrases have the following meanings:

A. "Disposal area" is the potential disposal area available for the installation of an onsite wastewater treatment system within any lot or parcel, excluding therefrom all unsuitable areas. Unsuitable areas include all areas within required zoning setbacks, areas within dedicated easements unless the easements are dedicated for liquid waste disposal purposes, areas not owned or controlled by the property owner, areas occupied or to be occupied by structures and paved areas.

B. "Ground slope" shall be measured in percent of grade and is classified in the following categories:

Category	Slope Percent
I	Less than 10 percent
II	11-20
III	21-30
IV	Greater than 30

C. "Horizontal distance" is the distance in lineal feet measured in a horizontal plane from the nearest edge of any structure, opening or excavation.

D. "Impaired water body" means a surface water body or segment thereof that is identified on a list approved by the State Water Resources Control Board and the US EPA pursuant to Section 303(d) of the federal Clean Water Act.

E. "Net area" of a lot or parcel means the area of such lot or parcel measured in acres less any road rights-of-way, whether dedicated or not.

F. "Onsite wastewater treatment system(s)" (OWTS) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. OWTS do not include "graywater" systems pursuant to Health and Safety Code section 17922.12.

G. "Percolation rate" is the rate determined in accordance with procedures contained in the current United States Department of Health, Education and Welfare "Manual of Septic Tank Practice."

H. "Public sewer" is a common sewer directly controlled by a public authority.

I. "Shall" is mandatory and "may" or "should" is permissive.

J. "Soil" is a granular or weathered material that can be excavated and handled with a pick and shovel.

K. "Uniform Plumbing Code" is the latest version of such code adopted by Section 15.04.010.

L. Any other word or phrase shall be interpreted and construed in a manner consistent with the Uniform Plumbing Code.

13.04.020 Purpose - Construction. The Board of Supervisors finds that the uncontrolled installation and maintenance of OWTS have the potential to degrade water quality and to cause health hazards and nuisance conditions, and, therefore, enacts this Chapter to regulate such systems in order to protect the public health and safety. Every effort should be made to connect to a public sewer where reasonably available. This Chapter shall be liberally construed to effectuate its purposes.

13.04.030 Compliance - Exceptions.

A. Notwithstanding any other provision of this Code except as provided in subdivisions B, C, D, E or F of this Section, no lot or parcel of a gross area of ten acres or less, shall be created or approved on and after January 2, 1975, pursuant to Title 16, unless a tentative subdivision or parcel map including such lot or parcel was approved prior to January 2, 1975, without fully complying with this Chapter.

B. This Chapter shall not apply to a lot or parcel that is required to be connected to a public sewer by the Uniform Plumbing Code as adopted by Chapter 15 or unless each such lot or parcel is guaranteed connection to a public sewer, which guarantee shall be in writing from the authority operating the public sewer; if such guarantee is received, resulting in the creation and approval of such lot or parcel, no building permit shall be issued thereafter for any building on such lot or parcel unless such building will be connected to the public sewer.

C. A lot or parcel zoned as an Open Space (O) District may be created and approved without complying with this Chapter. Such a parcel may not be rezoned to any other zoning district unless and until it fully complies with this Chapter. This restriction shall be noted by a certificate on the map. However, failure to place such a certificate on the map shall not affect the enforceability of this restriction.

D. A lot or parcel may be created and approved if an OWTS connected to an approved structure exists on the parcel and the Environmental Health Division of the Community Resources Agency determines that the required subsurface drain field for expansion of the system will exist on the parcel, minimum horizontal distances will be maintained, and that compliance with other provisions of this Chapter are not required to protect the public health or safety. The Environmental Health Division may require an inspection of the existing system and proof of one or more of the minimum criteria pursuant to Section 13.04.070. The applicant may obtain approval of the lot or parcel under subsection A of this Section without reference to this subsection.

E. Existing lots may be combined by merger or reversion to acreage as defined in Title 16, without complying with this Chapter. The reestablishment of the original lot configuration or a proposal to resubdivide shall fully comply with this Chapter.

F. A lot line adjustment or resubdivision shall not be approved without complying with this subsection:

1. Lots developed after March 6, 1974: A lot line adjustment or resubdivision may be approved, as provided for in Title 16, without otherwise complying with this Chapter if an acceptable OWTS connected to a structure exists on the lot or parcel, if the Environmental Health Division determines that existing OWTS will meet setbacks pursuant to Chapter 13.08, or Chapter 13.04 for developed lots created or approved for individual wells after January 2, 1975, and that the minimum required subsurface drainfield expansion area for repair of the existing OWTS will exist on each applicable lot or parcel after the lot line adjustment or resubdivision.

2. Lots developed prior to March 6, 1974: For purposes of this Section, on lots or parcels with OWTS installed before March 6, 1974, minimum required expansion area shall be any existing expansion area up to 100 percent of that required for the original system, unless a reduction of that area is approved by the Environmental Health Division. A reduction may be approved only upon a determination by the Environmental Health Division that doing so does not create a condition that upon failure of the existing system will create a greater potential to degrade water quality, or to cause health hazards or nuisance that existed before the proposed lot line adjustment or resubdivision.

3. Vacant lots created after January 2, 1975: For a lot line adjustment or resubdivision on a lot or parcel created or approved on or after January 2, 1975, unless a tentative map including such lot or parcel was approved prior to January 2, 1975, and where such a lot or parcel is not developed with a structure requiring an OWTS:

a. May be approved without complying with this Chapter if the adjustment or resubdivision will not eliminate any portion of the lot or parcel that was the site of any testing for purposes of originally complying with this Chapter.

b. May not be approved until compliance with this Chapter if the adjustment or resubdivision will eliminate any portion of the lot or parcel that was the site of acceptable testing for purposes of originally complying with this Chapter.

4. Vacant lots created prior to January 2, 1975: A lot line adjustment or resubdivision on a lot or parcel created or approved prior to January 2, 1975, and that is not developed with a structure requiring a septic disposal system, may be approved without complying with this Chapter.

5. An appeal from decisions concerning lot line adjustments or resubdivisions may be made to the Board of Supervisors pursuant to the procedure set forth in Section 13.04.050(B).

13.04.040 Authority to enforce Uniform Codes. The enactment of this Chapter is not intended to, and does not, supersede the authority of the Building and Safety Division of the Community Resources Agency to enforce the Codes adopted pursuant to Section 15.04.010 on lots or parcels created before or after January 2, 1975. Further, the enactment of this Chapter does not relieve anyone from complying with all other ordinances, statutes, rules and regulations pertaining to the creation or approval of lots or pertaining to the permit requirements of Chapter 13.08 of this Title.

13.04.050 Enforcement authority.

A. Enforcement authority. The Environmental Health Division of the Community Resources Agency of the County shall enforce this Chapter and is delegated full authority to do so. No parcel shall be approved without the written approval of the Environmental Health Division. The Environmental Health Division shall not approve any parcel unless each complies with this Chapter. In conjunction with a tentative map application, the owner or his/her agent shall submit to the Environmental Health Division the information necessary to evaluate the disposal area as prescribed by the Director of Environmental Health and include, but not be limited to: soil percolation rates (where required), soil depth to groundwater, ground slope, and horizontal distances. The Director of Environmental Health may require additional information or data which shall be supplied prior to the approval of the parcel. In areas with known groundwater problems, the Environmental Health Division may require additional testing during the crucial months of March through May.

B. Appeals to the Board. In the event that approval of a parcel proposed by a tentative subdivision or parcel map is denied by the Environmental Health Director with the concurrence of the Tuolumne County Health Officer, and the owner or his/her agent have reason to believe that one or more procedural errors had been made, an appeal may be made to the Board of Supervisors whose decision shall be final. The decision to deny the approval of a parcel shall be set forth in writing and shall specify the grounds for the denial. The appeal shall be filed with the clerk of the Board of Supervisors within ten calendar days following the date of the written denial, and shall specifically state the grounds on which the appeal is based.

13.04.060 Horizontal distances.

A. The following minimum horizontal distances are necessary to provide protection to water quality and for public health:

HORIZONTAL DISTANCES

	WELLS		SURFACE DRAINAGE										
Facility	Domestic	Public	Drainage Course	Ephemeral Stream (1)	Intermittent Stream (1)	Perennial Stream (2)	Impaired Water Body	Drinking Water Supply Surface Water Body (3)	Lake or Reservoir (above) (4) or Spring	Domestic Water Supply Canal, Above	Domestic Water Supply Canal, Below (7)	Cut or Fill Bank	Property Line (6)
Septic Tank	50'	150'	10'	25'	25'	50'	600'	50'	50'	100'	25'	10'	25'
Sewer Line	50'	100'	10'	25'	25'	50'	50'	50'	50'	100'	25'	10'	25'
Leaching Field	100'	150'	25'	50'	75'	100'	600'	200-400'	200'	250'	25'	4xH (5)	50'

Explanatory Notes:

1. As measured from the apparent edge of channel.
2. As measured from the high water mark which would result from a ten-year frequency flood.
3. Where the effluent dispersal system is within the catchment of a public water system's surface water intake point, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies and the dispersal system is located:
   a. Within 1,200 feet from a public water system's surface water intake point, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
   b. More than 1,200 feet but less than 2,500 feet from a public water system's intake point, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
4. As measured from the high water line.
5. Distance in feet equals four times the vertical height of the cut or fill bank. Distance is measured from the bottom of the bank. Setback is not required if the top of the drain rock is one foot below the bottom of the cut bank. Total distance need not exceed thirty-five feet from top of the bank.
6. When individual wells are used.
7. Below canal means below the bottom of the canal (invert).

B. Encasement in approved pressure pipe or other special protection required if at less distance than shown.

C. Lesser setbacks may be permitted with approved safety provisions. No part of an OWTS shall be located closer than the above minimum horizontal distance for each part of such system.

13.04.070 Minimum criteria.

A. The following minimum criteria are necessary for the proper functioning of an OWTS on each lot or parcel:

1. The percolation rate in the disposal area should not be greater than sixty minutes per inch.
2. Soil depth should not be less than eight feet. Greater depths shall be required if soils have a percolation rate less than ten minutes per inch.
3. Depth to groundwater shall not be less than eight feet. Greater depths shall be required if soils have a percolation rate less than ten minutes per inch.
4. Ground slope in the disposal area should not be greater than thirty percent.
5. The minimum disposal area should conform to the following:

Minimum Useable Disposal Area

Percolation Rate	Area in Square Feet
41-60	12,000
21-40	10,000
11-20	8,000
10 or less	6,000

6. Percolation rate tests shall be required in accordance with the following:

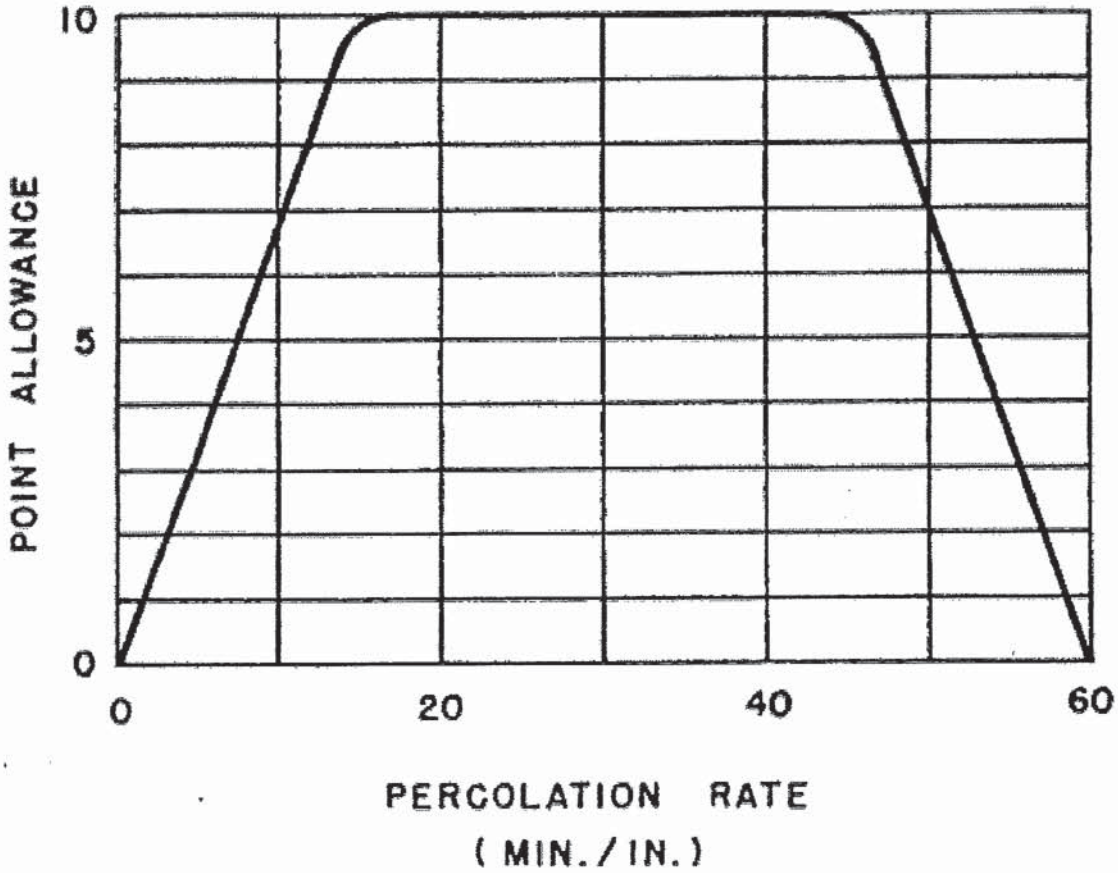
Parcel Size	Test Requirements
5-10 acres	If slope in category IV
2.5-5 acres	If slope in category III or IV
Less than 2.5 acres	Test required for all slope categories

B. A failure to meet the minimum criteria may be negated by other favorable conditions except where a criterion is required. For example, the installation of an OWTS may be allowed in areas steeper than thirty percent if the percolation rates are good, the soils are deep and the available disposal areas are large. Where minimum criteria are not met, a predevelopment engineered system may be required by the Environmental Health Division.

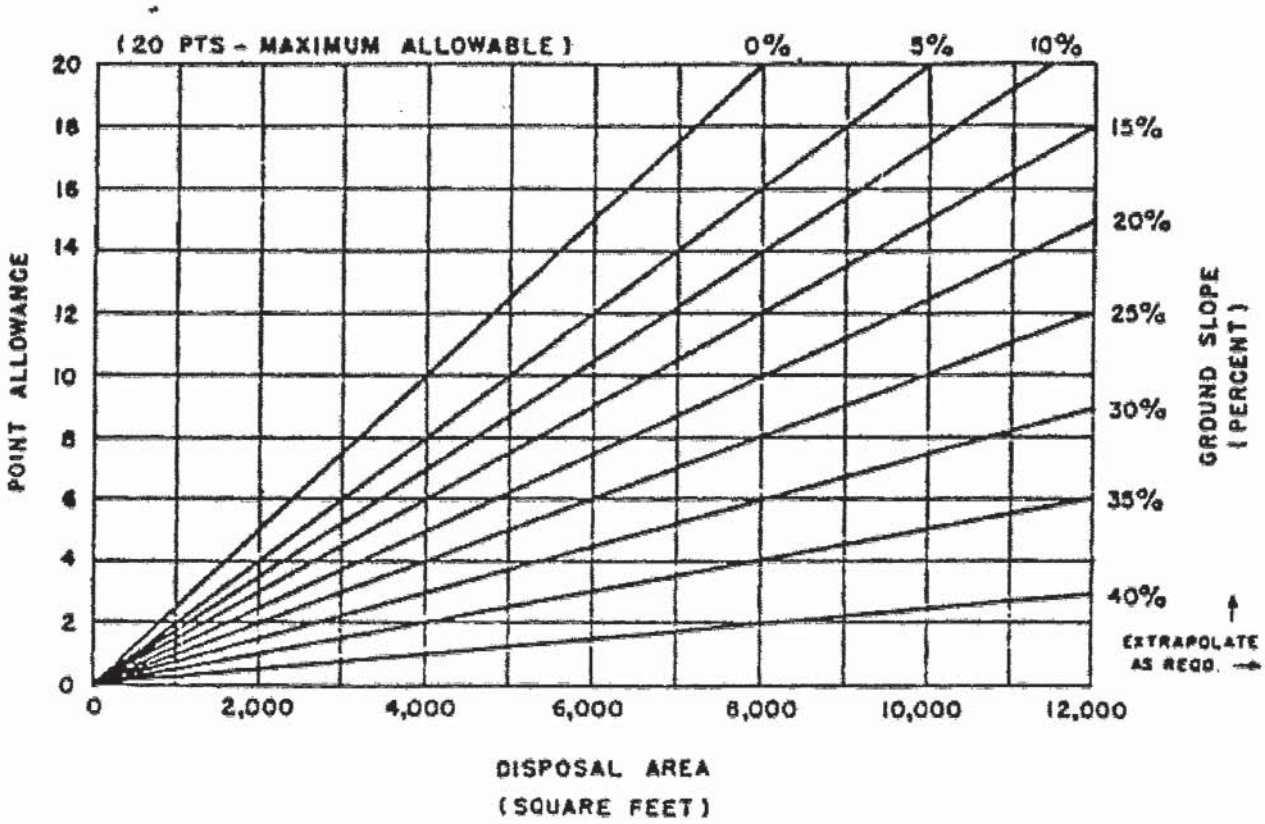
13.04.080 Procedures.

A. The following procedure has been formulated to recognize the interplay among the minimum criteria set forth in Section 13.04.070. Point allowances are provided for the magnitude of each factor set forth in such criteria. No lot or parcel shall be approved on which a single-family residence could be physically located unless such lot or parcel attains at least thirty-five points by applying the facts relating to each such lot or parcel to the four following graphs:

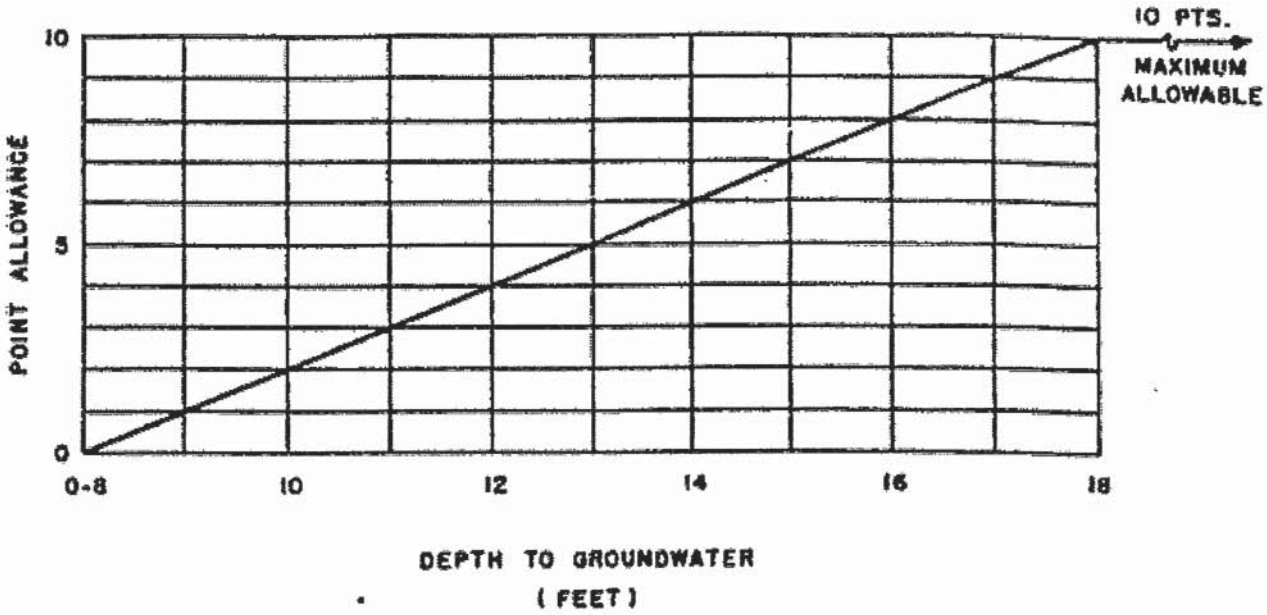
SOIL ABSORPTION CAPACITY



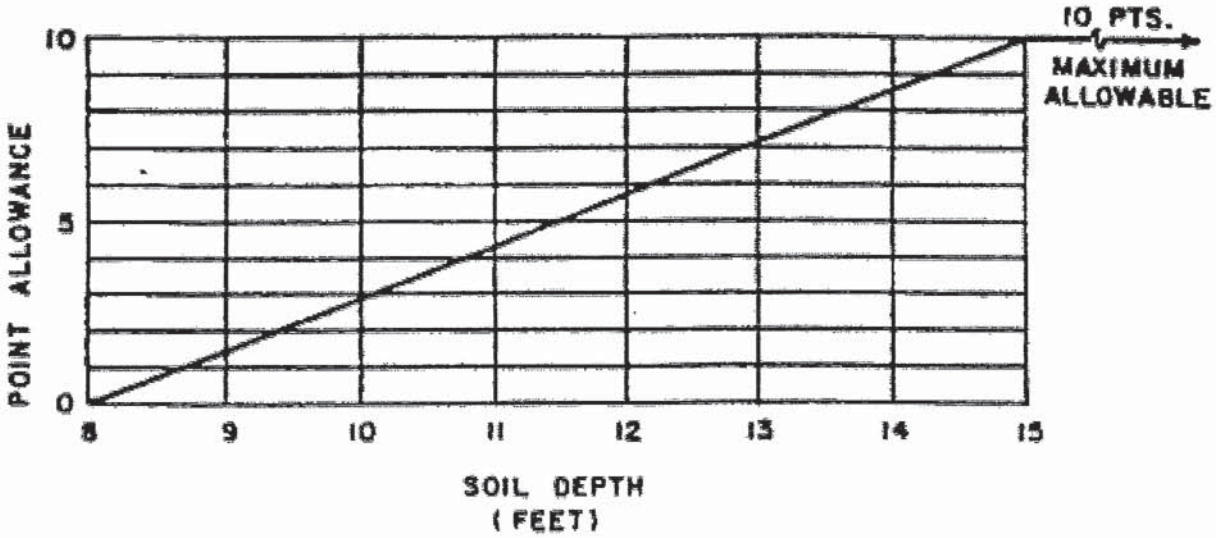
NET USABLE
DISPOSAL AREA vs. SLOPE



DEPTH TO GROUNDWATER



SOIL DEPTH



B. Land divisions in areas mapped as "limestone" on the general plan geotechnical maps shall meet the following requirements:

1. Computation of the points needed for approval of each parcel to be created shall include not less than six points for soil depth and not less than ten points for ground water pursuant to subsection A above. These points may be added to points attained through slope-area and percolation to meet minimum total required per parcel.

2. Percolation rate shall not be faster than fifteen minutes per inch at a depth of three feet below the ground surface.

SECTION 2: Chapter 13.08 of the Tuolumne County Ordinance Code is repealed and replaced to read as follows:

Chapter 13.08

ON-SITE SEWAGE TREATMENT AND DISPOSAL CODE*

Sections:

13.08.010 Purpose.
13.08.020 Title.
13.08.030 Definitions.
13.08.040 Enforcement.
13.08.050 Permit-Required.
13.08.053 CEQA review required.
13.08.055 Violation penalty.
13.08.060 Permit - Issuance and fee.
13.08.065 Installation or repair under permit.
13.08.070 Permit - Validity.
13.08.080 Permit - Posting.
13.08.090 Permit - Water supply.
13.08.100 Final approval under permit.
13.08.110 Permit conditions; emergencies.
13.08.120 Permit - Inclusion of backfilling abandoned septic tank.
13.08.130 Permit not to be construed to authorize violation.
13.08.140 Liability of County.
13.08.150 Public sewer connections.
13.08.160 Exceptions where community sewers are proposed.
13.08.170 Illegal occupancy.
13.08.180 Privies.
13.08.190 Cesspools, seepage pits and sewage wells.
13.08.200 Plumbing Code exceptions and superseding provisions.
13.08.201 Amendments necessary.
13.08.205 Technical standards - Compliance required.
13.08.210 Onsite wastewater treatment system.
13.08.220 General conditions.
13.08.221 Materials standards.
13.08.230 Minimum criteria for standard systems.
13.08.231 Minimum standards for graywater systems.
13.08.240 Leach field and leach bed design for standard systems.
13.08.249 Septic tank requirements.

13.08.250 Provisions concerning sizing of standard septic tank and disposal field systems.
13.08.260 Fiberglass septic tanks.
13.08.261 Dosing tanks.
13.08.262 Grease interceptors or traps.
13.08.270 Special design systems.
13.08.280 Location of onsite wastewater treatment system.
13.08.290 Abandoned sewers and sewage disposal facilities.
13.08.300 Inspections under sewage disposal permit.
13.08.310 Use and repair of existing onsite wastewater treatment system.
13.08.311 Discharge restrictions - Pollution prohibited.
13.08.320 Minor deviations from ordinance requirements.
13.08.330 Technical advisory committee.
13.08.340 Appeals.
13.08.350 Violation; enforcement.

*Prior ordinance history: Ordinance 1171; prior code Section 24

13.08.010 Purpose. The purpose of this Chapter is to establish minimum requirements for the protection of public health, welfare, and safety in the design, construction, maintenance, and use of sewage disposal systems and to protect surface and ground water from contamination by inadequately treated sewage.

13.08.020 Title. This Chapter shall be known and may be cited as the "Tuolumne County On-Site Sewage Treatment and Disposal Code."

13.08.030 Definitions. Unless the context otherwise requires, the following definitions shall be used in the interpretation and construction of this Chapter:
"Approved" or "Approval" means an action of approval by the Environmental Health Director.
"Board" means the Board of Supervisors of the County.
"California Plumbing Code" or "CPC" means the latest adopted edition of the California Plumbing Code, California Code of Regulations, Title 24, Part 5.
"Consultant" means any individual authorized under California law to design individual sewage disposal systems.
"County" means the County of Tuolumne, a political subdivision of the state of California.
"Drainage system" means all the piping within public or private premises which convey sewage or other liquid wastes from a structure to a point of disposal, but shall not include any portion of a public sewage system.
"Effluent" means any liquid wastes or sewage of which a portion of the solids have been removed by a primary treatment method.
"Environmental Health Division" means the Environmental Health Division of the Tuolumne County Community Resources Agency.

"EPA Manual" means the U.S. EPA Onsite Wastewater Treatment and Disposal Systems Design Manual (October 1980) and the U.S. EPA Onsite Wastewater Treatment Systems Manual (February 2002).
"Graywater" means untreated household wastewater which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom washbasins, and water from clothes washing machines and laundry tubs. It shall not include wastewater from kitchen sinks, dishwashers or laundry water from soiled diapers.
"High strength wastewater" means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other onsite wastewater treatment system component.
"Impaired water body" means a surface water body or segment thereof that is identified on a list approved by the State Water Resources Control Board and the US EPA pursuant to Section 303(d) of the federal Clean Water Act.
"Health Officer" means the County Health Officer or his/her duly authorized representative.
"Onsite wastewater treatment system" or "OWTS" means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. OWTS does not include "graywater" systems pursuant to Health and Safety Code section 17922.12.
"Septic tank" means a watertight receptacle which receives the discharge of a drainage system or part thereof, designed and constructed so as to retain solids, digest organic matter during a period of detention, and allow the effluent to drain into a subsurface absorption system or its equivalent.
"Sewage" means any and all waste substance, liquid or solid, associated with human habitation, or which contains or may be contaminated with human or animal excreta or excrement, offal or any feculent matter.
"Sewage disposal system" means any sewer system, OWTS, graywater system, disposal plan, septic tank, drainage system, seepage pit, chemical toilet, privy or other facility constructed for the purpose of receiving sewage or its effluent.
"Sewage well" means any hole used for disposal of sewage that has been dug or drilled into the ground and extends to or into the subterranean water-bearing stratum which is used or may be used as a domestic water source.
"Soil" means the unconsolidated material lying naturally on the surface of the earth that possesses percolative, infiltrative, and filtration capabilities. For the purposes of this Chapter, the USDA system of soil classification will be used including the USDA textural triangle.

13.08.040 Enforcement. The provisions of this Chapter shall be enforced by the Environmental Health Division.

13.08.050 Permit - Required.

A. No person, whether as principal, servant, agent, employee, owner or tenant, or otherwise, shall construct, install, replace, or repair any OWTS or private sewage

disposal system in any area of Tuolumne County without first having obtained a sewage disposal permit from the Environmental Health Division. If such OWTS or private sewage disposal system is to be constructed or installed for a new dwelling, the sewage disposal permit shall be obtained prior to the commencement of construction for such new dwelling. Applications for sewage disposal permits shall be made in such manner and on such forms as the Environmental Health Division directs and devises.

B. A sewage disposal permit shall be required for modification of any part of the septic tank and/or leach field other than pumping of a septic tank, including the addition or replacement of leach field trenches.

13.08.053 CEQA review required.

A. A review pursuant to the California Environmental Quality Act (CEQA) shall be conducted prior to the approval or conditional approval of a sewage disposal permit when:

1. A cultural resource is determined to be present on the project parcel pursuant to Chapter 14.10; and
2. The cultural resource cannot be avoided as established in Chapter 14.10.

B. A review of the impacts of the proposal on cultural resources shall be conducted in compliance with Chapter 14.10 of this Code to determine the appropriate conditions necessary to protect cultural resources.

13.08.055 Violation penalty. An applicant for a permit to legalize a violation of this Chapter, after service of a notice and order in accordance with Chapter 1.10 of this Code, shall pay a violation penalty and associated abatement costs as established by the Board of Supervisors and set forth in Chapter 1.10 of this Code. This penalty and abatement costs shall be paid in addition to the regular permit processing fee.

13.08.060 Permit - Issuance and fee. The permit required shall be issued on a standard form supplied for that purpose. A fee shall be charged for such permit in accordance with Chapter 3.40 of this Code.

13.08.065 Installation or repair under permit. Construction, installation, replacement, or repair of an OWTS or private sewage disposal system shall be performed by contractors licensed as required in accordance with the provisions of the Contractors' State License Law (California Business & Professions Code section 7000 et seq.). Nothing herein shall be construed so as to prevent a resident or owner from doing his/her own work.

13.08.070 Permit - Validity.

A. It is the responsibility of any and all persons performing any part of the construction, installation, replacement, or repair of an OWTS or private sewage disposal system to ascertain that a valid sewage disposal permit has been issued by the Environmental Health Division prior to initiation of any repair or installation.

B. Upon issuance of a sewage disposal permit, the permittee shall have one year from the date of issue to commence work authorized under the permit. The work

authorized under the permit shall be completed with final inspection by the Environmental Health Division within eighteen months of the date of permit issuance.

C. Any permittee holding any unexpired permit may apply for an extension of time within which he/she may commence and/or complete the work under that permit when he/she is unable to commence/complete work within the time required by this Section for good and satisfactory reason, provided no changes have been made or will be made in the original plans and specifications for such work. The Environmental Health Division may extend the time for action by the permittee for a period of up to three hundred sixty five days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. In order to renew action on a permit after expiration, the permittee shall pay the staff hourly cost with a one hour minimum upon applying for a permit renewal for permits that expired on or after July 1, 2008. The permittee shall pay a new full permit fee to renew action on a permit that expired prior to July 1, 2008.

13.08.080 Permit - Posting. The sewage disposal 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 Environmental Health Division.

13.08.090 Permit - Water supply. Location of the water supply shall be included as a condition of the permit.

13.08.100 Final approval under permit. No blue tag for electrical hookup shall be issued by the Building and Safety Division of the Community Resources Agency without certification of compliance with all conditions of the sewage disposal permit by the Environmental Health Division.

13.08.110 Permit conditions; emergencies. Any person who shall commence any work for which a permit is required by this Chapter without first having obtained a permit therefor or who fails to comply with the terms and conditions of said permit shall be in violation of this Chapter. Work may commence prior to obtaining a permit for emergency work only when it shall be proven to the satisfaction of the Environmental Health Division that such work was urgently necessary and that it was not practical to obtain a permit before commencement of the work. In all such cases, a permit must be obtained as soon as it is practical to do so and if there is any unreasonable delay in filing an application for such permit a double fee shall be charged. For the purpose of this Section, an unreasonable delay shall be considered to be a period of time in excess of seven days.

13.08.120 Permit - Inclusion of backfilling abandoned septic tank. When a permit has been obtained to connect an existing building or an existing facility to the public sewer, backfilling of a private septic tank abandoned consequent to such connection is included in the building sewer permit.

13.08.130 Permit not to be construed to authorize violation.

A. The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for or an approval of any violation of any provisions of this Chapter. No permit presumed to give authority to violate or cancel provisions of this Chapter shall be valid except insofar as the work or use which it authorizes is lawful. The issuance or granting of a permit or approval of plans shall not prevent the Environmental Health Director from thereafter requiring the correction of errors in the plans and specifications or from preventing construction operations being carried out thereunder when in violation of this Chapter or any other ordinance, law or regulatory provision.

B. All installations shall be installed as designed and approved. Any variations from an approved design shall require a revised plot plan and shall be the subject of new approval prior to commencement of construction.

C. Any OWTS or sewage disposal system constructed or used in violation of this Chapter constitutes a public nuisance, is dangerous to health, and may be enjoined or summarily abated in the manner provided by law.

13.08.140 Liability of County. This Chapter shall not be construed as imposing upon the County any liability or responsibility for damage resulting from any OWTS or sewage disposal system as herein provided; nor shall the County, or any official employee thereof, be held as assuming such liability or responsibility by reason of the activities authorized hereunder.

13.08.150 Public sewer connections.

A. Every building in which plumbing fixtures are installed, including dwellings, places of business, or other structures in which persons reside, congregate or are employed, and any building or structure from which sewage may originate, shall connect to a public sewer when such a public sewer is available. For the purposes of this Section, a public sewer is defined as being available when the following conditions exist:

1. The agency operating the sewer has agreed to permit connections;
2. The public sewer is located three hundred feet or less from the proposed building as measured over an existing public right-of-way or public utility easement. If the private sewer to be connected is at a lower elevation than the public sewer, the distance described herein shall be one hundred feet or less via public easement;
3. The character of flow in the public sewer at the point of connection is the type of flow commonly known as open channel flow so that there is an air space above the sewage in a public sewer pipe under normal operating conditions at the time of the sewer connection.

B. This Section shall not be construed to prevent the connection of a private sewer to a public sewer if the applicant chooses to do so, provided the condition set forth in subsection A(1) of this Section has been met and approval of the Environmental Health Director has been obtained even though the public sewer is under pressure or at a greater distance than specified herein.

C. When no public sewer is available as defined above, the private sewer shall be connected to an OWTS or private sewage disposal system.

D. Within the limits prescribed by subsection A of this Section, the rearrangement or subdivision into smaller parcels of a parcel for which public sewer available shall not be deemed cause to permit the construction of an OWTS or private sewage disposal system, and all plumbing or drainage systems on any such smaller parcel or parcels shall connect to the public sewer.

13.08.160 Exceptions where community sewers are proposed. In any area of the County where a public entity has proposed community sewers and has obtained all required approval and funding for such community sewers and has established a plan and time schedule for the installation of community sewers, the Environmental Health Director may allow such standards and equipment for a temporary septic tank and effluent disposal system that the Environmental Health Director shall determine is adequate to serve any building or dwelling or mobilehome on a temporary basis until the scheduled community sewers are available. The Environmental Health Director may revoke his/her permission to utilize such temporary systems if at any time he/she determines such temporary systems are a detriment to the public health. Any property owner seeking permission to utilize a temporary OWTS under the provisions of this Section shall present to the Environmental Health Director an agreement in a form suitable for recording to connect to the community sewer as soon as it is available to the property.

13.08.170 Illegal occupancy. It is unlawful for any person to maintain or use any dwelling, place of business, or other building or place where a person resides, congregates or is employed in violation of the terms and conditions of the sewage disposal permit or which is not provided with or having access to means for the disposal of human wastes, either by connection to an approved OWTS or sewage disposal system or to a public sewer. Where he/she deems it impractical or impossible to do otherwise, the Environmental Health Director, in consultation with the Health Officer, may allow privies or chemical toilets, provided that approved methods of construction and maintenance are adhered to in such installations. Such privies or chemical toilets may be installed and used only with written permission of the Environmental Health Director.

13.08.180 Privies.

A. No person shall construct, maintain or use any privy permitted by the provisions of this Chapter unless the following conditions are complied with:

1. The sewage deposited therein shall fall into a vault or pit in the ground constructed especially for the purpose.
2. The privy building and privy vault or pit shall be at all times inaccessible to rodents and insects.
3. The privy building and vault or pit shall be constructed in such a manner as to prevent the entrance of rainwater and surface water into the vault or pit.

4. Seat covers and door shall be self-closing. The base shall be banked with earth and the vent pipe shall extend from the vault or pit to one foot above the roof. The top shall be screened with 16 mesh screen.

5. All parts of the privy building shall be maintained in a clean and sanitary condition at all times.

B. The privy shall not be allowed to become filled with excreta to a point within one foot of ground surface. The excreta in the pit shall be covered with earth, ashes, lime or some similar substances at regular intervals, or if a concrete vault, it shall be pumped out as needed. It shall be maintained in a sanitary condition and in good repair.

13.08.190 Cesspools, seepage pits and sewage wells. Cesspools, seepage pits and sewage wells are unlawful and are declared to be a nuisance.

13.08.200 Plumbing Code exceptions and superseding provisions. The following provisions and sections of the CPC are amended, modified and superseded as follows:

A. Chapter 1 (Administration), Sections 104.0 (Permits), 105.0 (Inspections and Testing) and 106.0 (Violations and Penalties), in regards to onsite sewage treatment and disposal, are replaced by the organization, enforcement, permit and inspections provisions shall be as set forth in Chapter 1.10 and Sections 13.08.040 through 13.08.130 and Section 13.08.350 of this Code to provide for local permitting and management of sewage disposal systems by the Environmental Health Division.

B. Sections 713.1, 713.2, 713.3, and 713.4 of Chapter 7 are replaced by Section 13.08.150 of this Code.

C. Section H101.8 of Appendix H is replaced by Section 13.08.310(C) of this Code to clarify requirements for use of an adjacent parcel for sewage treatment and disposal.

D. Sections 722.4 and 722.5 of Chapter 7 are replaced by Section 13.08.290 of this Code so that the terms "Department having jurisdiction" and "Administrative Authority" are replaced with "Environmental Health Director".

E. Table 721.1 of Chapter 7 is replaced by Table 2, set forth in Section 13.08.280 of this Code.

F. The following provisions and sections of Appendix H are amended, modified and superseded by Sections 13.08.190, 13.08.210, 13.08.220, 13.08.230, 13.08.240, 13.08.249, 13.08.262, 13.08.270, 13.08.280, 13.08.290 and 13.08.310 of this Code.

1. CPC Appendix H, Sections H201.0, H301.0, H401.0, H501.0, H601.0, H701.0, H801.0, H901.0, H1101.0 and Table H101.8.

2. Table H201.1(1) is amended to provide that the minimum septic tank capacity for a single-family dwelling shall be one thousand gallons.

13.08.201 Amendments necessary. The modifications, deletions and amendments of standards enacted by this Chapter are merely a continuation of the Tuolumne County onsite sewage treatment and disposal code, and all changes and modifications to the CPC, whether previously enacted or contained in this Chapter, are reasonably necessary because of local climatic, geographical, or topographical conditions.

A. Sections 713.1, 713.2, 713.3 and 713.4 of Chapter 7 are replaced by Section 13.08.150 of this Code because of topographic conditions along the route of the Twain

Harte sewer interceptor, which was installed primarily to transport Twain Harte's sewage to the Sonora treatment facility, and is pressurized along much of its route to overcome elevation differences. Although many homes are within two hundred feet of the sewer line, often the nearest open-channel connection point is much farther away, making connection impractical or impossible.

B. Table 721.1 of Chapter 7 and Table H101.8 of Appendix H are replaced by Table 2 of Section 13.08.280 of this Code for the following reasons:

1. Geographic conditions in Tuolumne County such as high seasonal groundwater, shallow soil mantles, and highly fractured bedrock, prevent the safe use of seepage pits and cesspools. Because their installation is not allowed, that portion of the table was deleted.

2. Many topographic features common to Tuolumne County are not specifically addressed by the CPC. Therefore, sanitary setbacks for drainage courses, ephemeral, and intermittent streams, cutbanks and fill banks, water supply canals, and lakes or reservoirs where use is, or may be intended as a public water supply, etc. have been included in the above-referenced table.

C. Seepage pits as referred to in Appendix H, Section H701.0 are prohibited by Section 13.08.190 of this Code due to the fractured rock geology in Tuolumne County.

D. The CPC does not adequately address soil types found in Tuolumne County. Therefore, Sections H301.0 and H401.0 of Appendix H are replaced by Sections 13.08.220, 13.08.230 and 13.08.240 of this Code which are based on the USDA soil textural triangle, commonly used by this area's consultants, nationally recognized experts, and the EPA Manual.

E. Seepage pits and cesspools as referred to in Sections H701.0 and H801.0 of Appendix H are prohibited by Section 13.08.190 due to the fractured rock geology in Tuolumne County. Geographic conditions in Tuolumne County such as high seasonal groundwater, shallow soil mantles, and highly fractured bedrock, prevent the safe use of seepage pits and cesspools.

F. In Appendix H, Section H101.0 is replaced by Sections 13.08.210, 13.08.220, 13.08.230, and 13.08.270 to present a more modern, clear, and regulatory mechanism than the CPC wording, and to be integrated with other local ordinances, state Regional Water Quality Control Board standards, and the Tuolumne County general plan.

G. The last sentence of Section H201.1 is deleted because sizing of septic tanks should be based on the daily liquid waste production instead of percolation rates. It is the leach field that is to be sized on the percolation and application rates of the soil. Because a good indicator of soil permeability is the texture and structure of the soil mantle (which is surveyed for each new installation), percolation tests are not always required, thereby making the use of the referenced Table H201.1(4) inapplicable.

H. Sections H301.0 and H401.0 of Appendix H are replaced by Sections 13.08.220, 13.08.230 and 13.08.240 which are based on the USDA soil textural triangle, commonly used by this area's consultants, nationally recognized experts, and the EPA Manual. These changes are based upon local geography and topography and were reviewed by local consultants.

I. Section H601.0 of Appendix H is replaced with the provisions of Section 13.08.240 to be more responsive to local geographic conditions than in the CPC. It

contains all of the elements of the CPC except that seepage pits and cesspools are not allowed due to local geographic conditions.

J. Sections H701.0 and H801.0 of Appendix H are replaced with Section 13.08.190 which deems seepage pits and cesspools to be unlawful due to previously mentioned local geographic conditions.

K. Section H901.0 of Appendix H is amended by Section 13.08.262, which is essentially similar to the CPC but allows grease traps in addition to two-compartment interceptors. Grease traps are commonly used and are more easily inspected and cleaned.

13.08.205 Technical standards - Compliance required. All OWTS and private sewage disposal systems shall comply with the Tuolumne County Local Agency Management Plan, (LAMP), approved by the State Water Resources Control Board pursuant to the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (June 19, 2012), the CPC, and the EPA Manual, and this Code. In the event of a conflict among these standards, resolution shall be determined in the order set forth as follows:

A. The LAMP.
B. This Code.
C. The CPC.
D. The EPA Manual.

13.08.210 Onsite wastewater treatment system.

A. Where permitted by Section 713 of the CPC as modified by this Chapter, the building sewer for a building containing not more than five dwelling units may be connected to an OWTS complying with the provisions of this Chapter if allowed by the general plan and Title 17. The system, except as otherwise provided, shall consist of a septic tank with effluent discharging into a subsurface disposal field. The size and arrangement of such systems shall be determined on the basis of location, area and slope of land in the disposal area, soil character, and groundwater level and shall be designed to receive all sanitary sewage from the property based on potential occupancy of the dwellings served.

B. Where the system is intended to serve any use other than dwellings as described above, where the disposal area is insufficient for a standard system or the slope in the disposal area exceeds thirty percent, or where soil or groundwater conditions may impose limitations on standard OWTS, plans for a special design OWTS shall be required. Plans for special design systems shall be prepared and signed by a consultant. Plans for all such special design OWTS shall be submitted to the Environmental Health Director for review and approval prior to commencement of construction unless exempted by federal law or other County ordinance.

C. Where the system is intended to serve projected wastewater flows in excess of 10,000 gallons per day, small community systems for service of more than four individual parcels, and systems which produce high strength wastewater or significant amounts of waste from recreational vehicle holding tanks, the existing, new and

replacement OWTS shall be regulated separately by the applicable Regional Water Quality Control Board and no Environmental Health permit shall be required.

13.08.220 General conditions.

A. If the Environmental Health Director determines that there is insufficient disposal area, or that soil conditions, groundwater conditions, or topographic restraints will not permit installation of a standard OWTS, no sewage disposal permit shall be issued, and no OWTS shall be permitted unless a special design OWTS is first approved by the Environmental Health Director.

B. Nothing contained in this Chapter shall be construed to prevent the Environmental Health Director from requiring compliance with higher requirements than those contained herein where such higher requirements are essential to maintain a safe and sanitary condition, and therefore the Environmental Health Director may impose reasonable conditions on the permit.

C. The Environmental Health Director and his/her authorized representatives shall have the right of entry during usual business hours to inspect any and all buildings and premises in the performance of their duties connected with this Chapter.

D. No property shall be improved in excess of its capacity to properly absorb sewage effluent in the quantities and by the means provided in this Code.

E. The Environmental Health Director may grant exceptions to the provisions of this Chapter, for permitted structures which have been destroyed due to fire or natural disaster, and which cannot be reconstructed in compliance with these provisions, if the exception is found to meet current public health standards equivalent to this Code. The Health Officer shall be notified regarding any granted exceptions.

F. The Environmental Health Director may approve, conditionally approve, or deny sewage disposal permits. A decision to deny a permit shall be made by the Environmental Health Director with concurrence by the Health Officer and shall be set forth in writing and shall specify the grounds for the denial. In granting a permit, the Environmental Health Director shall attach whatever conditions are reasonable and necessary to fulfill the intent and purposes of this Chapter and Title 14. Such conditions and the proposal of the applicant as considered and approved shall be a part of such permit. Issuance of a permit may be made subject to guarantees, executed by the Environmental Health Director, and evidence that attached conditions are being or will be met. Such conditions may include compliance with an Operation Maintenance and Monitoring Program.

13.08.221 Materials standards. All perforated pipe, piping, inlet/outlet piping and other materials used in the construction, installation, replacement, alteration or repair of OWTS or sewage disposal systems shall conform to the standards of the CPC as revised by this Code.

13.08.230 Minimum criteria for standard systems. A standard system shall comply with the minimum criteria set forth in this Section.

A. Disposal systems shall be designed to utilize the most permeable or absorptive portions of the soil formation.

B. There shall be a minimum of five feet of permeable soil below the bottom of a leach trench or bed.

C. Depth to anticipated seasonal high groundwater below the leaching trench or bed shall not be less than five feet. Greater soil depths are required if soils do not provide adequate filtration.

D. The five foot requirements set forth in subsections B and C of this Section may be reduced by up to six inches pursuant to Section 13.08.320.

E. Ground slope in the disposal area shall not be greater than thirty percent. Leaching trenches or beds shall not be installed on benches created for this purpose.

F. All OWTS and private sewage disposal systems shall be so situated on the parcel that additional subsurface drain fields, equivalent to at least one hundred percent of the required original system, may be installed in an area. Area reserved for such use shall not become the site of any surface improvements.

G. The active, working portion of the soil filter media used for treatment of septic effluent shall have a soil texture as defined by zone 2 and 3 of the textural triangle shown in Figure 1.

H. Application rates shall be determined by either percolation tests or soils textural classifications. Verification of initial field tests by Environmental Health Specialists will be conducted using the field test methods outlined in the EPA Manual. Percolation tests shall be conducted as specified in the EPA Manual. The percolation rate in the disposal area shall not be slower than one-hundred and twenty minutes per inch for standard leach trenches or beds. The percolation rate in the disposal area shall not be faster than six minutes per inch for standard leach trenches or beds.

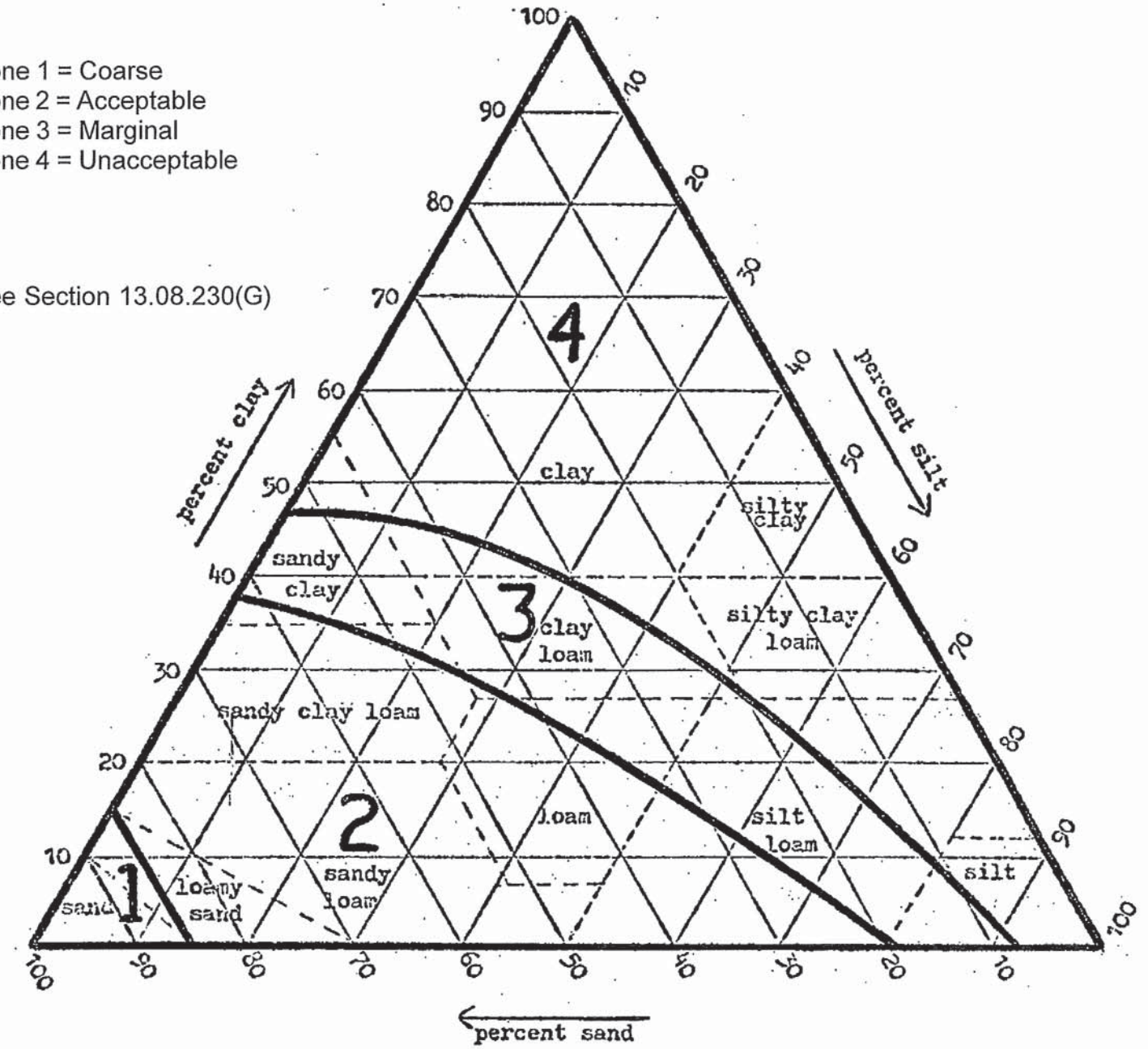
(See percolation chart on next page)

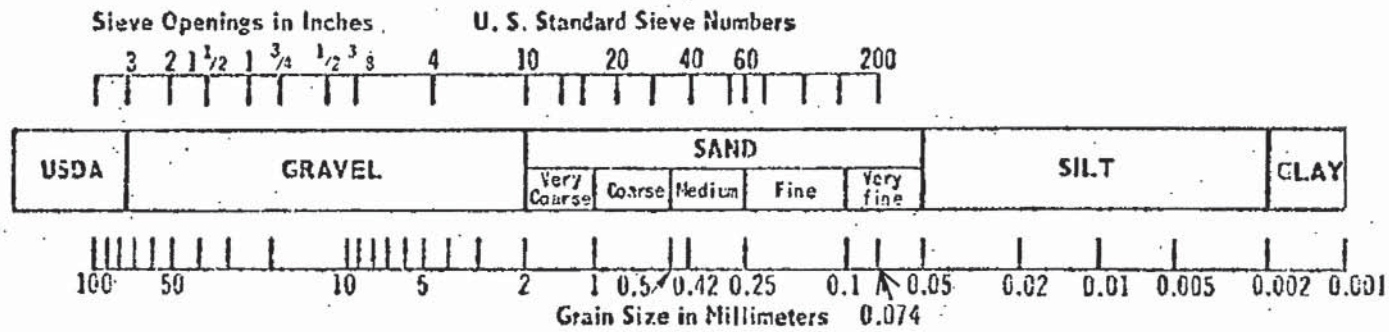
SOIL PERCOLATION SUITABILITY CHART

FIGURE 1

Zone 1 = Coarse
Zone 2 = Acceptable
Zone 3 = Marginal
Zone 4 = Unacceptable

See Section 13.08.230(G)





In case of dispute, the following instructions will be followed:

1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the sand direction an additional 2 percent for each 10 percent (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the clay direction an additional 15 percent for soils having a bulk-density greater than 1.7 gm/cc.

13.08.231 Minimum standards for graywater systems. All graywater systems shall be sized using the application rate criteria specified in Section 13.08.230. Graywater systems shall comply with any additional standards contained in the CPC.

13.08.240 Leach field and leach bed design for standard systems.

A. Flow rates for single and multiple-family dwellings shall be based on a minimum of three hundred gallons per day plus one hundred gallons per day for each bedroom beyond two in a residential unit.

B. Sewage application rates for leach trenches and beds and leaching chambers shall be as described in Table 1. (See Table 1 below)

TABLE 1

Sewage Application Rates		
Soil Type	Percolation rate Minutes/Inch	Application Rate Gallons/Ft^2/Day
Gravel and coarse sand	<1	Not suited for standard system
Coarse to medium sand	1-5	Not suited for standard system
Fine sand, loamy sand	6-15	0.80
Sandy loam, loam	16-30	0.60
Loam, porous silt loam	31-60	0.45
Silty clay loam, clay loam	61-120	.20[a]
Any soil type producing percolation rate in excess of 120 minutes/inch	>120	Not suited for standard system

a. These soils may be easily damaged during construction and shall require special care during construction as specified by the Environmental Health Division to avoid compaction, smearing and other soil damage.

Absorption surfaces for leach trenches shall be based on trench bottom area and sidewall area below the drainpipe. The absorption surface for leach beds shall be considered to be the base of the leach bed. Leaching chambers shall be sized on the bottom absorption area (nominal unit width) in square feet. The required area shall be calculated using Table 1 with a 0.70 multiplier (that is a 30% reduction in calculated length may be used).

C. Distribution lines shall be constructed of perforated plastic pipe authorized by the CPC. All bends used in the disposal field shall be made with manufactured fittings. The mitering of drainpipe is prohibited.

D. Before placing filter material in a prepared excavation, all smeared or compacted surfaces shall be removed from trenches by raking to a depth of one inch and the loose material removed. Clean stone, gravel, slate or similar filter material acceptable to the Environmental Health Director, varying in diameter from three-fourths (¾) inch to two and one-half (2½) inches, shall be placed in the trench to the depth and grade required by this Section. Drainpipe shall be placed on filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this Section and covered with untreated building paper, filter fabric, straw or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance.

E. There shall be at least one distribution box for each OWTS. The distribution box shall be constructed at the head of each disposal field and must be of sufficient size to receive lateral line. The crowns of all outlets shall be level and the inlet invert shall be at least two inches higher than any lateral outlet invert. The overflow invert shall be two inches higher than a lateral invert. Plastic and fiberglass distribution boxes shall be built on a level concrete slab installed in natural or compacted soil.

F. All laterals from distribution box to the disposal field shall have approved pipe with watertight joints. Multiple field laterals, wherever practicable, shall be of uniform length.

G. Connections between a septic tank and a distribution box, or between a distribution box and drain field, shall be laid with approved watertight joints on natural ground or compacted to the natural equivalent.

H. Disposal fields shall be constructed as follows:

Minimum number of drain lines per field	1 line
Maximum length of each line	100 feet
Minimum bottom width of trench.....	12 inches
Maximum depth of trench.....	10 feet
Minimum spacing of lines, edge to edge	5 feet
Minimum depth of earth cover over lines	12 inches
Minimum filter material under drain lines	18 inches
Minimum filter material over drain lines...	2 inches

I. Perforated pipe shall be laid level up to a maximum of three inches per one hundred feet slope and with the end of the line capped.

J. Minimum spacing between trenches or leaching beds shall be five feet plus two feet for each additional foot of depth in excess of one and one-half feet below the bottom of the drain line.

K. No part of the absorption field shall be placed under a paved area, roadway or structure. If necessary to cross under such construction, watertight lines of material acceptable for the building sewer shall be used.

L. Where intercept drains are required on new installations, a complete engineered plan shall be submitted by a consultant to the Environmental Health Division.

M. The OWTS shall be so designed to receive all domestic sewage from the property. No cooling water, water softener brine, groundwater, oil, hazardous wastes or materials, roof or other surface drainage shall be discharged into any OWTS.

N. Inspection risers shall be required at the terminal end of each leach line. The riser shall be separate from the distribution line. The risers shall be capped and constructed to preclude entrance of rain or surface water and shall allow a determination of the depth of sewage effluent in each trench.

13.08.249 Septic tank requirements.

A. All water from bathrooms, kitchens, laundry fixtures and other household plumbing shall pass through an approved septic tank or other approved sedimentary tank prior to its discharge into the soil. The septic tank design shall be such as to produce a clarified effluent consistent with accepted standards, and shall provide adequate space for sludge and scum accumulation.

B. Structural plans for the construction of all septic tanks shall be submitted to the Tuolumne County Community Resources Agency for approval prior to approval of the sewage disposal permit. Such plans shall show all dimensions, reinforcing, structural calculations, and such other pertinent data as may be required to ensure compliance with the CPC as revised by this Chapter.

C. The required minimum septic tank capacity shall be as follows:

Number of Bedrooms	Gallons
1-3	1,000
4	1,200
5-6	1,500

Note: Extra bedroom, 150 gallons each.

D. For all other uses not specified in subsection C of this Section, the capacity of all septic tanks shall conform to Table H201.1(1) or Table H201.1(2) of the CPC as determined by the number of bedrooms or apartment units in dwelling occupancies and the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 702.1 of the CPC, whichever is greater.

E. All in-place septic tank construction shall require a building permit from the Tuolumne County Community Resources Agency. The liquid capacity of the septic tank shall be approved by the Environmental Health Division.

F. Approved aerobic systems may be substituted for conventional septic tanks provided that the Environmental Health Director is satisfied that such systems will

produce results at least equivalent to septic tanks, whether their aeration systems are operating or not.

13.08.250 Provisions concerning sizing of standard septic tank and disposal field systems. No septic tank and disposal field sizing shall be considered for a residential structure to be less than that for a two-bedroom dwelling. Dormitories and loft areas will be considered as multiple bedrooms based on one hundred twenty square feet per bedroom unit, based on floor area with a possible eight feet or greater floor-to-ceiling clearance. No single-family residence containing dormitory or loft area or areas shall have more than a four-bedroom value assigned to the dormitory or loft area or areas. Any room in a proposed residence classified as a sewing room, den or recreation room will be considered a bedroom if a provision for a permanently constructed closet is present. The expansion of a residence premises to add one or more bedrooms shall require the septic tank and leach field sizing of the premises to be as provided in this Chapter.

13.08.260 Fiberglass septic tanks. The following specifications shall apply to the installation of all fiberglass septic tanks:

A. The trench shall be excavated to provide sixteen inches of clearance against each side of the tank so as to allow hand or foot compaction under tank. Bottom of trench shall be level and base of trench shall be free of large or sharp rocks;

B. Backfill material shall be free of large or sharp rocks within six inches of tank. Backfill material shall be hand or foot tamped under tank to achieve a balanced bedding. Backfill shall be placed at a maximum of four-inch even layers and shall be hand or foot tamped before placing next layer;

C. The minimum fill over the top of tank shall be thirty inches unless an equivalent restraint and protection is provided;

D. Fiberglass septic tank shall be equipped with schedule 40 plastic pipe four-inch tees at the inlet and outlet. Tank shall be filled with water above the joint level to prove water tightness before the tank is backfilled.

13.08.261 Dosing tanks. When the quantity of sewage exceeds the amount that can be disposed in five hundred lineal feet of leach line, a dosing tank shall be used. Dosing tanks shall be equipped with an automatic siphon or pump which discharges the tank at least once every three or four hours. The tank shall have a capacity equal to sixty to seventy-five percent of the interior capacity of the pipe to be dosed at one time. Where the total length of leach pipe exceeds one thousand lineal feet, the dosing tank shall be provided with two siphons or pumps dosing alternately and each serving one-half of the leach field.

13.08.262 Grease interceptors or traps.

A. Required. In commercial or industrial premises when liquid wastes contain excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients

which may affect the operation of an OWTS or private sewage disposal system, an approved interceptor or trap for such wastes shall be installed.

B. The installation and location of such interceptors or traps shall comply with the CPC as revised by this Chapter.

C. Grease traps or interceptors shall be installed under permit and inspection from the Tuolumne County Community Resources Agency.

13.08.270 Special design systems.

A. Where the criteria set forth for a standard system cannot be attained, the Environmental Health Director may approve a special design system. Special design systems shall include Modified systems, Alternative systems and Experimental systems. Guidelines formulated for special design systems and alternative systems shall be maintained by the Environmental Health Division.

B. The Guidelines shall provide for a possible reduction of the required soil depth to a minimum of two feet below the bottom of the leaching trench or bed or to groundwater. Specific, written factual justification shall be provided for any reduction granted, as well as a library of referenced publications. All systems included in the EPA Manual, as well as systems with a historical record of reliability in the local area shall be considered by the Guidelines.

C. Any proprietary supplement treatment system used in a special design system shall meet NSF/ANSI (National Sanitation Foundation/American National Standards Institute) Standard 40. NSF approved proprietary components shall not be used independently. Proprietary components may be used as part of the overall wastewater treatment system as tested and approved by NSF.

D. Applicants may request, at applicant's cost, a review of the plans for special design systems by a Qualified Professional under contract to the County. This Qualified Professional shall have the following qualifications:

1. Contemporary experience, knowledge and expertise in the field of OWTS design,
2. Be either a registered civil engineer or a certified engineering geologist in the State of California,
3. Have no conflicts of interest relative to the given special design OWTS plan under review.

E. These systems shall be located, designed and installed under the direction of a consultant. After installation is completed, the consultant shall certify in writing to the Environmental Health Division that the system was located and installed in fidelity with the plans and specifications as approved. Minor deviations from the approved plan and specifications arising from prior unknown site conditions shall be accurately included in the certification. Major deviations shall be reported to the Environmental Health Division prior to installation and new written approval shall be required.

F. The Guidelines developed and approvals granted pursuant to this Section shall be based on valid information and extensive field and test data from conditions similar to the proposed site or from additional data as may be necessary to provide assurance that approved special design or alternative systems will produce continuous and long-

range results, at the proposed site, at least equivalent to systems which are specifically authorized.

G. No person shall fail to comply with an Operation, Maintenance and Monitoring Program for a special design system as required pursuant to Section 13.08.220(F).

13.08.280 Location of OWTS or sewage disposal system. OWTS or sewage disposal systems constructed on parcels or lots created or approved on or after January 2, 1975, shall meet the setback requirements of Chapter 13.04. For those horizontal distance setbacks not set forth in Chapter 13.04 and for those parcels or lots created prior to the above named date, the following setback requirements are applicable:

TABLE 2

Location of OWTS or Sewage Disposal System			
Minimum horizontal distance in clear required from:	**Building Sewer**	**Septic Tank**	**Disposal Field**
Building or structures (A)	2'	5'	8'
Property line adjoining private property	Clear	5'	5'
Private water wells	50' (B)	50'	100'
Public water wells	50'	150'	150'
Lakes or reservoirs where use is, or may be, intended as a domestic water source	50'	50'	200'
Streams, irrigation ditches, springs or other perennial water courses or impoundments. Category 1 drainage course Ephemeral Stream (C) Intermittent Stream (C) Perennial Stream (D) Impaired water body (E) Surface water body drinking water supplies (F)	10' 10' 25' 25' 50' 50' 50'	10' 10' 25' 25' 50' 600' 50'	25' 25' 50' 75' 100' 600' 200-400'
Trees over 24" in diameter		10'	
Disposal field		5'	5' min (G)
Domestic water line	1' (H)	5'	10'
Distribution box		4'	4'
Driveway or parking area		Clear	Clear

Pressure public water main	10'	10'	10'
Cutback or fillbank when facility above bank	10'	10'	4xH (I)
Domestic water supply canal: Above Below	 50' 10'	 50' 10'	 100' 25'

(A) Including porches and steps whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
(B) All nonmetallic drainage piping shall clear domestic water supply wells by at least fifty feet. This distance may be reduced to not less than twenty-five feet when the drainage piping is constructed of materials approved for use within a building.
(C) As measured from the apparent edge of channel.
(D) As measured from the high water mark which would result from a ten-year frequency flood.
(E) For parcels created prior to May 13, 2018, OWTS may be located within 600 feet of an impaired water body if the proposed system meets the requirements set forth in the LAMP Advanced Protection Management Program.
(F) Where the effluent dispersal system is within the catchment of a public water system's surface water intake point, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies and the dispersal system is located:

1. Within 1,200 feet from a public water system's surface water intake point, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
2. More than 1,200 feet but less than 2,500 feet from a public water system's intake point, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

(G) See Section 13.08.240(J).
(H) Comply with CPC Section 720.0.
(I) Four times the height of the bank, measured from the top edge of the bank. Maximum setback thirty-five feet from top of bank.

13.08.290 Abandoned sewers and sewage disposal facilities.

A. Every abandoned building (house) sewer, or part thereof, shall be plugged or capped in an approved manner within five feet (1.5m) of the property line.

B. Every cesspool, septic tank, and seepage pit which has been abandoned or has been discontinued otherwise from further use or to which no waste or soil pipe from a plumbing fixture is connected, shall have the sewage removed therefrom and be completely filled with earth, sand, gravel, concrete, or other approved material.

C. The top cover or arch over the cesspool, septic tank, or seepage pit shall be removed before filling and the filling shall not extend above the top of the vertical

portions of the sidewalls or above the level of any outlet pipe until inspection has been called and the cesspool, septic tank, or seepage pit has been inspected. After such inspection, the cesspool, septic tank, or seepage pit shall be filled to the level of the top of the ground.

D. No person owning or controlling any cesspool, septic tank, or seepage pit on the premises of such person or in that portion of any public street, alley, or other public property abutting such premises, shall fail, refuse, or neglect to comply with the provisions of this Section or upon receipt of notice so to comply from the Environmental Health Director.

E. Where disposal facilities are abandoned consequent to connecting any premises with the public sewer, the permittee making the connection shall fill all abandoned facilities as required by the Environmental Health Director within thirty days from the time of connecting to the public sewer.

13.08.300 Inspections under sewage disposal permit.

A. The applicant will deliver the number of plot plans required by the Community Resources Agency and such plot plans shall contain all required information.

B. At the time of delivery of this packet to the Community Resources Agency, the applicant or representative shall uncover and flag all recorded boundary monuments so as to make them visible. When the monuments are not intervisible, the boundary line shall be clearly marked between the same. A sign clearly stating the name of the property owner shall be clearly placed at a spot easily visible from the road or entry abutting the parcel.

C. The following soil profile test requirement may be waived by the Environmental Health Director where he/she determines there is adequate soil data for that area of the parcel. A test trench at least eight feet deep must be provided in the initially proposed leach field area and expansion area to assure the soil depth is adequate, to determine the most permeable strata for discharge of effluent, and to indicate the depth of groundwater. Each test trench shall be of an adequate dimension to allow an unobstructed view to the bottom of the trench. The Environmental Health Division shall be notified prior to the completion of the trenches and the trenches shall be covered or protected immediately after inspection. This inspection and all further discussed inspections must be requested at least twenty-four hours in advance.

D. The Environmental Health Director or his/her representative shall then visit the site to determine if the proposed improvements meet the requirements of this Chapter or any other applicable County ordinance or state law. If this determination is made, a sewage disposal permit shall be issued as provided in this Chapter. Notwithstanding any other provision of this Section, the Environmental Health Division shall not be required to issue any permit if, in the opinion of the Environmental Health Director, in consultation with the Health Officer, such approval would result in a public hazard or be detrimental to the health, safety or welfare of the residents of the area.

E. The Environmental Health Director may also require percolation tests when history and experience in the area indicate such tests are advisable. The percolation tests shall be conducted as specified in Section 13.08.230(H).

F. Inspections of construction of the OWTS shall be performed when:

1. The disposal field, septic tank hole, distribution box and solid line areas are dug, trench walls are scarified, and the distribution box bases are compacted;

2. The septic tank, drain rock, drain pipe, solid lines, distribution boxes, and building paper are in place in their respective trenches.

Covering installed improvements prior to inspection shall be limited solely to those portions of the work where the open excavation impedes necessary movement of equipment required to complete the system design as approved. If each inspection has disclosed satisfactory compliance of the provisions of this Chapter and the CPC, the Environmental Health Director or his/her representative shall sign off the work as completed on the sewage disposal permit copy mandated to be kept on the job. The owner or contractor may then cover the installed improvements.

13.08.310 Use and repair of existing OWTS or sewage disposal system.

A. Every part of each OWTS or sewage disposal system is to be maintained in good repair at all times, and operated in such a manner as not to cause odors, pollution or contamination of adjacent lands or surface waters or useable subsurface waters of the County nor create any other nuisance.

B. With respect to the repair of an existing OWTS or sewage disposal system, the Environmental Health Director may allow such lesser distances than those shown elsewhere in this Chapter, except as to structures, as he/she shall determine necessary to avoid undue hardship, but that will accomplish the general purpose and intent of this Chapter.

C. Nothing contained in this Chapter shall prevent utilization of another parcel for the construction of an OWTS or sewage disposal system or a portion of an OWTS or sewage disposal system providing the following conditions are met:

1. The land on which the system is to be constructed is owned by the owner of the system provided that the parcels are legally merged or a notice of action is filed with the County recorder's office reflecting restrictions on the use of each parcel for purposes consistent with the existence of the OWTS or sewage disposal system. Alternatively, another parcel may be used if the owner of the system has a legally recorded easement on the land which expressly provides that he/she has the right to use the land for sewage treatment and disposal purposes;

2. The recorded easement shall stipulate that the easement may not be revoked or extinguished and that an effort to do shall be of no force and effect unless and until there has been recorded an affidavit signed by an authorized representative of the agency owning the public sewer stating that the structure which the OWTS or sewage disposal system was originally intended to serve has been permanently connected to a public sewer.

13.08.311 Discharge restrictions - Pollution prohibited. All sewage and other liquid waste shall be disposed of by an approved method of collection, treatment and effluent discharge. Sewage or sewage effluent shall not be disposed of in any manner that will permit it to rise to the surface or flow over the top of the ground or cause pollution of the

ground surface, groundwater, bathing area, lake, pond, or watercourse, or create a nuisance. It shall not be discharged into any abandoned or unused well or into any crevice, sinkhole or other opening either natural or artificial in the rock formation.

13.08.320 Minor deviations from ordinance requirements. Minor deviations from a requirement of this Chapter regulating OWTS or sewage disposal systems may be granted by the Environmental Health Director. Specific, written, factual findings shall be made in each case justifying the minor deviation.

13.08.330 Technical advisory committee. The Environmental Health Director, with the concurrence of the Health Officer, shall appoint an ad hoc technical advisory committee made up of three consultants. Any project may be referred to the technical advisory committee at the request of the applicant, the Environmental Health Director, or the Health Officer. The technical advisory committee shall make its recommendation within thirty days unless a longer time is agreed to by the applicant.

13.08.340 Appeals. If the Environmental Health Director denies an application for a permit, issues a conditional permit, or denies a minor deviation from requirements of this Chapter which is contrary to law, an appeal may be made to the Board of Supervisors, whose decision shall be final. The appeal shall be filed with the clerk of the Board of Supervisors within ten calendar days following giving or mailing notification by the Environmental Health Director of the decision subject to the appeal, and shall specifically state the grounds on which the appeal is based. Appeals not submitted in a timely manner will not be considered and will be returned.

13.08.350 Violation; enforcement. A violation of this Chapter shall be enforced as provided for in Chapter 1.10 of this Code.

SECTION 3: If any provision of the Ordinance or the application thereof to any person or circumstances is for any reason held invalid, such invalidity shall not affect other provisions or applications of the Ordinance which can be given effect without the invalid provisions or applications thereof, and to this end the provisions of this Ordinance are severable.

SECTION 4: This Ordinance shall take effect thirty (30) days after its adoption. The Clerk of the Board of Supervisors is hereby authorized and directed to publish a summary of this Ordinance in the Union Democrat, a newspaper of general circulation printed and published in the County of Tuolumne, State of California, prior to fifteen (15) days after its passage.

The foregoing ordinance introduced on the 6th day of February, 2018, and adopted at a regular meeting of the Board of Supervisors of the County of Tuolumne, State of California on this 20 day of February, 2018, by the following vote, to wit:

AYES: Hanvelt, Royce, Gray, Rodefer

NOES: ✓

ABSTAIN: ✓

ABSENT: Brennan

John L. Gray

John Gray, Chair
Board of Supervisors,
County of Tuolumne,
State of California

ATTEST: Alicia Jamar
Chief Deputy Clerk of the Board of Supervisors

by _____ (SEAL)

I hereby certify that according to the provisions of Government Code Section 25103, delivery of this document has been made.

ALICIA L. JAMAR
Clerk of the Board

By: _____

APPROVED AS TO LEGAL FORM:

County Counsel
County of Tuolumne

by _____
Carlyn M. Drivdahl, Deputy County Counsel